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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

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Lecture III.—Misplacements and Malformations.

[The first two lectures of this course were devoted to the demonstration of the situation of the heart in the thorax, the explanation of the sounds of the heart, and to the demonstration of the mode of examination to be adopted in investigating a supposed case of cardiac disease. These it has not been thought desirable to publish.]

Misplacements.

The heart is not unfrequently found to occupy a wrong position in the chest, and displacements of this kind may be either congenital or due to disease in after life. The congenital misplacements have the terms *ectopia cordis* or *ectocardia* applied to them, and they are divided into the internal and external. Of the internal misplacements, the most common is that to which the term *dexiocardia* has been given, in which the heart is found occupying a very similar position on the right side of the chest to that which it should occupy on the left. This condition may co-exist with transposition of the other viscera, or may occur alone. When the heart is so placed the aorta generally makes its turn to the right side, the descending aorta lies on the right side of the spinal column, and the large vessels also are transposed, the arteria innominata being given off on the left side, and the separate trunks of the subclavian and carotid arteries arising on the right. Such, however, is not always the case. The aorta sometimes makes its arch to the left, the descending aorta occupies its ordinary position, and the large vessels originate in the usual way. The heart in cases in which it is thus misplaced may either be itself quite natural, or its conformation may be more or less seriously defective. Of these several forms of irregularity many instances might be quoted. The malposition of the heart attracted the notice of observers from a very early period. It may readily be supposed that what attracted especial attention was that the irregularity, when unattended with any serious deviation from the natural conformation of the organ, does not appear to be necessarily productive of any serious symptoms. Cases are on record in which the condition existed in persons who survived for many years, and who even attained very advanced ages.

Of the external misplacements of the heart, the most common are those in which, in consequence of imperfection in the sternum, the organ is situated wholly or in part in front of the chest. Our museum contains one very interesting specimen of the kind, which occurred in the practice of Dr. Bain, of Poplar, and is described in the *Pathological Transactions* by Mr. Sydney Jones. In this, as in most of the cases on record, the child only survived for a few hours. In other instances the diaphragm is defective, and the heart is found lying in the abdominal cavity; and in some cases of this kind life has been prolonged for some years, and even a considerable amount of vigour has been enjoyed. The heart, however, when misplaced is often also imperfectly formed.

The congenital misplacements of the heart are, however, rare and interesting rather in a scientific than in a practical point of view; but not unfrequently the heart is displaced as the result of disease in after life. Indeed, the organ very often deviates more or less from its natural position, and especially in connexion with alterations in the condition of the lungs. Some years ago I made, in conjunction with Dr. Lanchester, then House-Surgeon of the Victoria-park Hospital, and now of Croydon, numerous observations on the position of the heart in the chest, and found that the situation of the orifice of the pulmonary artery varied from the level of the upper border of the fourth cartilage to the upper border of the second, and from the middle of the sternum to fully an inch to the left of that bone; the general rule being that the organ was situated at a higher level in cases in which the lung was contracted, and lower down when it was expanded. The heart also may be brought in contact with the parietes of the chest to very different extent in different cases, altogether independently of being itself diseased. Thus, after extensive pleurisy of the left side, the area of dulness is often considerably extended, and the pulsation can be felt and seen over a space much larger than natural. More marked displacements, however, than these often occur. In cases of effusion in the left pleural cavity, the heart is more or less displaced to the right, beating behind the lower portion of the sternum, to the right of that bone, beneath the right nipple, or even to the right of that body. More rarely in such cases the heart is displaced both to the right and upwards, so that in a case of empyema of the left side I once saw it lying beneath the right clavicle. The opposite displacement, in which the heart occupies a position further to the left than it should, is less frequent and less striking; but in a case in which there was extensive effusion in the right pleural cavity, in connexion with growths of lymph-adenoma in the chest, the heart lay at the anterior border of the left axilla. I once also saw a still more rare form of lateral displacement, in which the organ lay quite over on the right side, in consequence of the absorption of the fluid of a pleuritic effusion on the right side, which had completely and permanently compressed the lung, so that it was wholly impermeable to air. The condition was found in the body of an old man whose history was imperfectly known, and the time at which the effusion had occurred could not be ascertained; but, from the excessive thickening of the pleura, and the bony deposits which existed in it in different places, it was evident that the disease was of very long duration. The left lung was very greatly expanded, and had doubtless much assisted in the displacement of the heart. Similar displacements to those which depend on pleuritic effusions may also result from the growth of tumours of different kinds in the chest.

The heart may also be displaced upwards in cases in which there is copious effusion in the peritoneal cavity. I have seen several cases in which the organ has been found in ascites to lie immediately under the left clavicle. In two of these there was a loud systolic bellows murmur heard apparently at the base of the heart, and which was evidently due to the altered position of the organ, as it increased with the advance of the displacement, and no other cause was found on examination after death to explain its production.

Lateral displacement from pleuritic effusion I have never found to cause murmur at the heart, except in the case I have referred to in which the organ was also pushed upwards so that it lay under the right clavicle. This observation is of considerable practical importance, for it occasionally happens that the symptoms of intrathoracic growths resemble very closely those of pleuritic effusions, or the latter may coexist with the former. In such cases, if the heart be displaced, murmurs are of very common occurrence. In any doubtful case, therefore, in which the heart is simply displaced laterally, and in which a murmur is heard, the suspicion may be entertained that there is a tumour, or at least that the malposition is not wholly the result of an effusion in the pleura. Guided by these considerations, in a very obscure case which was not long ago under my care, I ventured to express the opinion that there was an intrathoracic tumour, and the result proved the diagnosis to be correct.

Malformations.

It is impossible in the space of a single lecture, which is all the time that we can devote to the subject, to give more than the merest outline of the various kinds of malformation of the heart.

The malformations of the heart may be classed—first, into those which occur at the early periods of fœtal life, and consist in serious deviations from the natural process of development; and secondly, those which originate at the later period, and are only important by interfering with the changes which should ensue after birth, or by predisposing to disease in more advanced life: and these classes may be again subdivided according as the irregularities chiefly affect the heart itself or the larger vessels.

Of the malformations of the first division, and which specially involve the heart itself, those which occur in the earliest periods of fœtal existence present the circulatory organs in the simplest form. The heart consists of only two cavities, an auricle and a ventricle, and the ventricle gives origin to one vessel, from which both the pulmonic and systemic arteries are derived.

In the next group the process of development has proceeded to a somewhat more advanced stage before having been arrested. The auricles are found to be imperfectly divided, but the ventricle, though it also may present some rudiments of a septum, is essentially single, and gives origin either only

to one vessel for the maintenance of both the pulmonary and systemic circulations, or there may be a distinct pulmonary artery and aorta.

When the deviation from the natural process of development occurs at a still later period, there are two auricles and two ventricles, though these may be imperfectly separated; and there may either be only one artery given off, or two distinct vessels, though in the former case the single vessel can no longer be regarded as the primitive arterial trunk, but rather represents the aorta proper.

In each of these forms the heart is very imperfectly developed; and those deviations which occur at the earliest periods are very rarely seen, and are only compatible with the maintenance of life for a very limited period. When the process of development has proceeded to a more advanced stage the heart is better fitted to maintain the double circulation, and life is sometimes much more prolonged, though the cases in which this occurs are very few in number.

In a fourth group of malformations the development of the heart has proceeded to a still more advanced stage; the auricles, ventricles, and vessels are complete, though the septa which should divide them may be imperfect. This imperfection is generally traceable to the existence of some impediment to the passage of the blood from the right ventricle into the pulmonary vessels, either caused by malformation of the valves of the pulmonary artery, by constriction at the fibrous zone to which the valves are attached, or at the end of the conus arteriosus or infundibular portion of the right ventricle, or by narrowing of the cavity of the ventricle at the commencement of the conus arteriosus, or at the point of union of the sinus of the ventricle with the infundibular portion.

Specimens displaying one or other of these forms of defect are contained in our Museum, and I have several in my own collection at the Victoria-park Hospital, and many similar instances are recorded; indeed, they are the most common forms of congenital defect in the heart. The subjects of these malformations do not generally survive more than some months or years, but occasionally patients live to the period of puberty or to early manhood or womanhood, and still more rarely to even more advanced ages. In a less frequent set of cases the defect at the pulmonic orifice is still greater, the aperture, and often also the trunk of the vessel, being indeed found entirely imperforate, the blood being generally conveyed to the lungs from the aorta through the ductus arteriosus. The septum of the ventricles also is imperfect, or the foramen ovale unclosed. Life, however, is in such cases generally of short duration, though some remarkable instances to the contrary are on record.

Closely allied in their effects to the malformations which have last been mentioned are those in which the impediment to the circulation is situated at one of the other cardiac orifices—the right auriculo-ventricular, the left auriculo-ventricular, or the aortic; and in some very rare instances these apertures are imperforate.

A very small number of cases are also on record in which the foramen ovale is found to have become more or less perfectly closed before birth. A case of the kind occurred in the practice of my friend Mr. E. Pye-Smith, and is described in the *Pathological Transactions*. The subjects of this defect only survive birth for a few hours, death probably resulting from the imperfect expansion of the lungs, from the free outlet for the blood into the descending aorta through the large ductus arteriosus. An analogous form of defect may also involve the ductus arteriosus; or at least that passage, if it be not prematurely obliterated, not unfrequently does not exist. With this condition the pulmonary artery is of small size, and cannot adequately expand to transmit the increased flow of blood which should pass to the lungs after birth, and so an impediment to the circulation is occasioned. The heart may in consequence be defectively developed, or the fœtal passages may remain open after birth.

The development of the primary vessels, the pulmonary artery and aorta, may be arrested or prevented at different periods of fœtal life, either alone or in conjunction with defects in the heart itself. Of the malformations of this kind the most remarkable is that in which the vessels are transposed, the pulmonary artery taking its origin from the left ventricle, and the aorta from the right. This irregularity was first described by Dr. Baillie, and the specimen which he figured is contained in the Museum of the Royal College of Physicians. In these cases either the septum of the ventricle must be imperfect, or the foramen ovale or ductus arteriosus open, and even with these conditions life is generally limited in duration to a few weeks or months, or at the most to two or three years.

In some cases the portion of the aorta between the origin of the left subclavian artery and the entrance of the ductus arteriosus is more or less constricted, and the supply of blood to the descending aorta is mainly transmitted through the ductus arteriosus. More aggravated instances of the same defects occur, in which the ascending aorta only furnishes the supply to the arteries of the head and upper extremities, and the descending aorta is simply a continuation of the ductus arteriosus. Two very interesting specimens exhibiting the slighter form of irregularity, which were formerly in Sir Astley Cooper's collection, and which have been described by Dr. Farre, are in our Museum; and there is also a specimen of the more extreme defect, which was described by Dr. Wade Hicks in the *Pathological Transactions*.

If in the former kind of cases the constriction be at the time of birth only slight, so as not to create any marked impediment to the circulation, the patient may survive for many years. The obstruction, however, may become gradually greater from the thickening and induration of the coats of the artery, and ultimately the canal may in this way become entirely impervious, or it may be completely obstructed by thrombosis, the circulation being carried on by the enlargement of the collateral vessels, and by their free anastomosis. Of this (as it has been termed) *quasi malformation* a considerable number of instances are on record, and our Museum contains one very interesting and beautiful specimen which was obtained from the body of a man which had been injected for dissection. The preparation is described by Mr. Sydney Jones in the *Pathological Transactions*. We have also a specimen exhibiting the same condition which occurred in the practice of Dr. Barker. The malformations which have just been mentioned must be ascribed to the faulty evolution of the pulmonary artery and aorta from the primitive arterial trunk and the branchial arches.

The malformations of the second class, or those which originate at the later periods of fœtal life, are chiefly irregularities in the number and connexions of the valves; but some of those which have before been described, though they probably generally occur at the earlier periods, may originate also at the later. This remark applies even to some of the more serious defects, such as the entire obliteration of the orifice of the pulmonary artery and the premature closure of the foramen ovale. Of the malformations of the valves may be named the blending together of two of the curtains of the semilunar valves, so as to leave only two distinct segments; or the three valves may be united so as to form a simple diaphragm, stretched across the orifice; or the folds of the tricuspid or mitral valves may be blended together. If at the time of birth the constriction of the orifices thus caused be great, one or both of the fœtal passages may be prevented from closing, and all the symptoms of a congenital cardiac defect will arise. Often, however, the malformation of the valves is not immediately a cause of impediment to the circulation, and the symptoms of disease only manifest themselves after the lapse of years, when the orifices and valves, being rigid and unyielding, do not expand with the progress of growth so as to admit of the increased circulation which is required, or when they have become the seat of disease in after life aggravating the original defect.

The more serious irregularities in the conformation of the heart are usually incompatible with the prolongation of life for any lengthened period, and are only seen in infants or young children, and do not therefore often occur in ordinary practice. However great, therefore, their scientific interest, they are not of much practical importance. The less marked imperfections, such as an obstructed pulmonic orifice, with the septum of the ventricles incomplete or the foramen ovale open, are, however, not unfrequently seen, and occasionally in persons of more advanced age. These conditions are generally readily recognisable. Not only does the commencement of the symptoms, if carefully investigated, generally date from early life—or at least there is a history of very prolonged indisposition,—but the actual state of the patient is very characteristic. There is usually very intense and peculiar lividity of the face and extremities, and a loud bellows-murmur is heard at the base of the heart, and is usually propagated in the course of the pulmonary artery, and must be regarded as proving the existence of some source of obstruction in that situation. Often, also, the murmur is heard very loudly in the course of the aorta, and if so, it is at least probable that the aorta communicates with both ventricles. Indeed, either the septum

of the ventricles is incomplete or the foramen ovale open in so large a proportion of cases that the supposition of their existence may fairly be hazarded.

We have not very long ago had two such cases in my own wards in the Hospital. In one of them a boy, 17 years of age, whose case is described in the pathological reports, and whose heart is in the Museum, the condition was correctly diagnosed during life. In the other, also in a boy of about the same age, the diagnosis of the case was sufficiently clear. He left the Hospital considerably benefited, and I have not since heard anything of him.

I have spoken of the lividity in these cases as being very intense and peculiar, and it is so much so as to have caused the terms *cyanosis*, *cyanopathia*, and *morbus cæruleus* to be given to the condition. There has also been considerable discussion as to the cause to which this discoloration is to be ascribed. Morgagni, in describing a case of stenosis of the pulmonary orifice with an open foramen ovale, which fell under his notice, ascribed the lividity to the excessive congestion which must have existed; while Dr. Hunter soon after, in relating a similar case, suggested that the intermixture of the venous and arterial currents of blood was probably the cause of the peculiar lividity. The former view has recently been maintained by M. Louis, while the latter has received the able support of Dr. Farre and M. Gintrac. There cannot, I think, be much doubt that the congestion which obtains in these cases is the essential cause of the cyanosis, for the intensity of the discoloration bears a direct reference to the amount of obstruction, while cyanosis may exist, even to a very marked extent, in cases in which no intermixture of the venous and arterial blood occurs. It is, however, probable that other circumstances influence the peculiar colour which the patients assume in some of these cases —such, for instance, as the long duration of congestion causing extreme dilatation of the small vessels, and the peculiar thinness and transparency of the integuments from imperfect nutrition. When, also, so small a portion of blood is exposed to the influence of the air, the whole mass must assume a very dark colour, and this must intensify the discoloration. It is a curious circumstance that pathologists for a long time almost entirely lost sight of the fact that the imperfection of the interventricular septum, the unclosed foramen ovale, and the open ductus arteriosus are simply the necessary results of the obstruction to the transmission of the blood from the right ventricle by the pulmonary arteries, and that these conditions must therefore be regarded as essentially conservative, and as alone affording the means by which extra-uterine life can often be maintained. This is the more remarkable as the true relation in which the abnormal openings stand to the primary source of obstruction was very clearly pointed out by some of the early observers. It has been thought that there is a special antagonism between the condition of the blood in cases of cyanosis and the tendency to the deposit of tubercle, and Rokitansky denied the possibility of cyanotic persons becoming tuberculous. This, however, is not correct. Cyanosis in the most intense form not unfrequently coexists with tuberculous depositions; and, indeed, if persons who have malformed hearts live for a sufficient length of time, they often die phthisical. It is, however, equally incorrect to assert, as has recently been done, that persons labouring under malformations of the heart almost always become phthisical. I have seen several exceptions to any such rule; and when the two conditions coexist I believe that the deposition of tubercle is not due, as has been asserted, to the irritation of the pulmonary tissue, but to the very defective nutrition which exists in such cases from the imperfect aëration of the blood.

FROM two to seven deaths daily occur from the yellow fever in Rio. In Monte Video the fever has abated.

FROM a statistical account issued by Dr. London, director of the lying-in hospital established at Jerusalem by the Baroness B. de Rothschild, we find that of the total number relieved 48 women were born in Jerusalem, 24 came originally from Russia, and 19 were born in various parts of Turkey. Some of the mothers were very youthful, 2 being but fifteen years old, 3 sixteen years of age, 5 seventeen years old, 9 of the age of eighteen, 4 of the age of nineteen, and 15 not beyond their twentieth year. The report embraces a period of one year.

ORIGINAL COMMUNICATIONS.

DEATH UNDER THE ADMINISTRATION OF METHYLENE ETHER.

By LAWSON TAIT, F.R.C.S.,
Surgeon to Birmingham and Midland Hospital for Women, and Consulting Surgeon to the West Bromwich Hospital.

S. S., AGED 62, admitted to the Hospital for Women under my care for large multilocular ovarian tumour. She had been in perfect and robust health until February last, when the tumour was noticed. There was no complication in the tumour save a cretaceous mass behind the uterus, quite free, and supposed to be either an old cyst degenerated or a calcareous fibroid. A systolic murmur at the base was recognised two days before the operation, but as it seemed to arise in the great vessels, and as no general signs accompanied it, and as there certainly was no valvular lesion, it was not considered of such importance as to form an objection to the proposed ovariotomy.

She was placed under the influence of methylene ether on June 28, about 11 a.m., by the resident medical officer, Dr. Louisa Atkins. She took the anæsthetic readily and quietly, and after five drachms had been administered she seemed so perfectly and satisfactorily unconscious that in a few seconds the operation would have been begun. Suddenly she seemed to be coming out of the anæsthesia, the urine passed out of the bladder, and the eyes opened. I noticed the pupils to be extremely dilated, and the pulse suddenly ceased. Some efforts at respiration were made, and a spasmodic effort as if the patient was about to vomit. Respiration then ceasing, it was carried on by Sylvester's method. Strong ammonia was applied under the nostrils, and a strong stimulant enema given. Other means, as rubbing the chest with a brush, dashing cold water over it, etc., were tried unavailingly. It was evident to the acting staff, who were all present, that failure of the heart was the initial part of the process of death.

The post-mortem examination was made within twenty-four hours, and revealed nothing to account for death. The heart was in such a condition as might be expected in a person of her age: the cavities contained a small quantity of dark blood, there being no difference apparent between the blood in the right and that in the left side. There was no atheroma in the aorta or in the coronary arteries, and the fibres of the heart were not fatty. All the valves were competent, and only in one cusp of the aortic valve was there one minute atheromatous plate, so small and even that it could have been of no consequence. The systolic murmur must therefore have been hæmic. The brain and all the other organs were healthy except the left ovary and a calcareous fibroid tumour pedunculated to the fundus uteri, which could easily have been removed, as it certainly would have been had the operation been performed.

The anæsthetic administered was a mixture of McFarlane and Co.'s anhydrous ether and Hearon, Squire, and Francis's bichloride of methylene, having a density of 1·1, according to Dr. B. W. Richardson's formula. I have now administered it over 200 times, and never with the slightest appearance of risk till the occurrence of this case. It has been frequently administered for my colleagues and for myself in hospital practice by Dr. Louisa Atkins, than whom I never saw a more competent and careful administrator. The day on which this fatal case occurred I gave it or had it given in five cases and in the following order:—

1. For the introduction of a stem pessary in my own consulting-room.
2. For the proposed ovariotomy in the case of S. S.
3. For version in a case of placenta prævia to which my friend Dr. Call Weddell, of Bloomsbury, had summoned me in consultation.
4. For the removal of an external hæmorrhoid.
5. For an examination and operation on a case of stricture of the rectum.

This is sufficient to show that I have by no means lost confidence in methylene ether, for it has great advantages over all other anæsthetics.

It would seem that it is not absolutely safe, though I am of opinion that S. S. would have died under any anæsthetic.

Sulphuric ether cannot be used to any extent where assistants are scarce; and to lay down rules to the end that no

anæsthetic should be given save in the presence of two or more qualified men, would be to limit the benefits of anæsthesia to a most unwarrantable extent.

Methylene ether is such a thoroughly manageable anæsthetic that I am quite certain, in spite of this fatal case, that it, or at least some anæsthetic safer, but as manageable, will come into general use. I am quite certain sulphuric ether will never be the anæsthetic of private practice.

I am not sanguine enough to believe that we shall ever get any agent which shall be absolutely free from risk; just as I am quite certain that numerous deaths occur from the use of ordinary drugs, the effects of which are much less tangible than those of anæsthetics.

One suggestion I should like to make to those engaged in studying the actions of anæsthetics—Should we not look to the state of the blood for an explanation of such cases as this? S. S. had a systolic murmur in the great vessels which must been hæmic. Was the state of her blood the cause of her death? If so, there were no external indications of anything wrong.

NOTE BY DR. B. W. RICHARDSON, F.R.S.

The case recorded above by Mr. Lawson Tait is the first fatal case under methylene ether. The agent had proved so safe under experimental trial, and, hitherto, so manageable, effective, and successful in practice, I had hoped it would have been found more free of evil than any other anæsthetic. It may still hold its place, by comparison, but the proof that it is not free of danger is incentive enough to new research. We must in all such painful positions simply submit to nature, and go on anew, avoiding specially the method of inventing foolish excuses for the agent, or the mode by which it was administered, and trying to extract out of the very calamities it has occasioned some useful lesson.

The case now before us, painful as it is, presents many features that should not be forgotten. *Imprimis*, it elucidated a fact I have for many years taught,—that there exists a small minority of persons who die under anæsthesia as if from some particular and unknown susceptibility to the influence of the narcotic vapours. I believe with Mr. Tait that his patient would have died under any anæsthetic that produces general insensibility. But what is the nature of this susceptibility? Is it a failure in one part of the organism, and always in the same part in all persons, or is it varied. Towards the elucidation of this problem not a single fact, however small it may be, should be overlooked. Mr. Tait's case again is valuable as conveying a fact: I refer to the anæmic condition of blood to which he has drawn attention. The capacity of blood for the absorption of anæsthetic vapours is modified by the density of blood. It will be worth while, in the future, to learn whether absorption under diseased states of blood may be so quickened as to be a cause of immediate danger.

NOTES ON

A CASE OF ANEURISM OF THE THORACIC AORTA,

THE SYMPTOMS AT THE COMMENCEMENT BEING VERY OBSCURE.

By W. I. H. LUSH, M.R.C.S.,

Associate of King's College, London, Resident Medical Officer to St. George's, Hanover-square, Dispensary.

W. F., aged 48, came under my notice on April 12. Had always enjoyed good health up to three weeks previous to the above date. He then for the first time complained of an occasional burning pain on the right side of the chest and back, and running down the arm. He ascribed it to rheumatism, and did not take much notice of it; but as it continued to increase he applied for advice. Patient was a healthy-looking man, but had rather an anxious expression of countenance. No history of syphilis, rheumatism, or of any injury to the chest. The superficial veins of the chest and neck on the right side were distended. He complained of slight cough and dyspnœa, which was increased on taking the least exertion. There was slight aphonia, but no dysphagia; no numbness or œdema of the extremities. On auscultation a distinct systolic bruit was detected, heard plainest two inches above and to the inner side of the right nipple. There was slight dulness on percussion, and pulsation could be felt in the second and third costal spaces. Cardiac sounds at apex normal; apex-beat in normal position. No perceptible difference in the radial pulses. Pulse 78, temperature 98·8°; no tracheal breathing; respiratory sounds normal; pupils equal; urine contained no albumen. He was placed on a nourishing diet, and ordered a mixture containing perchloride of iron and digitalis, and perfect quiet enjoined. As he complained of sleepless nights, chloral hydrate was ordered, commencing with grs. xv., and gradually increasing up to grs. xl. For the first few nights after taking the chloral he slept better, but after this it seemed rather to excite than to soothe him, so on April 25 the chloral was discontinued, and tinct. opii ℥xxx. given.

April 26.—Passed a better night after taking the tincture of opium than he had done for some time. The tinct. opii was gradually increased to ʒiss.

May 5.—Slight œdema of the arms and legs, and puffiness of the face. Cough very troublesome.

16th.—Œdema much increased. Dulness at both bases, and feeble breathing. From this point all the symptoms of obstruction to the circulation became more marked, and the aphonia complete. There was slight dysphagia towards the last, but the pupils remained normal.

He died on June 12.

Autopsy made thirty-six hours after death. I was assisted in the examination by my friend Mr. Charles Vipan. Body very œdematous. Thorax filled with serum. On attempting to remove the sternum it was found to be adherent to a large fusiform dilatation of the ascending portion of the aorta, the size of an orange, which pressed on the recurrent laryngeal nerve, and slightly on the œsophagus. On opening the aneurism it was seen to be filled with a large fibrinous clot stained with the colouring matter of the blood. The walls of the aneurism were covered with atheromatous deposit. The aortic valves were retracted and evidently incompetent. The other valves were normal. The lungs were œdematous, and on making a section of them a quantity of frothy mucus exuded. An examination of the other organs could not be made on account of the objection raised by the friends.

The above case may be of some interest, both on account of the obscure symptoms which it first presented, and also on account of its being one of the cases in which chloral not only failed to produce a sedative effect, but evidently after the first few doses caused increased excitability of the nervous system.

Chapel-street, Grosvenor-square, W.

CASE OF MALIGNANT FACIAL CARBUNCLE.

By FREDERICK IRVING DE LISLE, L.R.C.P.,

Physician to the St. Peter Port Hospital, Guernsey.

Although this case did not differ from others of its kind, yet the happily comparative rareness of this most fatal disease, and the insidious manner in which it commences, so apt to lead astray the unwary or overworked practitioner who sees it in its early stage, may render it interesting to the profession.

A. M. H, aged 19, an actress, about May 25 noticed a small pimple on the upper lip, which caused her some pain and uneasiness. This she scratched, and applied to it eau-de-Cologne, which caused it to smart intensely. On the 26th the pimple had enlarged and was accompanied by throbbing pain. Fearing lest the eau-de-Cologne should have poisoned it, she applied to Dr. F. E. Carey. Dr. Carey observed a good deal of induration about the base of the pimple. Patient had felt depressed and languid for some weeks, and from a bright lively girl had become lethargic in her habits, lying down the whole of the day, just rousing herself to go to the theatre for a rehearsal or a night's acting. During this time her appetite remained good. Ordered a mixture containing one grain of quinine in each dose. A dose to be taken three times a day.

May 27.—The induration had extended and the pain increased. The induration, pain, and swelling continued to increase until May 30, when Dr. Carey detected fluctuation. The part was lanced, and healthy-looking pus issued from the wound. On the evening of this day, as she felt herself getting worse, she was removed at her own request to the hospital, and was seen that evening by my colleague, Dr. Clifford Crewe. I took charge of the case on the morning of the 31st.

31st.—Upper lip greatly swollen and indurated; swelling extends over the whole of the left cheek and closes the left eye; a bright red blush extends all over the swollen part of the face.

Tongue furred, and breath excessively fetid. Is in great pain, and unable to sleep at night. Pulse 140, thin and compressible; temperature 103°. The whole appearance gives the impression of some great depressing cause having been at work. Patient is coherent in her answers, but has difficulty in speaking owing to the swelling of the lip, and does not answer immediately that she is spoken to, as if she required time to understand the question. Ordered—℞. Tinct. ferri perch. ℥x., liq. strych. ℥v., quinæ sulph. gr. j., every three hours. ℞. Pot. permang. ʒj., aquæ ℥xvj., m. ft. lot.; the broken part of the lip to be syringed out with it; a portion of it to be diluted with an equal quantity of water, and used for washing out the mouth. ℞. Chloral. hydrat. gr. xv., liq. morph. mur. ℥xv., aq. cinnam. ad ℥j.; to be taken at bedtime, and to be repeated two hours after if sleep is not induced. Milk, eggs, and wine *ad libitum*. Evening: Has wandered slightly during the day, and the swelling has increased. Does not seem to understand questions when put to her, but on their being repeated she answers coherently. Pulse 140; temperature 103·5°.

June 1.—Pulse 150; temperature 104°; skin hot and dry; a little crepitus heard at the base of both lungs. Slept at intervals during the night. Is quite delirious, and fancies she is in a gutter, and pleads most piteously to be lifted out. Noon: Low muttering delirium. Pulse 155. The swelling has extended to the submaxillary region on the left side, and is of a hard boggy character; it also invades to some extent the right cheek. Evening: Delirium is more violent; patient wishes to get out of bed, and is still under the impression that she is in a gutter; she succeeded in rising when the nurse was at the other end of the ward, and was with difficulty persuaded to return. After taking the night draught she became more composed, but did not sleep; towards the middle of the night the violence of the delirium returned. Pulse 160; temperature 104·5°.

2nd.—Pulse 170; temperature 105°; skin feels cooler, and somewhat clammy, notwithstanding the rise of temperature indicated by the thermometer. Patient lies on her back and picks at the bedclothes; is quite delirious, but now of a quiet kind. The amount of quinine in each dose of her mixture to be doubled. Noon: Pulse cannot be counted. Temperature cannot be taken, owing to the way patient throws her arms about. Patient refuses all food and medicine. Evening: Sinking fast; the symptoms at noon aggravated. Patient slips down off the pillow, and is constantly obliged to be raised. No urine has passed since last night. I introduced a catheter into the bladder, but no urine had been secreted.

3rd.—Died at 7 a.m.

It is probable that in this case death was caused by septicæmia and exhaustion. Although there was no rigor to mark the former, yet I believe that the suppression of the urine was due to blood poisoning. As it is advised to push quinine in these cases until cinchonism is produced, it may be thought by some that the dose of quinine prescribed was wretchedly inadequate; it is therefore necessary to state that, owing to some peculiarity in the climate of this island or other cause, large doses of quinine are badly borne. I have seen well-marked cinchonism even with a very small dose of the drug. My reason for combining perchloride of iron and strychnine with the quinine is the well-known powerful tonic and antiseptic properties possessed by this salt of steel, and the beneficial effects of this alkaloid when administered in cases of depressed nervous energy.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

AMPUTATION THROUGH SHOULDER-JOINT.

(Under the care of Mr. DURHAM.)

[For notes we were indebted to the dresser, Mr. Lungley, who, it will be remembered, was killed on board the emigrant ship *North Star*, while honourably and bravely employed in the exercise of his profession.]

John W., tram-car driver, aged 42, a strong, healthy-looking man, was thrown from his seat by the slipping of the drag-handle, two of the wheels of the car passing over his right arm, causing a compound comminuted fracture of radius, ulna, and humerus, as high as the middle of the deltoid, which was much lacerated.

On admission (August 9) the patient was in a state of collapse. Recovering from this, Mr. Durham amputated, about four hours from the time of the receipt of injury. On examining the arm whilst the patient was under chloroform, it was found to be completely crushed from wrist to shoulder, and no radial pulsation was perceptible. A key tourniquet having been applied to the subclavian, Mr. Durham made an anterior flap, preserving as much of the deltoid muscle as was uninjured. He then dissected down to the axillary artery, and, passing a ligature round it, drew it out of the way. The joint was next disarticulated, and in doing this the pectoral muscles escaped from the wound, having apparently been torn through by the wheels, the edges being as clean as though severed by the knife. A full posterior flap was then made, and the vessels twisted, including the axillary, after removal of the ligature previously applied. There was but little loss of blood during the operation. The edges were then brought together by continuous suture, and the flaps supported by broad pieces of strapping, and dressed with carbolic oil.

10th.—Slept but little during the night, and complains of great pain, which he refers to the injured hand, not yet realising that his arm had been amputated. Pulse 120; temperature 103·5°.

11th.—Slept fairly well last night, after subcutaneous injection of morphia; less pain. Pulse 110, full; respiration 40; temperature 103°.

12th.—Dressing removed. Healthy discharge from posterior corner of incision; the whole wound, with exception of half an inch in this position, having healed by first intention. Suture removed. Pulse 100; temperature 101·8°; respiration 38.

14th.—The aperture at posterior corner all but healed up, but, the discharge not escaping freely, a small incision was made, and a drainage-tube inserted, passing about three inches in direction from the axillary border of scapula towards glenoid cavity.

15th to 27th.—The wound still freely discharges healthy pus; syringed out daily. Patient eats and sleeps well. Temperature normal.

29th.—Patient has had rigors and sickness. Erysipelatous blush over whole shoulder. Administered an emetic—pil. col. c. cal. gr. x. Temperature 101°.

30th.—Patient feels much better. Redness disappeared. Temperature nearly normal.

From this time he continued steadily to improve, the sinus gradually healing up, until October 15, when he was sent to Bognor, the wound being entirely healed and the patient restored to health.

ABSCESS ON OUTER SIDE OF THIGH (PERIOSTEAL)—RECOVERY.

R. L., aged 12, was admitted into Guy's Hospital on July 20, 1872. While running in the street she fell and struck her hip against the stones; she was able to walk home. Two days afterwards she felt great pain down her thigh, so that she could not walk, and was obliged to take to her bed. She was in bed a week, but finding the pain to be much increased she was brought into the Hospital.

On Admission.—Patient is a very unhealthy-looking child, very thin, and quite tubercular in appearance, fingers slightly clubbed. Has no cough and does not expectorate. Upper part of right chest dull on percussion, and crepitation is to be heard. Some sordes about mouth; tongue clean. The right thigh is considerably swollen and very painful on pressure, so that she cries out directly it is touched. The swelling extends from the knee to the great trochanter. There is no redness in the part, but considerable heat. There is decided fluctuation. There has been no shivering. Pulse 100; temperature 98·9°.

A fortnight after admission, chloroform being administered, an incision was made about four inches long on the outer part of the thigh, under the carbolic acid spray. About a pint and a half of moderately healthy pus escaped. No bare bone could be detected, but it had a peculiar nodular feel. The cavity extended to the great trochanter. Carbolised gauze was placed over the wound, and oil silk over that. Two days later the dressing was removed for the first time; very little discharge was found. Patient's health was much improved. From this time a rapid recovery ensued.

SPINDLE-CELL SARCOMA OF THIGH—REMOVAL.

(Under the care of Mr. DURHAM.)

[For notes we are indebted to the courtesy of Dr. Goodhart, the Registrar.]

T. E., aged 20, labourer, of Gravesend, admitted May 30, 1873. The family history of the patient is good. He has never had any previous disease. Five years ago he was kicked by a horse on the outer side of the right thigh, but this caused him no pain. He was able to walk quite freely till about two years ago, when he first noticed a small swelling in the position in which he had been kicked. Gradually enlarging at first, it has been rapidly growing during the last two months.

When admitted he looked spare, but not unhealthy. On the right thigh is a large swelling, of irregular shape on the outer aspect, and lobulated at the lower part. It is evidently under the vastus externus, so that from the tumour a tendinous ridge may be felt running down to the outer part of the knee-joint. It moves, but not freely, on the bone, and is apparently bound down by the fascial structures. No enlargement of the glands in the groin.

Mr. Durham made a long vertical incision on the outer side of the thigh and exposed the mass. He then enlarged the original cut by two transverse ones, so as to convert the incision into a crucial one. The tumour was then quickly exposed and found to push outwards the vastus externus and protrude from underneath it. The muscle was cut through and the growth dissected out by turning it up from below. The incision was then closed by sutures, except its posterior arm.

The growth consisted of small spindle cells with an immense number of free oval nuclei. It belonged to the type of spindle-cell sarcomata.

With this growth, and attached to it, was removed a piece of the vastus externus muscle. The portion of muscle excised had its longest measurement in the direction of the axis of the muscle, and it was interesting to witness the irritability and contractility of its fibres. As the tumour was being sent round for inspection, it was seen that the muscle was in a state of active and forcible spasmodic movement, which reminded one of the spasmodic movements of choreic patients. We had the opportunity of watching this for forty-nine minutes, and at the end of that time the spasmodic contractions were still going on almost as vigorously as when first noticed. How much longer they continued we have not been able to ascertain, but the fact seems worth recording.

TUMOUR OF SUPERIOR MAXILLA.

(Under the care of Mr. DURHAM.)

John F., aged 49, labourer, was admitted May 20, 1873. Family history good; a healthy man. About fourteen years ago he was very much troubled with bad gumboils from carious teeth, and they used to discharge freely. Thirteen weeks ago he had a slight cold, and noticed a swelling on the right side of his face, which has gradually increased in size since.

On Admission.—The patient is a wasted man; his face is distorted by a tumour, which pushes forward the cheek on the right side and the corner of the mouth. On looking into the mouth a mass is to be seen on the outer side of the alveolar process of the upper jaw, between the gum and the cheek. The surface is ulcerated, and extends from the right canine backwards to about the site of second molar. The only teeth present on this side are one incisor, one bicuspid, and the canine. The surface of the tumour is hard and nodulated, but no shell of thin bone can be felt over it.

June 10.—Mr. Durham operated. An incision was made from the inner angle of the eye downwards by side of the nose through right nostril and through upper lip in the median line. A second was next carried from the angle of the mouth upwards into a curve (whose concavity was upwards) for two inches. Free bleeding occurred, which was arrested by twisting. The flap thus made was dissected up, a tooth withdrawn, and the nasal process of superior maxilla divided with bone-forceps. The palatine process was then divided in a similar manner, one blade being in the nostril, the other in the mouth. The molar process was divided by the saw. The bone and growth were then turned outwards. Several ragged fragments were next removed by the forceps, and, as the growth appeared to invade the palate, a fresh section of bone was taken away by the saw further to the left, close to the septum. Some bleeding still continuing, it was stopped by the hot iron, and the soft parts were then adapted by sutures.

The microscopic nature of the growth has not as yet been ascertained.

EDINBURGH ROYAL INFIRMARY.

PERIMETRITIS POST-PARTUM.

(Under the care of Dr. MATTHEWS DUNCAN.)

[Reported by Dr. J. R. HARDIE.]

J. M., AGED 24, unmarried, was admitted to Ward XVI. of the Royal Infirmary on April 9, 1873, complaining of pain in the lower part of the back in the left iliac, hypogastric, and epigastric regions.

Patient was delivered eleven weeks ago, and was progressing favourably until about seven weeks ago, when, after going out, the pain complained of commenced. The pain was first noticed in the left side and lower part of the belly. She has had rigors and occasional sweatings. Temperature 101·6°; pulse 108.

Physical Examination (April 11).—The lower half of the belly, or, more exactly, all below a line joining the crests of the ilia, is occupied by hardness, greatest and most prominent in the middle. It is everywhere dense and tender to the touch; dull on superficial percussion, but slightly resonant on deep percussion. On introducing the finger into the vagina, the cervix uteri is found to be nearly in its natural position. The cavity of the true pelvis is observed to be unoccupied, except at its upper margin on the left side, where there is a little hardness prominent from above. It is slightly tender, and on bi-manual examination is identified with the external hardness, and presents a doubtful feeling of fluid. The rest of the plane of the pelvic brim presents fulness and tightness, but no marked hardness. The uterus is fixed, and on introducing the probe it is found to be of natural length, but displaced a little forwards. No parametric induration is felt in the pelvis or groins. Poultices were ordered to be applied over the seat of abdominal swelling, and one half-grain of opium to be administered when pain is troublesome.

Progress of Case.—April 26, temperature 100°, pulse 90; 27th, temperature 99·8°, pulse 102; 28th, temperature 99°, pulse 102. The hardness now extends only as high as to a line joining the anterior superior spinous processes of the ilia, and appears to be further diminished at either end of this line. April 29: Temperature 99·5°; pulse 76. May 19: Belly appears natural to the touch. On examination per vaginam there are discovered signs of numerous adhesions at the brim of the pelvis, and also especially a mass of hardness on the left side of the uterus, which is evidently connected with the left ovary. The whole of the organs in the brim of the pelvis are easily displaceable, and almost mobile. 30th: The swelling formerly described on the left side of the uterus cannot now be made out. The pelvic viscera are now movable. Patient has now a healthy look; body well nourished; and she says that she feels quite well. Sent to convalescent hospital.

This was a very simple and characteristic case of perimetritis post-partum, without suppuration anywhere. The perimetritis was extensive, involving the lower packet of small intestine. Neither symptoms nor signs indicated the presence of suppuration, the inflammation being only everywhere adhesive. The rapid disappearance of the hardness and adhesions is noteworthy. There are grounds for believing that early in the disease there was an attack of ovaritis. The pain began in the left groin, and was always severest there. There could always be felt in the region of the left ovary a tender hardness, which as the adhesions disappeared could be identified as this gland. The adhesions about it were the last to disappear, and when they did so the gland could be no longer made out by any kind of examination.

WE much regret to learn that on the evening of Thursday week, the 19th inst., Dr. Robert Law, King's Professor of the Institutes of Medicine in the School of Physic in Ireland, was suddenly attacked with right hemiplegia. The latest accounts are somewhat favourable, the patient being quite conscious, and not losing ground in any way.

"DEDUCTING," says the *Iron*, "railway servants and suicides, the railway system of the United Kingdom costs about 900 lives per annum, out of a passenger traffic of 375,000,000; while, taking an average of the last four years, 122 persons are killed annually by accidents in the London streets."

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JULY 5, 1873.

"A FREE BREAKFAST-TABLE."

A popular cry, professedly in the interests of the labouring and poorer classes, is "A Free Breakfast-Table"; and members of Parliament who wish to win the favour and praise of the masses adopt this cry as a valuable help towards their ambition, professing to see in it something of a principle to be accepted by the Legislature, calculated to confer a great boon upon those classes considered least able to bear taxation. Now, we might examine this cry, or the principle contained in it, from a political point of view, and we believe could show that the classes in question have no just claim for exemption from the incidence of indirect taxation—which is really the only form of taxation that reaches them,—and that their relief from such taxation beyond the point already reached would throw an unfair burden on the income-tax-paying portion of the community. We might further show that the reduction of duty upon various articles of consumption—as, for example, sugar,—although involving a great loss to the revenue of the kingdom and the necessary retention of an income-tax, gives no tangible relief or benefit to the purchasers of the commodity by a corresponding reduction of its price, inasmuch as the amount remitted in duty is intercepted and pocketed by the class of middle-men who intervene between the producer and the consumer.

However, leaving such political discussions to politicians, we would examine the reasonableness of the cry from a hygienic point of view, and in the first place would ask its advocates whether they have duly apprehended its meaning and worth? To demand a "free breakfast-table" is simply to ask for the entire remission of the duty on tea, coffee, and sugar; the other usual accessories to the breakfast-table—bread, butter, bacon, and eggs—are to all practical purposes free. We have, therefore, only the question to answer, whether the making tea, coffee, and sugar—particularly the first, for coffee is comparatively sparingly used, and sugar is already sufficiently cheapened for all domestic purposes—free commodities will be advantageous to the popularly styled "working classes." Our reply is that such a course would not be so; and that when the vast sacrifice of revenue it would involve is taken into account it would be unjustifiable.

The saving to the classes in question accruing from the reductions of duty already carried into effect is not proportionate to that reduction. Its advantages have been principally reaped by the dealers, whilst the increased demand for the articles has fostered adulteration, and introduced into existence compounds under the name of tea, disgusting in character and deleterious in their effects. Before the duty was lessened tea was a much more genuine article than now, and its consumers had the benefits derivable from its use from smaller supplies, and consequently at not much greater cost than at the present day of cheapness and nastiness.

But, apart from such considerations, we hold that tea-drinking should not be encouraged. The teetotalers are urgent in their endeavours to restrict the sale and use of alcoholic liquors, on the plea of their detriment to the health of the nation; and to the same one-sided enthusiasts we may attribute much of the strength of the cry for the remission of the tea duty. On the medical side we contend against excessive tea-drinking as injurious to the public health, and, although without advocating the evil policy of restriction of trade in articles of diet, we raise our voice against measures calculated to increase the evil we deprecate.

No medical man of experience and observation among the poorer classes of society can fail to be impressed with the lack they display of knowledge how to feed themselves. Cookery is an almost unknown art among them, and when attempted is an exhibition of wastefulness. The men generally so take care of themselves as to secure more or less animal food, towards which also they have, as a rule, more avidity and taste than the women, and are vastly indifferent to its culinary preparation. The wives, from natural instincts and from more sedentary occupations, care less for such food, and too often shirk the trouble of cooking from sheer indolence; and their growing tendency for years has been to rely more and more upon a tea and bread-and-butter diet. This diet, too, they enforce upon their children; and no one acquainted with the elements of food necessary to health can fail to recognise that it is an insufficient diet. It is not, therefore, to be marvelled that medical men are now becoming acquainted with its evil results, and exposing them. The wonder is that protests against such feeding have not been heard earlier; but since the counter-blast to excessive tea-drinking raised by Dr. Arlidge nearly two years ago, many physicians have followed in his wake, and exposed the evils of the favourite diet of females of the lower strata of society. At the time some literary periodicals made merry at the idea of the ills of tea-tippling, but the experience of the profession was against them.

Although various communications have reached us on the subject, we have chiefly been led to write on it from remarks occurring in the recently issued Parliamentary report on the hours of labour in factories, which puts prominently forward the ill results accruing from the wide-spread use of the insufficient diet in question. The Commissioners, Dr. Bridges and Mr. Holmes, put sundry questions to the medical men practising in textile factory districts respecting the health of the operatives, the diseases prevalent among them, and their causes. In reply to those questions, the interrogated doctors referred to the prevalence of digestive derangements of an obstinate form, consequent mainly "on the eating and drinking of easily prepared foods, as bread, tea, and coffee, and the neglect of meat and fresh-cooked vegetables."

Distinct individual testimony to the pernicious results on children and adults of this defective diet is borne by Alderman Ferguson, of Bolton, a factory surgeon of wide experience, and by Dr. H. Browne, of Manchester; and the Commissioners

observe, generally, that dyspepsia is one of the most prevalent diseases among the factory operatives, and is attributable to the excessive use of tea.

Defective nourishment, with its attendant dyspepsia, must sap the vitality of the body, and provoke early degeneration and decay. In other words, a population underfed is one that must deteriorate physically and degenerate; and if it be a duty of a Government to restrict or deter from the use of unwholesome food or beverage of any one sort, it must also be so with regard to any other. In fine, the policy of a "free breakfast-table" brings no benefit to the classes in whose interests it is advocated, but encourages the extension of a mode of living inimical to the health of the country. It would be well, indeed, for the poorer population if they could be induced to return to the dietary of their forefathers, and replace the bread-and-butter and tea by meal and milk, and supplement these articles by a modicum of soup, in the use and preparation of which they might get most valuable instruction from abroad.

THE JUDGMENTS OF THE SCOTCH JUDGES ON THE MEDICAL WOMEN QUESTION.

On Friday, the 27th inst., the four judges of the Second Division of the Court of Session gave their decision in the ase of Jex Blake and others *v.* the Chancellor and Senatus of the University of Edinburgh. By a majority of three to one the interlocutor of Lord Gifford was reversed, and the plaintiffs were ordered to pay the costs of the defendants. Previously to giving their opinion the judges formally consulted the other members of the Scottish Bench. It is believed there will be no appeal from this decision.

In a lucid statement by Lord Cowan of the rights demanded in this action, and of the grounds upon which the judges have unanimously given an adverse decision as to the more important points, we find that the plaintiffs demanded as a legal right that women be admitted as students to the classes of any professor in the University on precisely the same footing as male students; that they are therefore entitled to study and graduate in Medicine in the University; and that the medical professors are bound to instruct women either in separate or in mixed classes. On this general question of legal right Lord Cowan did not think it necessary to dwell, "seeing that all the consulted judges without exception had returned opinions to the effect that the legal rights asserted by the pursuers [or plaintiffs] could not be maintained or enforced, irrespective of the regulations adopted by the University Court." In that view Lords Cowan, Neaves, and Benholm concurred. The Lord Justice Clerk (Moncrieff), who, as Rector of the University, was President of the University Court when the regulations were adopted, is also of opinion that "the contention of the pursuers that females were entitled to the same University privileges as males was a hopeless one, against which usage was conclusive." Lord Gifford, too, who in his enthusiastic interlocutor in favour of the ladies, and against which the Senatus appealed, most unquestionably declared his conviction that *vir* in the charters included *fœmina*, just as the word "horse" includes mares, now, in a new opinion, confesses that he was in error. Apart from the regulations, and independently thereof, he is of "opinion that the ladies could not, as a matter of right, demand admission as students into the University." Had, then, the University Court the power to confer this legal right, as regards the Faculty of Medicine? Lord Cowan and the majority of the judges are clearly of opinion that it has no such power, and that the regulations by which the professors were "permitted" to give instruction in Medicine to women were not only beyond the powers of the Court, but were a manifest encroachment on those of the Crown and Parliament. But in so far as the minority of the judges are of opinion that the University Court had this power of permission, nothing is really gained for the medical women, because they are equally of opinion that neither the Court nor the Senatus can compel the professors to instruct women, either in separate or mixed classes. All that is alleged in their favour by the minority of the judges, is that the medical professors may teach women if they please, and that if they do so teach they must also examine for graduation. But the minority do not say that the University Court has the same power as regards other Faculties. In short, a clear judicial deliverance is wanting in all their opinions, and sentimental discussions predominate. On the other hand, the opinions of the majority are lucid statements of the law. We would especially mention that of Lord Ormidale, and referred to by Lord Cowan.

It is to be hoped that the experience the medical professors have had of the "lady" students will serve as a warning to them to abide by the law so lucidly laid down, and that for the future none of them will coquette illegally with the "ladies," however mature, persuasive, or attractive the applicants may be.

THE NEW ARMY MEDICAL WARRANT.

We have received at different times reports of meetings of army medical officers held at the camps of Aldershot and the Curragh, the object being to discuss the new Medical Warrant, and to elicit the opinions of the Service as to the desirability of memorialising the Secretary of State for War, with a view to obtaining an alteration in those clauses which are so manifestly unjust to gentlemen holding commissions in the Army Medical Department. It is not necessary to give *in extenso* the proceedings of these meetings, for the simple reason that we have already, on numberless occasions, placed before our readers a complete list of those grievances which the new Warrant has entailed upon members of the profession doing duty with the army. The salient points are now so well known that it is needless to repeat them; suffice it to say that upon each of the occasions above alluded to a "round robin" was drawn up, signed, and forwarded to the head of the Department, praying for a reconsideration of the obnoxious clauses. Further, we have heard of other meetings for the same purpose at different stations both at home and abroad, and we cannot but think that Mr. Cardwell will by this time have realised the great fact that the discontent with his new legislation for the Medical Department is not simply the expression of feeling on the part of a dissatisfied clique, but rather the forcible protest of a whole body of gentlemen, who feel that their interests have been most unjustly sacrificed to the spirit of parsimony which has pervaded most of the acts, in relation to the medical services, of the present Government. As a matter of fair reasoning and common sense it has always hitherto been the received idea that no alterations should affect men already in the Service to their disadvantage; yet here, upon the debated points, the whole body of medical officers are deprived of advantages which some of them have enjoyed for a period of thirty years. And the policy (if policy it can be called) of such a proceeding is manifestly short-sighted: the small amount which will be saved to the country by the abolition of the forage allowance will be largely exceeded, if the authorities at the War Office refuse to acknowledge their error, by the difficulty which will ensue in obtaining recruits for the Service. The sister island came to the rescue of Pall-mall upon a former occasion; but if the protests of its leading colleges upon the new Warrant are sincere—and of this there is no doubt—Mr. Cardwell must not look in the same direction for assistance to enable him again to coerce the Medical Department.

In conclusion, we would hint to the gentlemen concerned

that no agitation is so powerful or carries so much weight as that which is heard within the walls of St. Stephen's. Meetings such as we have now recorded are useful as instances of universal feeling, but we doubt if the influence they exert on the authorities is very powerful. When an honourable member rises in his place to catechise the Secretary of State for War touching the existing dissatisfaction in the medical corps, fresh evidence is brought to that worthy official's mind that the body for which he has just (in some instances) so unsatisfactorily legislated are possessed of potent friends and well-wishers who are not disposed to stand by and allow them to be wrongfully entreated.

THE WEEK.

TOPICS OF THE DAY.

We have the pleasure of publishing this week the first half of Professor Rolleston's most able and valuable Harveian Oration. Professor Rolleston's Oration fulfils two objects—one is, it gives an account of recent advances which have been made in the anatomy and physiology of the circulation, thus illustrating the fame and reputation of the great discoverer who made such advances possible; and secondly, he has vindicated the claims of Harvey against one of the many persons—Walter Warner, the mathematician—who have been said to have anticipated the discovery of the circulation. Professor Rolleston completely disposed of Warner's claims by reading passages from his MSS. found in the library of the British Museum. The announcement of Professor Rolleston's discovery of the moderator-band in the heart of the Australian cassowary—a band existing in the hearts of Ungulates and in a rudimentary state in the human heart—greatly enhanced the scientific value of the Oration, which, whether as a scientific or literary production, has scarcely been surpassed by former Harveian Orators.

The Royal Colleges of Physicians and Surgeons of Edinburgh some weeks ago presented to the House of Commons a statement of reasons against Mr. Headlam's Bill for amendment of the Medical Acts. This statement is now before us. As there is not the slightest chance of Mr. Headlam's or any other Medical Reform Bill being heard of until a new Parliament has been elected, we do not think it necessary to print the very able statement of the Colleges *in extenso*. Most of their arguments have appeared in some form or other, and have frequently been discussed in our own columns. We think that if the Scotch bodies are determined to oppose—and up to a certain point we believe they are capable of opposing effectually—the cry for fresh medical legislation, they have only to do one thing, that is, raise the standard of examination for the licences of the Scottish Corporations, and thus deprive their opponents of the strongest reason for urging the necessity for a change.

The Edinburgh Royal College of Surgeons has addressed a memorial to the Director-General of the Army Medical Department in reference to the new Army Warrant, which we publish in another column. It seems to us that the memorial should rather have been addressed to Mr. Cardwell, who is the party really responsible for the defects of the Warrant.

A second application from the Ladies' Association for the Promotion of the Medical Education of Women to the Council of Queen's College, Birmingham, for the admission of women to the medical classes has met with a second rebuff. The *Birmingham Daily Post* reports that a counter-memorial, signed by forty out of the fifty male medical students, was presented at the sitting of the Council at which the ladies' petition was received, expressing the desire of those who signed it that women might not be admitted to the classes. After due consideration and discussion, on the motion of Canon Wilkinson, seconded by Professor Clay, the following resolution was agreed to, *nem. con.*:—

"That this Council, having fully considered the subject of the admission of female students to the medical department of this College, begs to refer the Ladies' Committee for the Education of Women for the Medical Profession to a resolution already passed by this Council, as follows:—'The Council, whilst fully recognising the right of women to occupy any field of employment for which they may deem themselves qualified, and desirous to afford any facilities in its power towards the higher education of women, considers that it cannot, under existing arrangements, conveniently admit female students to any of its departments, and is not prepared, at present, to make such alterations as the admission of female students would require.' The Council still regards the practical difficulties in the way of complying with the request made to them as insuperable, and regrets that it cannot further entertain the question at present."

We congratulate the professors and medical students of Birmingham on the wise stand the Council has made in this matter. In the present state of affairs in Edinburgh and Birmingham, and after the strong expression of opinion that has been drawn from the Scottish Bench as to the impropriety of mixed classes, we should hope that if women are still determined to attempt as a profession the practice of Medicine—a calling for which we have still to be convinced that they are physically or mentally fitted,—we say we hope they will see the necessity of obtaining a medical school and an examining board of their own. As long as modesty and decency are valued in England they will never be allowed to participate in the education provided for male practitioners.

Lord Ettrick has done well to call the attention of the Government to the frightful sacrifice of human life in India—amounting to 4000 annually—by tigers and snakes. A correspondent of the *Times* suggests strychnia for the tigers, which has been found so useful in clearing the Australian settlements of prairie dogs. For snakes in India the offer of a sufficiently tempting reward is no doubt the best remedy. Dr. Fayrer, in the "Thanatophidia of India," proves that the natives will readily adopt snake-killing as a means of living if it be sufficiently paid. In the same work there are some valuable hints about the use of carbolic acid and tar in keeping deadly snakes at a distance.

We have the pleasure of recording that her Majesty the Queen has recently conferred the honour of knighthood on two members of our profession. On June 26 Dr. Alexander Nisbet, Honorary Physician to her Majesty, and Inspector-General of Hospitals and Fleets, received that honour; and on the 30th of last month the Queen conferred knighthood upon Dr. Joseph Ritchie Lyon Dickson, Physician to her Majesty's Legation in Persia, who is in attendance on the Shah. Sir Joseph Dickson is the second son of the late Mr. John Dickson, R.N., of Dalkeith, surgeon to Lord Nelson at the siege of Copenhagen, afterwards appointed by the British Government Surgeon-Major and Chief of the Medical Staff of his Highness the Hereditary Pasha of the Regency of Tripoli, at the request of his Highness and on the recommendation of Lord Nelson. In 1847 Sir Joseph was appointed Physician to her Majesty's Legation in Persia, and in 1849 was called to attend the King for typhus fever during the absence of his Majesty's body physician, and received the Commander's Star of the Lion and Sun in acknowledgment for his successful attendance. The Shah requested the British Government to attach Sir Joseph to his staff on the occasion of his Majesty's visit to Europe. Sir Joseph's elder brother is Physician to her Majesty's Embassy in Constantinople.

The letter in the *Times* last week signed "George Burrows, M.D., Physician-Extraordinary to the Queen," and warning tourists against an outbreak of small-pox in the Bernese Oberland, turns out to be a forgery. Dr. Burrows disclaimed any

knowledge of it in the *Times* of Friday last week. In the same paper of Thursday last is a letter from the Agent and Consul-General for the Swiss Confederation, in which it is asserted that there has not been a single case of small-pox in the district, and that there had been but one case of small-pox in the whole Canton during the present year, and that was in a district far removed from Thun, Interlacken, and the Bernese Oberland. The author of such a stupid and mischievous hoax should be sent to spend the holidays in an empty small-pox hospital as a punishment.

THE ELECTION INTO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council of the College took place yesterday, the 3rd inst., and rarely has there been so much interest excited in the Profession—partly, perhaps, owing to the unusual number of candidates for the four vacancies caused by the resignation of Mr. Charles Hawkins, and by the retirement in the prescribed order of Mr. Richard Quain, Mr. Thomas Turner, and Sir James Paget. The last-named gentleman, however, again offered himself, and was deservedly re-elected, being returned at the head of the poll. The candidates, originally nine in number, but reduced to eight by the retirement from the contest of Mr. Thomas Wakley, were, taking them in chronological order, Messrs. Francis Hird, of the Charing-cross Hospital; Haynes Walton, of St. Mary's Hospital; John Cooper Forster, of Guy's Hospital; Edward Law Hussey, of the Radcliffe Infirmary, Oxford; John Marshall, F.R.S., of University College Hospital; William Scovell Savory, F.R.S., of St. Bartholomew's Hospital; and George Southam, of the Manchester Royal Infirmary. Messrs. Walton, Forster, Marshall, and Savory are Fellows by examination, and Messrs. Marshall and Savory are members of the Court of Examiners. Punctual to the hour appointed (two o'clock) Mr. Hancock, the President, accompanied by the Vice-Presidents, Messrs. Curling and Clark, entered the library, where the election took place, and explained to the Fellows the mode of election, which was by ballot. The voting then commenced, and was not brought to a close until five o'clock, when the scrutiny commenced, and at its close the President declared that the choice of the Fellows had fallen on Sir James Paget, Bart., and on Messrs. Haynes Walton, George Southam, and John Marshall. The numbers polled by the candidates were as follows:—

Sir James Paget . .	200,	including	1 plumper.
Mr. Haynes Walton . .	136	,,	25 plumpers.
Mr. George Southam . .	113	,,	13 ,,
Mr. John Marshall . .	106	,,	5 ,,
Mr. John Cooper Forster .	105	,,	4 ,,
Mr. William Scovell Savory	97	,,	1 ,,
Mr. Francis Hird . .	62	,,	5 ,,
Mr. Edward Law Hussey .	29	,,	0 ,,

In the evening the Fellows dined, as usual, at the Albion Tavern, under the presidency of Professor Humphry, M.D. A large number of country Fellows attended the election, amongst whom we noticed Dr. Harris, of Redruth; Messrs. Southam, Blackmore, Mellor, Railton, Woodcock, of Manchester; Husband, of York; Mathias, of Stockport; Sir J. C. Burrows, of Brighton; Messrs. Harrison, Stubbs, McCheane, Walker, of Liverpool; Cattlin, Rugg, Morgan, of Brighton; and Messrs. Baker, Bartleet, Savage, and Thomas, from Birmingham.

NEW EXAMINERS AT THE ROYAL COLLEGE OF SURGEONS.

At a special meeting of the Council of the Royal College of Surgeons on the 1st inst., to elect two members of the Court of Examiners in the vacancies occasioned by the decease of Mr. Richard Partridge, of King's College, and by the completion of his five years' term of office by Mr. Samuel A. Lane, of St. Mary's Hospital, the choice of the Council fell on Mr. John Marshall, F.R.S., Surgeon to University College, and Professor of Anatomy in the Royal Academy of Arts, for the first-named vacancy; and on Mr. Timothy Holmes, Surgeon to St. George's Hospital, and Hunterian Professor of Surgery and Pathology in the College of Surgeons, for the second vacancy.

THE ANNUAL REPORT ON THE ARMY MEDICAL DEPARTMENT FOR THE YEAR 1871.

The annual Blue-book containing the Report on the Army Medical Department for the year 1871 has just been published. This, the thirteenth volume, is not quite so bulky as its predecessors, but contains a large amount of information compiled by various medical officers belonging to the army. It commences as usual with a statistical account of the health of the troops serving in the United Kingdom during the year referred to, from which we gather that, compared with the results for 1870, there has been a very slight increase in the admissions to hospital and mean daily sick, but a decrease in the deaths. They have all, however, been considerably under the average of the last ten years.

The average strength of non-commissioned officers and men doing duty in the United Kingdom during the year 1871 was 92,667. The admissions into hospital from this force amounted to 75,641, the deaths to 764, and the average constantly non-effective from sickness to 3594. The admissions, therefore, were in the ratio of 816, the deaths of 8·24, and the mean daily sick of 38·78 per 1000 of mean strength. The death-rate thus shown gives a decrease of ·87 per 1000 as regards the preceding year.

A carefully prepared table shows the influence of the different classes of diseases in causing the sickness and mortality, from which it will be seen that there has been a decrease in the ratio of admissions by both groups of general diseases, and in that of the deaths also by the constitutional group. This reduction in admissions has been to some extent counterbalanced by an increase in diseases of the urinary and cutaneous systems, and in accidental injuries. The fluctuations in the other classes of diseases has been very slight.

Eruptive fevers were much more prevalent than in 1870 at all the groups of stations except the camps, the excess being mostly due to small-pox, which prevailed so generally throughout the year as an epidemic among the civil population. The troops in camp did not escape it; but there was a reduction in admissions by eruptive fevers compared with the preceding year, chiefly from the abatement of measles and scarlet fever. There were altogether 213 cases of small-pox admitted into hospital, of which number nineteen died, or 9 per cent. The patients are all stated to have borne marks of vaccination, except one recruit who had just joined. Revaccination was largely performed in consequence of the widespread prevalence of the disease; all men were subjected to it in whom the marks had become indistinct, whenever a case occurred in a corps or at a station where the malady was prevalent.

Continued fevers did not differ greatly from the results of the preceding year. Paroxysmal fevers were less prevalent at all the groups of stations, except the large manufacturing towns, and London and Windsor—the dockyards and arsenals, as usual, furnishing the highest proportion of cases. The relative prevalence of these fevers at the different stations appears to depend on the previous service of the corps doing duty at them, as they are almost always the result of liability contracted in the tropics.

Syphilis was more prevalent than in 1870 at the dockyards and arsenals, and large manufacturing towns, London and Windsor showing no change, and the other groups of stations a decrease.

The admissions from scrofula and phthisis were lower than

in the preceding year at all stations, except the camps, which showed no change. Local diseases exhibited no marked difference, with the exception of a considerable increase in those of the urinary system. Injuries differed little from the results of the previous year, and the proportion of deaths by suicide in the two years was identical.

There are also the usual sanitary reports from the principal districts and large stations, together with the records of invaliding and recruiting for the year 1871 in the United Kingdom, which give most exhaustive and valuable information. These are followed by separate and distinct reports from all foreign stations under British control, including India, containing in each instance similar details to those given for this country; and the first portion of the book terminates with an able summary showing the sickness, mortality, invaliding, and the proportion constantly non-effective from sickness per 1000 of mean strength in the whole of the army at home and abroad for the year 1871, and on the average of the ten years 1861-70.

THE SPREAD OF CHOLERA.

Reports of the spread of cholera continue to reach us from Austria. There is also a report of the death of at least one English lady at Vienna from so-called cholerine. The outbreak of cholera in America, if really of the Asiatic type, bids fair to offer a fine nut to crack on the modern theories as to the propagation of the disease.

ORDERS OF MERIT FOR SCIENTIFIC MEN.

A debate in the House of Lords on an address to the Queen, introduced by Earl Stanhope, and asking the institution of an order of merit for scientific and literary men, ended without a division, as the Government was strongly opposed to any such innovation. It was shown by Earl Granville that the universal decoration of distinguished men on the Continent had led to much abuse and misuse of the titles conferred; and also that the recipients of these honours were more frequently those specially skilful in making themselves popular with those personages who had to dispense the orders of merit than sound men of science; and that the great men of letters, who are as a rule very reticent, would not be likely to press for such distinctions. The *Times* generally disapproves of the measure on the ground that it would be inexpedient and impracticable, inasmuch as the great men of letters and science would hardly have the "push" of less worthy men, all whose doings and purposes are kept prominently before the public with the single object of courting public favour. We consider that it would be difficult to see what valid distinction there is between the man who holds a Government post and the man whose ambition does not lead him to enter the public service, that the former should receive a title for himself and a certain social standing for his family, while the latter, more gifted, more famous, more useful to his own age, and perhaps to ages that are to come, should remain without any such State recognition. Attempts have been made to draw a distinction, but they seem to us futile.

A SCOTCH JUDGE ON MIXED MEDICAL CLASSES.

We have received a legal document entitled "Opinions of Consulted Judges *in causâ* Miss Sophia Louisa Jex Blake and others," etc., in which is recorded Lord Ardmillan's opinion of the conduct of the said Miss Sophia Louisa and others in attending mixed medical classes. Lord Ardmillan observes:—

"I fully and respectfully recognise the high qualities, capacities, and vocation of women. I recognise especially the fact that the elevation of women in domestic and social position is one of the blessed fruits of Christianity. There are few, indeed, who hold intelligent and virtuous women in higher estimation than I do. It is very much for their own sake, and on account of the respect which I entertain for them, that, on this particular point, I feel it my duty to state my decided opinion that the promiscuous attendance of men and women in mixed classes of medical study, such as anatomy, surgery, and obstetric science, with concomitant participation in dissection, demonstration, and clinical exposition, is a thing so unbecoming and so shocking—so perilous to the delicacy and purity of the female sex, to the very crown and charm of womanhood, and so reacting on the spirit and sentiment which sustain the courtesy, reverence, and tenderness of manhood—that the law and constitution of the University, bound to promote, and seeking to promote, the advancement of morality as well as knowledge, cannot sanction or accept such attendance."

Lord Ardmillan's remarks apply ostensibly to the demand by the ladies, referred to above, that the Senatus should compel the medical professors to teach them in mixed classes; but his Lordship surely cannot have forgot that it was precisely the "thing so unbecoming and so shocking," in his opinion, which led to the disgraceful riot of the extra-academical students at the College of Surgeons in Edinburgh, and the never-ceasing abuse of the University therefor. Is it not more than probable that the riotous students anticipated this opinion of his Lordship, and only too rudely expressed it?

The *Scotsman*, the organ of the medical ladies in Edinburgh, has expurgated its report of Lord Ardmillan's judgment by omitting the passages we have quoted, feeling, doubtless, how severe is this reproof of the Scottish judge, not only to the unfortunate lady-students involved, but also to all those who have encouraged them in demanding and attending mixed classes.

A CASE OF MELANÆMIA.

An interesting case of this rare affection is given in the second Heft of Stricker's *Jahrbuch* for this year by Dr. S. Von Basch. The patient was a physician of the Banat, and lived in a malarious district. In 1868 he had an attack of ague, which was cut short by quinine. A second attack was dealt with in the same fashion in 1869; but the attacks were renewed more violently in 1870 and 1871, till in 1872 they appeared in a most aggravated fashion. In May that year he was also attacked by neuralgic pains apparently malarious in their origin. In June he began to complain of pain in the urethra while passing water, and this pain gradually spread upwards till it reached the symphysis pubis. Fourteen days later he had pain in his joints, and high fever, which yielded to water dressings and quinine in large doses. These pains began in the course of the morning and gradually increased in intensity till about four or five o'clock in the afternoon. During the early hours the urine was normal, or with only a slightly flocculent precipitate of mucus; but that passed near the time when the pain was greatest was turbid and milky-looking, depositing a copious dirty-white sediment soluble on the addition of acetic acid. When seen in August by Dr. Basch the patient was markedly cachectic, and the spleen and liver were enlarged. Under appropriate treatment he somewhat improved, but the sediment continued. One day, examining the urine when free from the white sediment, Basch found a scanty reddish precipitate, mainly composed of uric acid crystals, with some oxalates, but containing over and above hyaline masses, some of them like cells, some in fragments, the larger of which were thickly filled with dark brown and finely granular pigment. Further investigation showed that exactly the same kind of bodies were to be found in the blood. The ordinary dirty-white sediment was found to consist of needle-shaped crystals, sometimes solitary, sometimes in rosettes, and were set down as the crystalline bibasic phosphate of lime. The urine itself was acid. The case was so far satisfactory that the patient improved and obtained a considerable degree of health.

The case is imperfect, and we purposely abstain from all comment; but we would invite attention to it for its analogies

in certain points with the cases of hæmatinuria recently so graphically told in these columns by Dr. Druitt. This case, in fact, seems a kind of halfway-house to the more aggravated forms there recorded.

PRECAUTIONS AGAINST CHOLERA.

We are glad to observe, from a reply to an inquiry on the subject, that the Chairman of the Port of London Sanitary Committee said that the Committee were fully alive to the necessity of taking precautionary measures against the possible visitation of cholera to this country.

APPOINTMENT OF NURSES TO HOSPITALS.

Dr. Inglis, one of the honorary physicians of the Worcester Infirmary, has addressed a letter to the committee of that institution, complaining of a change which has lately been introduced, of giving the power of electing the nurses to the matron. We do not endorse the opinions expressed by Dr. Inglis, though undoubtedly there is some force in them. He says the matron, failing to obtain two nurses from the Stockwell Hospital on whom she had calculated, obtained two others through advertising, neither of whom (he says) was fit to be placed in the responsible position of head nurse in an infirmary. No reflection was cast upon them, but they were not competent for the duties of nurses. Dr. Inglis considers it to be a grave defect in the management of the Infirmary that incompetent persons can thus be put in charge of patients. He complains that the medical gentlemen are not consulted, as heretofore, as to the qualifications of persons desiring to be engaged in this capacity, and submits that no one ought to be accepted as a nurse for service in the Infirmary except her qualifications are satisfactory to the medical staff, and that in order to insure this the testimonials ought, as in the case of appointing a house-surgeon, to be referred to the physicians and surgeons.

A (SO-CALLED) MARTYR TO THE VACCINATION ACT.

A Mr. Price, of Ludlow (says the *Oswestry Advertiser* of the 25th ult.), is paying dearly for "conscientious convictions" on the subject of vaccination. He has already been fined £30 for refusing to have his child vaccinated, and last week was again summoned and ordered to have the operation performed within twenty-eight days. Upwards of 300 inhabitants of the town signed a memorial to the magistrates asking them not to impose another fine, on the ground that the objection was a conscientious one.

APATHY OF A VESTRY.—THE ADULTERATION ACT.

A letter was read at the last meeting of the St. George's (Hanover-square) Committee of Works, from the Secretary of the Anti-Adulteration Society, to the effect that they desired the Vestry to co-operate with them in carrying out the Adulteration of Food Acts. An opinion was expressed that the Vestry of the parish was not sufficiently active in the matter. The Committee, however, decided to take no action. The Committee will incur a great responsibility if the Adulteration Act is to be a dead letter to them; and we trust the Anti-Adulteration Society will, although they have not obtained the co-operation of the Vestry, adopt steps to bring under the penalties of the Act tradesmen who vend adulterated articles of food. Supineness in carrying out this important Act of Parliament on the part of the Vestry of such a parish as St. George's, Hanover-square, rather surprises us. We should have expected a ready adoption of measures for the suppression of the evils which the Act was designed to correct, so that the present system of trading might be purged of the taint of fraud by adulteration.

A DANISH FACTORY ACT.

The *Times* in a recent issue contained an interesting notice from its Danish correspondent of the adoption by the Government of Denmark of those general principles of supervising and controlling labour which have so long been in operation and so universally approved in this country. The Act of the Danish Government enforcing these principles bears the wide-reaching definition of "an Act concerning the work of children and young people in mills or great workshops, and the public inspection to be established of the same." It will thus be seen that the measure at once comprehends legislation both for factories and workshops, and therein effects an amalgamation in the work to be performed not yet attained in this country, where several heterogeneous factory and workshop Bills are in operation to the detriment of efficient and harmonious action.

In some of its provisions the Danish Act is more stringent than the English factory laws. It allows no child under ten to be employed; it limits the work of those between ten and fourteen to six hours and a half each day, including an interval of rest for half an hour; and further forbids work to them before six in the morning and after eight at night. Youths between fourteen and eighteen may work twelve hours a day, but not before five in the morning nor after nine at night, and of that time two hours at least are to be given them for rest and meals. The proprietors of mills and workshops are to provide a separate room for the meals of the young people in their employ; and, as far as circumstances will permit, the two sexes are to be kept separate as well during working as during recreation hours. We may add, moreover, to this account from the *Times*, that special provisions are made for the medical inspection of factories and of their operatives, and for periodical returns of the state of health of those employed and of the hygienic condition of the workshops.

FROM ABROAD.—PRIZE QUESTIONS OF THE ACADÉMIE DE MÉDECINE—EXCISION OF THE COCCYX IN IMPERFORATE ANUS—THE NEW MEDICAL FACULTY AT LYONS—MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The meeting of the Académie de Médecine for the distribution of the prizes of 1872, which, after postponements, was held on June 24, passed off very flatly, with a small audience, and an absence of the customary pomp,—why, no one seems to know. The works which received recompense in recognition of their merit were—M. Saint-Vel's "Traité des Maladies des Régions Intertropicales," M. Pellarin's "Contagion du Choléra demontrée par l'Epidemie de la Guadeloupe," M. Labadie-Lagrave's "Contributions à l'Etude de la Dysménorrhée Membraneuse," M. Liouville's "Sur la Généralisation des Anévrysmes Miliares," and M. Lagrelette's "Traité de la Sciatique." For several of the prizes no memoirs have been sent in, and altogether the responses to the invitations to competition seem to have been but feeble.

The list of prize subjects for 1873 was also announced; but as the time for sending in essays for these has passed by, we need only notice those proposed for 1874:—1. The Academy Prize of 1000 fr. is to be awarded for the best unpublished work on Experimental Physiology. 2. The Portal Prize of 2000 fr. for the best memoir on a question of Pathological Anatomy. 3. The Capuron Prize of 1000 fr. for the best manuscript memoir on some obstetrical subject. 4. The Civrieux Prize of 900 fr.; subject, The part played by the Nervous System in the production of Glycosuria. 5. The Barbier Prize of 2000 fr. for the discovery of the means of completely curing diseases reputed as usually incurable, as hydrophobia, cancer, epilepsy, scrofula, typhus, cholera, etc. In the meantime "encouragements" are to be awarded to those who without attaining this end seem nearest to approach it. 6. The Godard Prize of 1000 fr. for the best work on Internal Path-

ology. 7. The Orfila Prize of 2000 fr.; subject, Aconitine and Aconite. 8. The Rufz de Lavison Prize of 2000 fr.; subject, "Establish, by precise and sufficiently numerous facts observed among men and animals passing from one climate to another, what are the modifications or alterations of functions and the organic lesions that can be attributed to acclimatisation." 9. The Saint-Lager Prize of 1500 fr., founded in order to compensate the experimenter who shall have induced a thyroidean tumour as a result of administering to animals substances extracted from the waters or the soils of countries in which goître prevails as an endemic. 10. The Falret Prize of 1000 fr.; subject, Insanity in its relations to Epilepsy. All essays, written in French or Latin, and furnished with mottoes, must be delivered at the Academy before March 1.

At a recent meeting of the Paris Surgical Society, M. Verneuil called attention to the excision of the coccyx as a means of facilitating the performance of the operation for imperforate anus. Ten years since an infant was brought to him with the anus in a state of natural conformation, but having an imperforation at the distance of about a centimetre. As the end of the gut could not be found, Littre's operation was performed. At the autopsy it was observed that an excision of the coccyx would have enabled the rectal ampulla to be readily reached. Since then M. Verneuil has performed such excision in the cases of five boys and one girl, with the result of saving five of them without resorting to Littre's operation. The mere puncture of the ampulla he regards as dangerous, and only to be attempted as a means of diagnosis. Even when not indispensable, the excision much facilitates the operation and abridges its duration; it also facilitates the suture of the intestine to the skin, preventing thus infiltration of fæcal matters and consecutive stricture. When the *cul-de-sac* of the rectum is placed very high, and is but slightly movable, it is to be feared that traction may lacerate its fragile parietes; but after excision of the coccyx the depression of the rectum is less necessary, for it can then be carried more backwards, and fixed to the skin. This M. Verneuil did in three of his cases, and the anus thus carried back performed its functions very well at a later period. There is no incontinence of fæcal matter, there being rather a tendency to coarctation, which may be overcome by the daily introduction of the little finger. There are cases of imperforate anus, however, in which this excision is not required; and the portion removed is usually very small.

M. Trélat and other speakers observed that there were cases in which this would be a needless complication, while in others the ampulla is situated so high up as not to be attainable even after excision. M. Marjolin observed that there are almost as many different cases as there are patients, and there is always difficulty in choosing the best operative procedure. When the ampulla is near the surface, and the skin and mucous membrane can be readily brought together, subsequent dilatation after puncture may prevent stricture. When the case is a simple one, would it not be better to confine ourselves to division of the integuments rather than complicate it by suture of the intestine and skin? M. Verneuil replied that, so far from being a complication, the suture simplified the case by preventing stercoral phlegmon from infiltration of fæcal matter into the cellular tissue. In all cases such suture should be performed. He had never, indeed, met with those simple cases in which the rectal ampulla is subcutaneous. The perineal propulsion is a sign which often deceives. M. Blot wished to know to what height M. Verneuil would think himself authorised in searching for the rectum? He had himself pushed his incisions to seven or eight centimetres, without attaining the discharge of meconium. M. Verneuil replied that he first directs his incisions towards the coccyx, of which he removes the point. He continues to dissect a little further, and if unsuccessful resorts to Littre's or Callisen's operation.

At the meeting of the Conséil Supérieur de l'Instruction Publique, the important question of the creation of new medical faculties was freely discussed. Professor Würtz read a report which he had been appointed by a committee to draw up on the subject. In this he stated that three or four additional faculties were wanted, and the question was in what city should they be located. Nine cities had offered to make the necessary provision for them—viz., Lyons, Bordeaux, Nantes, Lille, Toulouse, Marseilles, Besançon, Limoges, and Rennes. The report proposed striking off the last three of these as not offering sufficient guarantees for the provision of the needs of the faculties. The offers of Toulouse and Marseilles are also rejected, as these cities can very well be embraced within the radius of Montpellier. The claims of the remaining four would have to be discussed; but, as it is only intended to establish one additional faculty immediately, the reporter considers that the claims of Lyons far outweigh the rest, and proposes that they shall be at once acceded to, leaving the other three towns for ulterior disposal. After a long discussion the report was almost unanimously adopted, and no doubt Lyons will soon be recompensed for the slight which for political reasons was put upon it by the preference of Nancy as a substitute for Strasburg. The Municipal Council of Lyons has come forward with the most liberal offers for the establishment and provision of the faculty during the first five years.

The American Medical Association held its twenty-fourth annual meeting at St. Louis in May last, and the proceedings seem not to have been characterised by anything very remarkable. Indeed, it is evident that the leading members of the profession in the United States take little interest in its proceedings, so that it is becoming less and less an indication of their feelings. The numerous projects that are brought forward on different occasions for the reform of its present constitution evidently show that this is not considered to be working satisfactorily. We find from one of the subjects brought before the Association that the Army Medical Corps is as little contented with its position as is our own. In a memorial addressed to the Association, signed by several army surgeons, it is stated that they are on an inferior footing to the other branches of the service, and point to the example set by the British War Office in its new Army Medical Warrant as one which they would like to have imitated. The memorial points to the fact that during the late war a larger number of the Medical Corps of the Army than that of any other staff corps died either directly or indirectly through the performance of their duties, and they cannot acknowledge the justice of keeping them now in a secondary position. The memorial also complains that vacancies are not duly filled up, throwing great labour upon those employed, and arresting the current of efficient supply. The "Nomenclature of Disease" forms a subject of one of the reports. It seems that a thousand copies of the modification of the one issued by our College of Physicians have been circulated at home and abroad, with the view of eliciting the opinions of the editors of journals and practitioners. Two replies only have been received, and the Committee concludes from this that the Profession are so well satisfied with the work as to render comment superfluous. It cannot believe that men of culture and experience would be so apathetic as to pay no attention to the matter. However, the Association did not think it prudent to take so favourable a view of the matter, and, after a discussion, agreed to a resolution that it was inexpedient to adopt this nomenclature, even in its revised form, and that an endeavour should be made to negotiate with the College of Physicians of London an arrange-

ment for the Association being represented on the occasion of the first decennial revision. This is certainly the best course; and let us hope that a more creditable production will be the result of the combined wisdom of the two continents. Whatever may be the opinion in the United States concerning the present "Nomenclature," it can scarcely be lower than that which is entertained among ourselves. From a report of one of the Committees it appears that the cultivation of the cinchona tree in California has begun to occupy much attention, and that the State of California seems disposed to take the necessary steps in emulation of what has been done by the British and Dutch Governments.

PARLIAMENTARY.—RATING OF HOSPITALS—ORDERS OF MERIT.

In the House of Commons, on Thursday, June 26,

Sir R. Baggallay took the opportunity of opening up a discussion upon the rating of hospitals while the House was engaged in amending the law for the levying of rates so as to obtain a uniform system throughout the country. Sir R. Baggallay claimed exemption for St. Thomas's Hospital, with which he is connected, on the ground that the governors would be compelled to close 140 out of the 600 available beds to provide the £3000 demanded of them for parish rates. Mr. Scourfield and Mr. Muntz supported the proposal of Sir R. Baggallay on the ground that it was no new proposal, and that the exemption desired was approved of by the public at large. Mr. Gladstone and the Solicitor-General, in opposing the exemption, showed that the ratepayers of Lambeth—a poor district—would be taxed to the extent of £3000 a year over and above that which they were legally required to pay to the rates if the exemption was enforced. Sir R. Baggallay argued that if the ratepayers did not pay with one hand they would have to pay with the other for the relief of their sick poor, so that the gain to the Hospital would not really affect the ratepayers. Mr. Gladstone explained that some time ago there were two hospitals in London doing exactly equal work —that is to say, each relieved with equal efficiency the same number of persons needing relief. One of these institutions, however, did the work with £15,000 a year, and the other with £30,000; so that the conclusion obviously suggesting itself was that the richer establishment had really a margin equal to the entire revenue of the other.

In the House of Lords, on Friday, June 27,

Lord Stanhope moved an address to the Queen, praying her Majesty to take into consideration the institution of an Order of Merit, to be bestowed upon men who have distinguished themselves in science, literature, and art. He stated that there was no country of any importance but England that had not made some provision for the proper recognition of such claims to public distinction. The recognition of art and science by the grant of decorations had, instead of advancing, actually retrograded in England, and he thought it would be desirable to give to literary men and artists a distinction similar to those Orders which statesmen and military commanders were ambitious to receive. A red riband was formerly granted to men of science, and it added to the dignity with which Sir Joseph Banks used to preside over the Royal Society; but this was no longer the case. This had been strikingly shown by the decoration of the Bath being conferred on Professor Owen, a man of great eminence, who was eligible as the holder of an office in the Civil Service—viz., at the British Museum; while he apprehended that a man of equal eminence, Sir Charles Lyell, would be excluded.

A SHOCKING practice has been discovered in Oude. When Hindoos or Mahommedans die of cholera they are buried immediately; but when the epidemic has abated the corpses are dug up again, and, spite of their frightful condition, are subject to the ordinary ceremonies of burial or burning. The attention of Government has been called to this practice.

THE officers of the Army Medical Department stationed at Gibraltar have laid their views with respect to the new Medical Warrant before the authorities at home. In doing this they have followed the example of their brethren at Aldershot; but, in addition to the points put forth by these officers, the gentlemen in Gibraltar have desired that Clause 5 in the new Warrant shall be replaced by Clause 17 in the old one.

THE HARVEIAN ORATION,

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, ON WEDNESDAY, JUNE 25TH,

By GEORGE ROLLESTON, M.D., F.R.S.,
Linacre Professor of Physiology in the University of Oxford, etc.

MR. PRESIDENT AND FELLOWS OF THE COLLEGE OF PHYSICIANS,—A man whose lot it is to live away from London may well feel some diffidence in accepting an invitation to lecture before a metropolitan audience; and, sir, when you honoured me by requesting me to deliver this year's Harveian Oration, I felt and expressed this natural hesitation. I wish to record that you pointed out to me that my function in Oxford was to pursue and lecture publicly upon the very subjects with which Harvey occupied himself; and I suggested to myself that what could with any propriety form the substance of a course of lectures in the one place could, *mutatis mutandis*, furnish materials for an address in the other. I felt besides that as the President of the College of Physicians is, by virtue of his office, one of the five electors to the Linacre Professorship, the Linacre Professor might seem scarcely justified in declining an invitation to appear before the learned body to which in part he owed his position; and, though I mention it last, I felt first of all that a wish expressed to me, not so much by the official whom I am now addressing, as by the individual who now more than twenty years ago introduced me to Harvey's Hospital, and has persistently befriended me ever since, was a wish which I ought not lightly to disregard. If now, sir, I follow an example which you have often set me, and, without needless preface or further personal allusions, address myself at once to the business before me, I shall thereby pay you the best of all compliments, by showing you that your teaching has not been wholly thrown away upon your former pupil.

The time allotted to me I propose to occupy, firstly, in expounding with all possible brevity certain advances made in our knowledge of the anatomy and physiology of the circulatory organs; and secondly, in giving the as yet unrecorded history of one of the many attempts to rob Harvey of his rightful rank in the noble army of discoverers which were made in the latter half of the seventeenth century.

Some of the last, if not the very last, of the many fruitful experiments which Harvey performed in the way of interrogating Nature as to the circulation were experiments in the way of injection. If the writer of a work which appeared but some forty-three years ago—Guthrie, "On the Diseases and Injuries of Arteries"—had taken the pains to repeat those experiments which Harvey performed more than 220 years ago, and when in his seventy-fourth year, we should not have had the following statement at page 8 of his book:—"I have conceived that the arteries contain air in an uncombined state, which may assist in keeping them distended, and in facilitating the circulation; but I have not been able to prove it." The fact that Harvey performed experiments in the way of injection may be unknown to many persons who are too well informed to conceive that the arteries may or can, compatibly with the carrying on of any circulation, contain air in an uncombined state; for these experiments are not to be found recorded either in the treatise "De Motu Cordis" or in either of the two letters to Riolanus, which two compositions were, in the older editions of Harvey's works, printed as three parts of a single treatise, under the names of "Exercitatio Anatomica Prima, Secunda, and Tertia," and were, till the appearance of the College of Physicians edition in 1766, the only published, as they are still the best known, records of Harvey's work and labour upon the circulation of the blood. The experiments to which I refer are put upon record in a letter of Harvey's to P. M. Slegel, of date 1651 (see "Harveii Opera," ed. 1766, p. 613; ed. Sydenham Society, p. 597). They were undertaken with the object of giving a final and happy despatch to all the quibbling objections of Riolanus, "omnes Riolani circa hanc rem altercationes jugulare"; and they consisted, firstly, in forcing water from the cava into the right ventricle whilst the pulmonary artery, the "vena arteriosa" of those days, was ligatured—whereby Riolanus's suggestion as to the permeability or porosity of the interventricular septum was shown to be untenable; and, secondly, in forcing water from the pulmonary artery round into the opened left ventricle, whereby the lesser circulation was demonstrated, to use Harvey's own favourite word, *αὐτοψία*; or, to use the very

words employed by him upon this very occasion, by an "experimentum ἄφυκτον a me" (in his seventy-fourth year) "nuper et collegis aliquot præsentibus exploratum." Simple as this experiment may seem to us now, I do not think that any apology is required for the drawing of attention to it; for it is only twenty-eight years ago that Dr. Sharpey, so recently and so fitly decorated with our Baly Medal (see *Edinburgh Medical and Surgical Journal*, vol. lxiii., p. 20), had to perform the very closely similar experiment of injecting defibrinated blood into the thoracic aorta, with the very closely similar object of showing that the force of the heart was sufficient to account for the passage of blood through the intestinal and hepatic vascular systems—nay, to perform an all but identical experiment, adding on to it but the means for estimating and reproducing the force put out by the ventricle concerned. If such experiments as these were necessary in 1845, how much more necessary must have been the still simpler experiments of Harvey in 1651? At that time the prestige of Riolanus the younger "pressed heavily upon mankind." Harvey himself had called that individual "anatomicorum coryphæum" in 1649; and, in the very year and letter we are dealing with, he calls him "celebrem anatomicum." And Pecquet, the discoverer of the thoracic duct, in his work, also of this selfsame year, 1651, the "Experimenta Nova Anatomica," a work spoken of by Haller ("Bibliotheca Anatomica," i., p. 443) as "nobile opus et inter præcipua sæculi decora," has the following remarkable passage:—"Ita sentiunt non vulgaris peritiæ medici Harveius, Veslingius, Conringius, Bartholinus, aliique complures; nec melior ipse Joannes Riolanus (quod mirari subit pro eximiâ viri, quà in rebus anatomicus cæteros anteivit sagacitate). Audi hanc in rem illius sententiam." This, I think, I will spare you; but I will remark that, after this singular—or perhaps, alas! not singular—instance of the blundering judgments which contemporary writers may pass upon each other, no young man, nor indeed any old one—for Harvey was in his seventy-fifth year when he first read Pecquet's work (see "Epistola Tertia," Morison's, p. 620, ed. 1766; p. 604, ed. Sydenham Society)—if his own age, in his own estimation, do him scanty justice. Posterity ordinarily—I do not say always—rectifies these false judgments; it has done so, at all events, in the cases of the men so grotesquely grouped together by Pecquet. See also, I would add, Gregorius Horst, the father of Harvey's correspondent of the same name, in his "Opera Medica," i., p. 83 (1661), where Riolanus is spoken of as "anatomicorum hujus sæculi fere primum"; and Bartholinus himself, who, in his work "De Lacteis Dubia" (1651), refers to "multis Riolani observationibus quibus rem anatomicum immortali nominis celebritate auxit." Haller, at all events, writing in 1774 ("Bibliotheca Anatomica," i., p. 301), speaks of Riolanus as "vir asperos et in nuperos suosque cœvos inimitis ac nemini parcens, nimis avidus suarum laudum præco et se ipso fatente anatomicorum princeps." The duty of attacking and abolishing such a man may, or, indeed, must have been, a disagreeable one to his contemporaries: they appear to have shirked it. It was their duty to have faced it, notwithstanding it might have been disagreeable.

Harvey used for these experiments a somewhat rough injecting apparatus, "quemadmodum in clysteribus injiciendis fieri solet." The modern experiment which I wish first to introduce to your attention rests for its accomplishment upon the employment of the delicate injection-syringe (*for Einstichung*) of Ludwig, and of the fine soluble Berlin blue for the substance to be injected. Here, as in so many other instances, our superiority to our forefathers rests mainly or wholly upon our possession of more delicate, or upon our command of more powerful agents; and the delicate syringe and the penetrating soluble injection-mass help us to discoveries and demonstrations impossible in default of such means, just as the superior lenses of Malpighi and Leeuwenhoeck helped them to the discovery and demonstration of the capillary circulation, unknown to the discoverer of the circulation as a whole. The experiment to which I refer has its results fairly represented in the diagram to which I point, from a specimen prepared by myself at a class-demonstration. It gives a figure of the lacteals injected, by the means just specified, as they exist upon the terminal segment, here widely globular, of the ileum, upon a single disciform patch upon the commencing colon, and finally and chiefly upon and all around the walls of the colossal vermiform appendix of the rabbit. In this latter place it is but what the Germans call, and have called, a *Kinderspiel*, to insert the point of the fine *Einstichung* syringe charged with the soluble blue injection just beneath the peritoneal coat at the cæcal end or elsewhere, when, upon pressing the piston, a reticulation of blue will spread itself over the surface of the tube, enclosing as islands the solid substance of the Peyerian follicles. It needs but a little perseverance in the way of gentle pressure to cause superficial tubular lymphatics to arise into view, and to declare their true character by their contrast with and distinctness from the bloodvessels, as well as by their moniliform character speaking of their richness in internally placed valves. Passing over the convex walls of the appendix, they join larger trunks which run along its mesenteric border; then larger trunks in their turn enter the mesenteric glands, and form in their substance reticulations strikingly like those formed previously in the walls of the intestine around the solid substance of the Peyerian follicle—speaking thus to the naked eye of the similarity, and by consequence of the homology, which the microscopic examination enables us to prove to exist between the lymph-masses and the solid masses they surround in the Peyerian follicles and in the mesenteric glands respectively.(a)

It is the demonstration of the relation of the lymphatic or lacteal vessels, or sinuses, as the case may be, in different animals, to the solid ampulla-like masses in the Peyerian follicles, which the modern method of puncture can claim as being eminently its own attainment; for many years ago—in 1784, in fact—and three years before the appearance of Mascagni's splendid work, with similar figures and histories of similar experiments ("Vasorum Lymphaticorum Historia et Iconographia," 1787), the continuity of the lacteal radicles upon the walls of the intestine with the "lymph-paths"—to borrow a word of later coinage—in the mesenteric islands, and finally, after passing through successive lines of these apparently solid structures with the thoracic duct itself, had been demonstrated by Sheldon, then Professor of Anatomy in our Royal Academy of Arts. These are his words (from page 49 of his work, "Of the Absorbent System," 1784), describing his plate No. 5, a copy of which I have had made and suspended there: "In the fifth plate of this work, upon a portion of human jejunum from an adult female subject, seventeen lacteal vessels are injected with quicksilver, by inserting pipes into them upon the intestine. They were remarkably large and varicose in this subject, and as the quicksilver was poured into the lymphatic injecting-tube to fill these vessels, it frequently ran out in a full stream by the jugular vein, which was opened. This circumstance rendered it evident that the mercury had passed through the whole course of the lacteals and thoracic duct, and had penetrated even into the venous system. It is, I believe, the only instance in which the thoracic duct has been injected from the lacteals on the intestines."(b)

Sheldon's first plate, I may add, when compared with his letter-press on p. 37, appears to show that what he calls "ampullulæ" were really Peyerian glands, and that he had repeatedly seen these glands distended in the way of natural injection with chyle, as it is easy enough to see them distended in an animal, such as a rat, which can be got to feed on fatty food, and can be killed at a proper interval of time afterwards. He appears to have had very serious as well as reasonable doubts as to the existence of any foramen in the apices of these ampullulæ; but the authority of Lieberkühn, whose "Dissertatio Anatomica" (p. 18) he had himself edited, appears to have weighed with him more than his αὐτοψία. Near, therefore, as Sheldon came to seeing the whole truth, he just failed of doing so entirely and completely; and the views which Lieberkühn had put forward (p. 10, *loc. cit.*) as to the

(a) I take this opportunity of expressing my surprise that Henle has not seen his way towards accepting this view of the real nature or *Bedeutung* of the Peyerian follicles. In his "Gefasslehre" of 1868 (p. 404) he refers us back to his "Eingeweidelehre" of 1862, where the absorbent character of these structures is denied, just as it was about the same date by Hyrtl in his "Handbuch der Topographischen Anatomie," 1860, p. 646, and by Teichman, "Das Sangadersystem," 1861, p. 88-91. The view which I have adopted was accepted by a distinguished Fellow of this College, Dr. Burdon-Sanderson, in the Eleventh Report of the Medical Officer of the Privy Council for 1868, p. 96.

(b) I have some pleasure in pointing out, by the aid of another diagram, taken from the plates of the venerable Professor Arnold, of date 1838, that the quicksilver injection could sometimes give as correct results as the "silver method" of modern microscopy for the detection of lymphatics by their epithelium. The diagram shows the fourth ventricle plexus without, the velum interpositum, on the contrary, with, lymphatics injected with quicksilver. The use of the silver method has enabled me to prove that this representation is correct: abundance of choroidal villi can be procured, and very beautiful objects they are when treated with 0·25 per cent. of nitrate of silver from the plexus in the fourth ventricle, but no lymphatic vessels. These can be shown from the velum interpositum by the use of the same reagent.

great number of the Peyerian glands in the lower segment of the small intestines, being a proof that they held relation to secretion or excretion rather than to absorption, prevailed, and have prevailed, even into our own day. These are Lieberkühn's words—"Quare ad finem ilei plures quàm in integro intestino positi erunt? Nonne propter fæces jamjudum exsuccas et indurescentes ut lubricatæ valvulum facile transeant nec lædant?" In Henle's ordinarily and marvellously excellent "Generelle Anatomie," of date 1841, I find (p. 895) the excretory character of the Peyerian follicles taken as something certain, the only thing left uncertain being the question as to whether their contents found their way into the cavity of the intestine by a constantly patent, however small, duct, or by dehiscence, as ova for an ovary. In 1850 the real meaning, the true physiological import, of these glands was proved by Brücke: the method of injection, of which I have spoken, enables us to demonstrate or exhibit what was thus proved, and that with the greatest ease. It is difficult to understand how anyone can now doubt that the Peyerian glands are really but the *pileorrhizæ* of the roots, the glands the tubera, and the thoracic duct the trunk or stem of the absorbent tree.

If any apology be needed for my dwelling so long upon a point of anatomy which has not merely so much historical, but also so much practical, interest—the Peyerian glands being the part of the organism especially affected by the poison of typhoid fever, which I see has, amongst other *aliases*, that of "Peyerian fever" (Walshe, "On Diseases of the Heart," 3rd ed., p. 208)—I would add that I was till recently under the impression that the actual demonstration, the doing, of that which that diagram represents as done, might have been a fitting exhibition for me to go through upon the present occasion, following herein the example of Harvey—"viliora animalia in scenam adducentis." I have, however, learned that this very demonstration on the appendix vermiformis of the rabbit has been often performed in Germany, and, indeed, also in England; and I judged, consequently, that it might be superfluous, as it would not be novel, to exhibit it here and now.

Having been thus disappointed in my intention of demonstrating something new in this direction, I cast about in another for something of the same character. And in the heart of a bird, the Australian Cassowary (*Casuarius australis*), killed at Rockingham Bay, lat. 18 deg., on the east coast of the continent, and sent me by my former pupil, J. E. Davidson, Esq., I came upon a structure which I am well assured has never been either described or figured before. It possesses upon this ground some claim upon our attention; but it possesses stronger claims than any mere rarity could give it, being as it is a structure which, though it has never been seen in any other member of the class Aves, is largely developed, and, indeed, exactly reproduced in the hearts of certain mammals, and does not fail to be represented, at least rudimentarily, in our own. The structure in question is a "moderator" band, holding precisely the same relations to the other parts of the right ventricle in this bird which the band so named by Mr. T. W. King in the *Guy's Hospital Reports*, vol. ii., p. 122, 1837, holds in many, if not in all, Ungulate mammals. This, I presume, is made plain by a comparison of the two diagrams placed side by side, showing, one of them the heart of this bird, the other the heart of a sheep, with the right ventricle similarly laid open in either case. The advantage, which in the struggle for existence, and specially in that very common phase of it which takes the form of a race for food or from an eater, which an animal with such a muscular band passing directly across the cavity of its right ventricle from its fixed to its movable wall, is not a difficult thing for any man to understand who has ever either watched in another or experienced in himself the distress caused by the over-distension of any muscular sac. A band of similar function—I do not say definitely of precisely the same morphological importance—has often been figured as existing in the hearts of most or all Reptilia below Crocodilina; and it serves in them to close up and expel the blood from the pulmonary compartment of their imperfectly divided ventricle.

Such being the function of this moderator band, what is its morphological bearing, and what traces can we find of it in ourselves, tempting us to speculate as to the nature of the secret bond which brings us into relations of affinity not only to the mammalian class, but with an older stock, the many-sided potentialities of which embraced not only mammals, but all warm-blooded animals, and not only all warm-blooded creatures, but warm-blooded animals and reptiles also? The valves of the heart in the higher vertebrata, when regarded from this point of view of development—the safest if not the sole criterion of homology,—may be spoken of as being but trabeculæ flaked off from the inner surface of the wall of a muscular sac, and subsequently made more or less membranous in the way of specialisation and its correlative economy. Thus, as Gegenbaur ("Vergleichende Anatomie," 2nd edition, p. 836) has remarked, the intervalvular space in these animals corresponds to the entire cavity of the spongy walled heart of fishes and amphibia; and the sinuous intertrabecular cavities in the spongy walls of these latter animals correspond with the chief part—viz., the extravalvular part—of the ventricular space in mammals, birds, and Crocodilina. Now, the musculi papillares represent the disposal or destination of the innermost layer of the right ventricle, according to Dr. Pettigrew (see his paper, *Phil. Trans.*, 1864, p. 479); and I would submit that the moderator band is but a specialisation of the next layer in order from within outwards—to wit, Dr. Pettigrew's sixth layer, which he has figured (plate xiv., fig. 33) as proceeding in a spiral direction from right to left, much as the fibres of the moderator bands I have figured do. A study of the heart of the rabbit will put this matter in a very clear light, and further open our eyes to see and recognise the rudimentary representation of this moderator band in our own hearts. If we look at the outer aspect of that very constant musculus papillaris, which passes in man from the outer and movable wall of the right ventricle to distribute its chordæ tendineæ to the two more anteriorly placed of the three segments of its auricular valve, we shall frequently see that its longitudinal fibres are crossed nearly or quite at right angles by a slender fibrous band, so that we have before us an appearance not wholly nor essentially unlike that presented by the striæ longitudinales of Lancisi and the fibres of the corpus callosum when viewed in mutual connexion. This band of fibres can sometimes be traced up towards the conus arteriosus, and be seen not to die away until close upon the point of origin of the most anteriorly or upwardly placed chorda tendinea arising from the septum to pass to the hindermost of the three segments of the tricuspid. The points between which this line of fibres lies may be observed to be the very same as those between which the moderator bands in the cassowary and the sheep stretch as free columns in the diagrams before you. It is not altogether rare to see this band raise itself from the position of fusion, like the ventricular wall, and assume the character of a cylindrical band for a lesser distance, but with no less distinctness as a column, than in the Ungulata. Such a case I had actually before me whilst writing this, and you have it now figured before you.

Every gradation, in fact, exists between the entire obsolescence of the moderator band, which we sometimes see in the human heart, through the typical, and, I should anticipate, constant, but not functionally important, representation of it in the rabbit, up to the important and structurally prominent development attained to by it in the Ungulate mammal, and this solitary instance for the class of Birds, and the sub-class with such generalised affinities, of Struthiones.

And, speaking of the method of gradations, I take this opportunity of saying that its application in the case of the muscular right auriculo-ventricular valve of birds will, in my judgment, put an end to the disputes which have taken place as to its homology with one or other of the two valves in the crocodiles. The two portions of the valve in the *Casuarius australis* are so nearly equal—the larger being but 1·7 inch, as against 1·4 of the smaller—as to do away with the difficulty which might be felt in holding that both crocodilian valves are represented here. There are other reasons for this view, which I reserve for another occasion. But while speaking of the heart of the bird, I cannot forbear pointing out how the structural arrangements of its auricle, differing as they do strikingly from those of the same compartment in the mammalian heart, helps us by that contrast to get a true idea of the working of this latter. Firstly, the walls of the bird's right auricle are relatively thicker, not only as compared with the walls of its own ventricle, but also as compared with the walls of the corresponding auricle in the mammal, the musculi pectinati standing out in as sharp relief as the similarly working muscular ridges in a hypertrophied bladder, and enclosing anfractuosities and recesses almost as deep. But, secondly, and what is of more importance, the bird's auricle is furnished with a large and functionally active valve, protecting the entrance of the great veins, and preventing regurgitation into those vessels just as the auriculo-ventricular

valves prevent regurgitation from the ventricles. It is fair to argue *à priori* that if the mammalian auricle had counted for as much in the action of the heart as the bird's, its force would have been economised by the placing of a large and functionally useful valve in the site of the rudimentary Eustachian—a structure altogether absent in many mammals, and variable, as rudimentary structures very often are, in ourselves. The *à priori* argument of comparative anatomy is abundantly borne out by the appeal to experiment. Marey, in his "Physiologie Médicale de la Circulation du Sang," 1863, whilst referring (p. 36) to other evidence from comparative anatomy than that which I have adduced, cites, in support of the view that the auricle has but an accessory and subordinate *rôle* in the functions of the heart, an experiment of Chauveau's, in which the auricle of a horse, being exposed and irritated, lost its contractile power for a time, during which, nevertheless, the ventricles continued to contract and the circulation to be maintained. Colin, again ("Traité de la Physiologie Comparée," vol. ii., p. 257, 1856), found that the left ventricle continued to be filled with blood even when the corresponding auricle was prevented from contracting by the insertion into it of a finger. And further, Magendie had long ago noted, in experimentation, what many here present may have noted in pathological or clinical observation—viz., that the auricles may remain extremely distended for hours, and, like other muscular sacs similarly conditioned, unable to contract and empty themselves, without the circulation for all that being brought to a standstill. It was Dr. Pavy's paper, treating (in the *Medical Times and Gazette* of November 21, 1857) of the case of a man (E. Groux) with a congenital fissure of the sternum, which first drew my attention to these points; and his summary of what takes place in the dog is so clear that I herewith reproduce it.

"In the dog, the contraction of the ventricles is sharp and rapid, instead of prolonged, as in the reptile, and does not appear to occupy nearly so much time as half the period of the heart's action. The ventricular contraction communicates a sudden impulse to the auricles, occasioning in them a distinct pulsation, which is instantly followed by a peculiar thrill, wave, or vermicular movement, running through the auricular parietes down towards the ventricle. This thrill or wave is coincident with the passage of the blood from the auricle into the ventricle, and takes place so instantaneously after the ventricular contraction, that the one movement appears to run on to continue itself into the other. There is then a pause, which seems comparatively of considerable duration, and which is succeeded by a recommencement of the heart's action, beginning with the ventricular contraction."

Dr. Pavy has very kindly gone to the trouble of repeating the experiment upon which these statements are based; and from a letter with which he has favoured me I gather that the auricular contraction detectable by the cardiographic tracing, as immediately preceding the ventricular contraction, is also detectable, of course during the pause just mentioned, by the eye, unassisted by the cardiograph, and turned simply upon the exposed heart, in which the auricular appendix is seen to become redder or more flesh-coloured at the moment in question. And he further remarks that this auricular contraction, difficult though it be to be observed under physiological conditions, may be exaggerated into considerd prominence in disease entailing contraction of the auriculo-ventricular orifices, and may then make itself known by a presystolic murmur.

I should now be glad to draw attention shortly to a few memoirs which have appeared comparatively recently, and which treat of matters of considerable interest, not merely as scientific problems, but also as practical questions. First among these I would name the paper which appears in the third volume of Professor Ludwig's "Arbeiten," 1868 (having previously appeared in vol. xx. of "Bericht Math-Phys-Klass., K.S., Gesellsch. Wissensch.," Leipzig), by Professor Ludwig himself and Dr. Dogiel. In this paper we have a number of experiments recorded as performed with the hearts of dogs removed from the body, and as nearly as possible emptied of blood; and the conclusion which the authors come to is that the heart of the dog, when removed from the body and emptied of blood, still produces a sound during the systole of the ventricles which is not essentially different from that which is recognised as the normal first sound of the heart. The authors add, however (p. 85), that they do not think these experiments entirely exclude the possibility of the tension of the auriculo-ventricular valves entering as a factor into the production of the first sound; and hereby they would be guarded from coming into contradiction with most English authorities—as, for example, Dr. Walshe ("Diseases of the Heart," 3rd ed., 1862, p. 62). Dr. Guttmann, however, in a paper of no great length, but of considerable merit, published subsequently to the one just mentioned, and in Virchow's *Archiv* for 1869, points out with much acuteness what, when once pointed out, is ever thereafter obvious—viz., that it is, in the nature of things, impossible, with all possible precautions in the way of emptying the heart of blood, to empty the complex phenomenon made up by a systole of the heart, of the condition of tension of the auriculo-ventricular valves. Surely the musculi papillares will contract with the rest of the ventricular walls, and, contracting, will they not stretch the chordæ tendineæ and the valves? For myself, I would say that we are more likely to overrate the share taken by the valves than to underrate that taken by the muscular walls. I need not say to this audience that the fact with which we are all so familiar, of the alteration in the first sound produced by disease of the auriculo-ventricular valves, does not absolutely prove that they produce any part of it during health; and, finally, to my own ear at least, a modification of Wollaston's experiments, which anybody can try for himself by making his temporal and masseter muscles contract at any time of perfect stillness, appears to produce a sound which is scarcely, if at all, different in quality from the first sound of the heart. A judgment, however, upon the nature of a sound, or, indeed, an aggregation of sounds, as in music, is one upon which two observers may very well differ, as neither of them can lay his proof of supposed identity or difference alongside of that which the other may possess, or suppose he does.

It is with much pleasure that I refer to Dr. Rutherford's paper on "The Influence of the Vagus on the Vascular System," which appears in the Edinburgh Royal Society *Transactions* for 1870, vol. xxvi. In that year, having to deliver an address to the Biological Section of the British Association at Liverpool, I made bold to say that the results which Dr. Rutherford had come to, and which were then only known to me in an abstract in the Cambridge and Edinburgh *Journal of Anatomy and Physiology* (May, 1869, p. 402), would prove to be of the highest value and importance. His memoir now published *in extenso*, and extending over forty-two pages, as fully justifies my prediction as it will fully repay anyone who will take the pleasant trouble of reading it. The most important result in a practical point of view is the demonstration which Dr. Rutherford has given of the nerve-circle, whereby, in the way of reflex action, the all-important secretion of gastric juice is called forth. The sensory impulse caused by the ingestion of food into the stomach is propagated upwards by the vagi to the medulla oblongata, where it throws into abeyance the vaso-motor nerve-cells, which, whilst the stomach is empty, keep the bloodvessels of the gastric mucous membrane constricted, but which, when their activity is inhibited, allow the zonular fibre-cells of these bloodvessels to dilate, and allow of the increased afflux of blood thus called for. That relief will result to some of the countless martyrs to dyspepsia out of the demonstration of this physiological relation of vagus, sympathetic, and peptic glands, I do not doubt. Possibly, I would add, Owsjannikow's observations as to the working of hydrate of chloral as a depressor of arterial tension (Ludwig's "Arbeiten," 1872, p. 32), may prove valuable to persons engaged in practice, by pointing out, in however shadowy a fashion, the road to a more rational and systematised, even if less general, use of this drug than that which I am told is now made of it. It may seem a paradox, but it is none the less true for all that, to say that, for the activity of many organs, a paralysing and inactivity of certain nerve-centres in connexion with them is a pre-requisite. The activity of such, indeed of most, organs is but intermittent and occasional, being but intermittently and occasionally called for, whilst the constringing activity of the sympathetic has to be constantly at work to prevent waste of force; the phenomenon of the distinction of the corpora cavernosa, a phenomenon used by Harvey himself in the way of illustration (see p. 129 of the "Epistola secunda ad Riolanum"), I may adduce in the way of illustration also, being, as it is, dependent upon a similar nervous mechanism.

Owsjannikow's paper (also found in Ludwig's "Arbeiten," sixth year, 1871, and in the "Bericht Math-Phys-Klass., K. S., Gesellsch. Wissensch.," Leipzig) just referred to, and published two years subsequently to Dr. Rutherford's, gives, as the result of a number of experiments performed in Professor Ludwig's laboratory at Leipzig on rabbits, and independently at St.

Petersburg on cats, the conclusion that the ganglionic centres of innervation for the entire sympathetic system occupy but a small space at the base of the brain—two strips, to wit, on either side of the median fissure in the floor of the fourth ventricle,—of, in the rabbit, a length of about four millimetres, beginning about four to five millimetres anteriorly to the calamus scriptorius, and ending about one to two millimetres behind the level of the corpora quadrigemina. The title of such a book as Eulenberg and Gutmann's "Die Pathologie des Sympathicus auf Physiologische Grundlage," Berlin, 1873, is an encouragement to those who hope to see fruit arise from such researches as these in the way of additions to our means for meeting, or at least understanding, human disease and suffering.

It has long been known (Budge, 1855) that the sympathetic nerves which supply the vessels of the head and iris do not pass directly or by the shortest possible route to this their distribution, but pass down the spinal cord for a greater or lesser distance, and then turn outwards, and pass from the anterior nerve-branches to bend upwards, much as the recurrent laryngeal nerve does. That other vascular regions receive their vaso-motor supply by this apparently circuitous route, and, till the history of development is taken into consideration, paradoxical route, is from time to time being demonstrated. Dr. Pavy, to whom I have already referred, many years ago identified and mapped out one segment of the road along which nerve-force passes to the liver, and prevents or allows of the occurrence of diabetes. Further exploration of this route we owe to Cyon ("Bulletin de l'Académie Impériale des Sciences de St. Petersburg), cited in the *British Medical Journal*, December 23, 1871; and this same investigator, working still in the same line of investigation, as it is in these days usually necessary for an investigator to work if he will make himself a name as a discoverer, has also shown us (Ludwig's "Arbeiten," third year, 1868) the track along which the vaso-motor nerves of the anterior limbs pass, proving that these nerves pass down in the spinal cord as low as the mid-dorsal region, before leaving it to turn upwards in the sympathetic chain to join the brachial plexus. Of all the results, however, which have been attained to in the line of experimentation now under consideration, those come to by Brown-Séquard and demonstrated by him at the meeting of the British Association held at Liverpool in 1870, and subsequently published in the *Lancet* of January 7, 1871, seem to me to be certainly the most striking, and possibly the most important. Could anything have been more surprising to him whose memory we here this day commemorate, than to have been told that an injury to a particular part of the brain, the pons, called after the excellent anatomist whose life ended in the very year in which his had begun, would produce hæmorrhage in certain parts of the lungs, and anæmia, œdema, and emphysema in others? This is an easy experiment to repeat; it is one which might have been done in the days of Harvey as easily as in those of Bernard, of Budge, of Ludwig, and of Brown-Séquard. But easy though it would have been to perform, I am bold to say it was well for Harvey that he never happened to perform it. For considering that, like Haller, he knew nothing of the contractility of arteries; considering that Hunter had not performed his now well-known experiments with the umbilical arteries; considering, sir, that in that excellent work on "Physiology," the translation of which, in 1838, by our late and never sufficiently to be lamented friend, Dr. Baley, we owe to your suggestion, I find several pages (pp. 202-206) devoted to *disproving* the muscular contractility of arteries; considering that it was not till three years later, in 1841, that Henle's work, already referred to, appeared with its still unsuperseded figures (plate iii., figures, 8, 9, and 10) of the arteries with their circular muscular coat, and with its excellent summary in letterpress of the whole subject (pp. 518-526, and especially pp. 524, 525); when I consider that nothing of all this had been done, to say nothing of other advances connected with names of men yet living to speak for themselves and for us—I say it may have been well that Harvey never came upon the facts relating to the alterations of lung-substance being entailed by destruction of brain-substance, not difficult to be observed and reproduced, which we owe to Brown-Séquard. For if he had come upon them, how could he have explained them in the absence of the entire chain of connecting facts, in the forging of which chain so many successive workers—Purkinje, Valentin, Weber, Burdach, Stilling, and others—have all contributed links? Might not even Harvey, often as he withstood such temptations, have, nevertheless, in default of power to assign the real causes of such a phenomenon, been driven back upon some of those explanations which he himself so forcibly denounces in the words ("Epistola secunda ad Riolanum," p. 116)—"Vulgo scioli cum causas assignare haud norunt dicunt statim a spiritibus hoc fieri et omnium opifices spiritus introducant, et ut mali poetæ ad fabulæ explicationem et catastrophen Θεὸν ἀπὸ μηχανῆς advocant in Scenam." It is a hard thing for any man to abstain from speculating as to the cause of any well-established phenomenon, especially if it be of striking interest and importance; it is a hard thing for any man to do more than keep pace with his own generation; and those who have spent any time in reading the works of Harvey's contemporaries will best appreciate the difficulty he must have had in setting himself free from the influence of the *idola theatri* referred to.

(*To be continued.*)

PROFESSOR HOLMES'S LECTURES AT THE COLLEGE OF SURGEONS.

Abstract of Lecture II.

The Professor, continuing the subject of Carotid Aneurism, observed that the time occupied in the cure of a large carotid aneurism by interrupted compression is usually considerable. The only case recorded in English practice is that under Mr. Sheppard, of Worcester, reported in the *Medical Times and Gazette*, vol. ii., 1863, p. 463. The patient was a policeman of intelligence, and made pressure with his own thumb for half an hour at a time as often as he could. The aneurism disappeared in five weeks.

The lecturer had met with no case on record, nor heard of any in private, where the rapid method of pressure has been tried in carotid aneurism; yet this treatment would be advisable where the aneurism is of large size and contains clot, and the patient is unable to bear pressure without chloroform. The tendency to affection of the brain from compression would, however, necessitate great caution in watching the symptoms while the patient is narcotised. A case of innominate aneurism, under Mr. Cooper Forster, recorded in the *Guy's Hospital Reports* for 1873, illustrates some of the effects of prolonged compression of the carotid under chloroform. It shows the circumspection which must be enforced in any future attempt to cure carotid aneurism by similar means, though the attempt is worth making, and should be made in cases of such a nature and size as to render the cure by compression probable, but after persevering trial compression without chloroform cannot be tolerated.

To sum up present experience of this matter: Five successful cases—viz., Sheppard's, Rouge's, Kerr's, Professor Humphry's, and Mr. Gay's—have been mentioned by the lecturer. In all, except Professor Humphry's, the pressure was digital; the only two others were unsuccessful. Thus, of seven cases of compression five were successful, and in the two which failed the ligature failed also. Thus we see that the trial of pressure for the cure of carotid aneurism is a rational measure, attended hitherto with a large proportion of success in the very few cases on record. There remains the question whether this experience affords a sufficiently favourable contrast to the results of other modes of treatment to justify us in adopting compression as the first resort of surgery in carotid aneurism. To answer this question we must turn to the records of the operations on the carotid artery—first, on the proximal side of the tumour; second, on the distal side; and finally, by the old method.

The treatment of carotid aneurism by ligature of the artery was first attempted by Sir A. Cooper in the well-known case which forms the commencement of the Medico-Chirurgical *Transactions*. The operation was performed in 1805, and proved fatal from inflammation of the sac of the aneurism. The preparation was produced from the museum of St. Thomas's Hospital, and is very interesting in itself as one of the landmarks in the progress of surgery. It shows perfectly the mechanism and effects of inflammation of the sac and cellular tissue around it—one of the usual causes of death after ligature of the carotid below the tumour.

This danger attaches more to Anel's operation than to Hunter's. This inflammation is usually regarded as due to

the deposit of soft clot in the sac as the consequence of the want of any circulation through it, a point on which Broca has laid much stress. But it seems to Professor Holmes equally probable that the proximity of the wound to the tissue of the sac is the real cause of the frequency of its inflammation. This point is not entirely overlooked by Broca, but he notices it in only a very few words. It forms, in Professor Holmes's opinion, one of the great objections to the ligature of the carotid for aneurism of the artery itself, that in a tumour which is at all large no space exists to cut down upon the vessel without great disturbance of the cellular connexions of the aneurismal sac, and much danger of subsequent inflammation.

In Sir Astley Cooper's case the inflamed and enlarged tumour has pressed on the pharynx to such an extent that it only just admits a common bougie, and on the larynx so as almost to close the glottis, and has produced inflammation of the windpipe, with deposit of coagulating lymph on its mucous surface. The coagulum in the sac appears firm enough, and there seems no reason to attribute the extensive inflammation which succeeded the operation to any irritating action of the clot, when so sufficient a cause exists in the dissection which had been carried on in the immediate neighbourhood of the sac. In fact, why should soft clots exercise any irritating effect on the tissue of the sac? We see them constantly in all parts of the body remaining perfectly quiet for long periods of time and then quickly disappearing. We see aneurismal sacs, when submitted to pressure, remaining soft, with hardly any pulsation, then gradually becoming hard and pulseless, and finally rapidly shrinking. Can there be any doubt that in these cases a great part of the sac has first been filled with soft clot, which has gradually given place to laminated fibrine? Instances of aneurism filled with soft clot after the disease has proved fatal by inflammation are by no means rare in voluminous aneurisms in any part, and especially in the thorax. In watching such cases it has appeared to Professor Holmes that the inflammation has been provoked by accidental causes acting on tissues highly irritable from the pressure of the growing sac; that the pulsation did not begin to slacken till the inflammation had manifestly commenced—in a word, that the coagulation was produced by the inflammation instead of the reverse. The neck especially is a part in which inflammation of the cellular tissue is apt to spread rapidly and to cause great infiltration; so that this traumatic cellulitis after ligature of the carotid soon produces fatal pressure on the parts around.

The fact anyhow remains, that the ligature of the carotid near the aneurismal sac is very often followed by inflammation of the latter; and in a case of Mr. Vincent's, reported in vol. x. of the Medico-Chirurgical *Transactions*, in which the inflammation commenced unmistakably in the wound, Mr. Vincent distinctly states that the aneurismal sac was contracted around a firm coagulum, and that its internal surface bore no indication of having been inflamed.

Sir A. Cooper's first case was unsuccessful, but the same volume contains his second and successful case. This was the first instance of a completely successful result in carotid aneurism; for though a Swedish surgeon in 1807 (*i.e.*, between Sir Astley's two cases in 1805 and 1808) tied the carotid for a pulsating tumour, the nature of the tumour seems uncertain, and it recurred fifteen years afterwards. In the second case of Sir Astley's, the aneurism was above the bifurcation and situated upon the internal carotid; and it is remarkable that the ligature did not entirely abolish the pulsation of the tumour, though the artery was tied with two threads and divided between them. The man survived the operation thirteen years, and died of apoplexy.

Exactly parallel to this last case is one recorded by the late Mr. Porter in the *Dublin Journal* for 1840. The aneurism was situated on the internal carotid, as was proved by dissection seven years afterwards; and in this case also it was observed that pulsation returned in the tumour four hours after the operation. In a case by Mr. Syme, reported in the *London and Edinburgh Monthly Journal* for November, 1842, of aneurism of the internal carotid, the tumour continued to pulsate after the ligature of the main trunk, though much less forcibly than before. The patient died thirty hours after the operation.

The records of the Hunterian operation for carotid aneurism are to be found chiefly in the works of Dr. Pitz (Langenbeck's *Archives*, vol. ix.), and M. Léon Lefort (*Gazette Hebdom.*, 1868); these contain those of previous investigators, such as Norris, Norman Chevers, Wood, etc.

The former collection contains eighty-seven cases, of which thirty-one died, which was unaccounted for. The operation is by no means so free from danger when employed for aneurism as has been represented. The danger does not depend perhaps exclusively, or even principally, upon the operation, but on the condition of the aneurismal artery, and very probably on the condition of brain which often accompanies carotid aneurism. It is a remarkable fact that the operation has only been once fatal out of thirty-four times in which it has been known to have been practised for epilepsy, headache, and other nervous symptoms, in which in all probability the artery and brain were healthy or not seriously impaired.

M. Lefort's paper is somewhat more critical, and contains less details of cases than the German surgeon's paper. He mentions fifty-three cases, thirty-five of these being of the common carotid, six of the internal, and twelve of the external carotid and its branches, and he says that out of these thirty-five cases of aneurism of the common carotid less than half have been really successful. He called attention to the great frequency of suppuration of the sac after ligature; this occurred eight times, and in three was the cause of fatal hæmorrhage. M. Lefort in fact can find only sixteen cases of recovery after this operation, and in exactly half of these cases there were complications which endangered the patient's life.

What, then, is the inference to be drawn from this picture of the Hunterian operation for aneurism of the common carotid? M. Lefort says that we cannot avoid those dangers which depend on the obliteration of the artery, since this is necessary for the cure of the aneurism; but that the danger which depends on the suppuration of the sac we can obviate by resorting to the old operation—*i.e.*, after having secured the artery on the proximal side of the sac, incising the tumour, turning out the clot, and tying its distal end. It is clear, however, that the cure by compression does not in the least degree necessitate the obliteration of the artery; and it is to be hoped that surgeons will adopt this plan of treatment more generally, and pursue it more patiently. Sufficient facts, then, prove how great is the danger incurred in tying the common carotid artery on Hunter's or Anel's method for an aneurism involving the trunk of that vessel. This danger increases as the tumour is seated lower on the artery, both because of the greater difficulty of the operation and because of the proximity of the sac to the ligature.

The next point is to consider whether there are any, and if so what, cases in which Wardrop's suggestion of ligature after the manner of Brasdor is admissible. The number of cases in which Brasdor's operation has been performed for aneurisms believed to be of the common carotid artery is eight. The only case, however, in which we have definite anatomical evidence of the existence of an aneurism exactly confined to the carotid, and of its cure by Brasdor's operation, as well as the mechanism by which that cure was brought about, is Lambert's. This case is well known and is described in Wardrop's work, page 36 and following. The way in which Brasdor's operation cures in cases where no branch intervenes between the aneurism and the ligature is clearly seen from this case. The blood is brought to a standstill in the artery and in the sac, the coagulum in the artery extends into the aneurism, obliterating the mouth of the sac and finally filling its cavity. This is strictly analogous to the partial cures which are produced in innominate or aortic aneurism by the ligature, or by the embolism of the common carotid, when the coagulum in this vessel extends down into and obliterates that portion of the sac through which the blood-stream used to pass into the carotid.

Lambert's case proves that an aneurism or an aneurismal dilatation of the root of the carotid may be cured by Brasdor's operation. But cases strictly amenable to Brasdor's operation are exceedingly rare, and there seems no prospect of radical cure by this method except in such a case as Lambert's, where the aneurism is limited to the root of the carotid itself; and these are extremely few. No specimen of the kind is to be found in the museums of this city. Nor can such a case be diagnosed with certainty during life from aortic or innominate aneurism. The practical inference is that the distal operation is justifiable in cases in which symptoms are such as to indicate growth of the aneurism upwards along the course of the carotid with increasing pressure on the trachea; but that it must be held to be a very dubious course. And in any such

case the effect of distal pressure on the carotid should be carefully noted. If it has no effect on the pulsation of the aneurism, this is a discouraging augury for the success of the distal operation, though it is not absolutely a contraindication. If, on the other hand, it materially checks the pulsation, an attempt should be made to treat the aneurism by methodical pressure on the upper portion of the carotid.

It remains to speak of the bold operation carried out by Mr. Syme in a case of traumatic aneurism resulting from a stab which had punctured the left carotid so near the clavicle that no pressure could be exercised below it, even after it had been exposed through the opening of the sac. The case is reported in his "Observations in Clinical Surgery," at page 161. It is an interesting practical question whether a somewhat similar operation ought not to be performed in spontaneous aneurism, where the tumour extends so low that the proximal end of the artery can only be tied close to the sac. It is, however, a suggestion which has not been put, as yet, to the test of practice. M. Lefort's reference to such an operation, as having been carried out by a "surgeon of Leeds," cannot be found recorded.

The experience of surgeons hitherto, then, leads to the conclusion that aneurism of the trunk of the carotid artery may be very often treated successfully by compression, and that the cure by compression frequently leaves the artery unobliterated, and exposes the patient to far less risk of cerebral mischief; that the ligature of the carotid for such tumours is extremely dangerous, and ought not to be undertaken until attempts, well devised and perseveringly carried out, have failed to effect the cure by compression; and that when the surgeon has been compelled by the position of the tumour to place his ligature close to the proximal side of the sac, it is worth very grave consideration whether it would not be better to evacuate the tumour and tie the distal portion of the artery also; finally, that cases do occur in which Brasdor's method holds out a rational hope of cure, but that this operation ought not to be practised except in cases of growing aneurism, where distal pressure checks the pulsation of the tumour, yet has failed to effect a cure.

Now as to aneurisms of the secondary carotids. There are many histories on record of aneurisms of the internal carotid artery; nor are spontaneous aneurisms of the external carotid artery apparently so very rare. No trustworthy diagnostic sign has been pointed out by which the artery affected can be distinguished with certainty—by which it can be determined whether the aneurism is seated on the internal or external carotid, or one of the branches of the external carotid artery, unless it may be the state of the pulse in the temporal, the affection of which would lead to the conclusion that the aneurism did not affect the internal carotid or not this only. But it is impossible to distinguish between an aneurism seated on the external carotid and one affecting one of its branches below the angle of the jaw. Spontaneous aneurisms of such small arteries as these latter are very rare. Nor is the diagnosis practically important. Aneurisms of the branches of the common carotid, primary or secondary, and situated below the jaw, should be treated by measures directed to the common trunk. The close proximity of the reflux stream from the external carotid in aneurism of the internal carotid artery does not seem to interfere with cure after the Hunterian operation. Without going so far as Broca, and saying that a certain amount of circulation through the tumour tends to harden the clot and promote cure, experience shows that such circulation is not inconsistent with the prospect of cure. In spontaneous cervical aneurism situated on one of the secondary carotids, or on one of the branches of the external carotid, persevering efforts should be made to cure the disease by pressure. If pressure fails, the ligature of the common is to be preferred to that of the external carotid artery for an affection of the latter or one of its branches.

The external carotid has hitherto only been tied for wound, hæmorrhage, erectile or cirsoid tumour, for cancer of the tongue or jaw, or as a preliminary to operations. The object of tying the external in preference to the common carotid is the avoidance of cerebral disturbance; so that there seems no motive for preferring the ligature of the internal carotid to that of the trunk. The artery is smaller, truly, but the operation is more difficult, and the ligature is placed nearer the sac.

It is not so certain that the same practice should be followed in traumatic aneurism generally. The prospect of cure by proximal compression or the Hunterian operation depends on the presence of a well-formed sac, which will contract vigorously on its contents when the force of the circulation is removed. If the sac is deficient or thin, and no progress is made by compression, it may be better to treat it after Mr. Syme's fashion.

Aneurisms of the branches of the external carotid in the face or scalp are almost always traumatic. Digital pressure either on the sac itself or on the artery just above it will almost always succeed; if not, the sac may be laid open, and the two ends of the vessel tied, with a confident hope of success.

Aneurisms of the smaller arteries of the neck, such as that of the transversalis colli, are not common enough to require notice; but traumatic aneurism of the vertebral artery is an affection which is common enough to be important, and which can be usually, or at any rate very often, diagnosed, and which, if confounded with carotid aneurism, is treated by means which tend directly to aggravate the danger.

This affection will be treated of in the next lecture.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XXVII.

By J. F. CLARKE, M.R.C.S.

For nearly forty years on the Editorial Staff of the "Lancet."

ESTABLISHMENT OF THE LONDON UNIVERSITY AND HOSPITAL.

(*Continued from page 556, vol. i., 1873.*)

Edward and Richard Grainger—Robert Carswell—Samuel Cooper.—The "Surgical Dictionary"—Copland and his "Medical Dictionary"—Literary Labour in the Morning and at Night—Professional Caligraphy.

The difficulties under which these papers are occasionally written must be my excuse for an error now and then being committed. I have been reminded by a distinguished surgeon who was demonstrator of anatomy at St. Thomas's Hospital when Richard Grainger was lecturer en anatomy at that institution, that the term "ill-fated" could not be justly applied to him. This is perfectly true, and I had found out the mistake before I received the kind communication of my friend. Richard Grainger, on his retirement as lecturer at St. Thomas's, the duties of which he fulfilled to the satisfaction of all, received a high and lucrative appointment under Government, which he retained until his death, having done good service to the public. I had the honour of his friendship for many years. He was an able, energetic, and conscientious public servant, and in private life one of the most estimable and honourable of men. The founder of the Webb-street School was his elder brother Edward, and, certainly, the term "ill-fated" was in every way applicable to *him*. Most accomplished as a lecturer, and idolised by his pupils, his extraordinary success made him the object of the jealousy, and of something more, of some of his rivals in the Council of the College of Surgeons. They threw every possible obstacle in his way, and unquestionably these proceedings acted most injuriously to him. Of a highly sensitive and chivalrous nature, he carried on the contest with indomitable courage, though not without great mental and bodily suffering. The quarrel was long and bitter, but he succeeded in vanquishing his enemies. The victory, however, came too late. He sank in the very prime of life from a disease which had been aggravated, if not produced, by great mental and bodily labour. It was highly to the credit of the *Lancet* that its great influence was brought to his assistance. Mr. Wakley never penned abler or more eloquent articles than those which appeared in the *Lancet* at the time in favour of Edward Grainger. I now return to the staff of the North London Hospital. Robert Carswell was the third physician. Of singularly unobtrusive and retiring disposition, with a soft voice, a melancholy expression of countenance, impressing the observer with the idea that he was suffering from bodily ailment, yet under this modest exterior was a mind of the highest order. He was an accurate and painstaking observer. His lectures and demonstrations in pathological anatomy were most interesting and instructive. His style was simple to the last degree; his diction never rose beyond the ordinary level; he was neither eloquent nor oratorical. His aim was to be a *teacher*, and not a mere talker. His delineations of disease

were marvellous specimens, such as never have been, and probably never will be, surpassed. This is the more remarkable from the fact that from a dissection-wound in early life he had lost the first and second phalanges of the forefinger of the right hand. Carswell was not "cut out" for success in private practice. His sphere was the deadhouse and the lecture-room. He never had a remunerative practice. Owing to the influence of the late Sir James Clark he obtained the appointment of private physician to the late King of the Belgians. Many of the closing years of a comparatively long life he spent in "learned leisure" at the Palace of Laacken, and in the completion of those labours in pathology to which he was so earnestly devoted. At the period when the *Lancet* was publishing the portraits and biographies of eminent members of the profession, I had occasion to visit Brussels, and it was arranged that I should visit my old teacher, obtain his photograph, and learn from him such circumstances of his life as he might wish to put upon record for the benefit and instruction of his brethren. Unfortunately, Carswell was away from Laacken with the King during my short visit, and I was consequently deprived of what would have been a great gratification to me. Carswell died in Belgium. He had the full confidence and earnest friendship of the King, and he left behind him a name associated with every sentiment of regard and affection by all who knew him in that country and in this. Carswell, unlike some of his colleagues in the London University, never mixed in any way with politics; he was content to pursue the "even tenor of his way," far from angry conflicts and personal contentions. The Senior Surgeon to the North London Hospital was Samuel Cooper, the Johnson of medical literature. His great "Dictionary," though of a different stamp, and written with a different object, was to surgeons what Johnson's great work was to English literature: it is a monument to his memory illustrative of marvellous industry and marvellous erudition. The labours of no single man in the literature of our profession can be compared with those of Samuel Cooper in the compilation of his great work. It is true Copland, in his "Medical Dictionary," might be regarded as a worthy rival, and so, to a great extent, he should be; but Cooper, it should be remembered, was almost entirely unassisted in the compilation of his great work—that it was completed in three or four years—that successive editions of it were published to meet the requirements of the time, and, while exhaustive and most methodical, the massive volume appeared in its various editions at astonishingly short intervals. On the other hand, Copland had able assistance; his great work was begun in one generation, and finished in another. From the appearance of the first number of his dictionary to that of the last, a period of thirty years had elapsed: during that long time Medicine had undergone a complete revolution in theory and practice—had been modified or entirely changed by experience. So much was this the case that the publishers of Copland's dictionary induced him to write a kind of "supplement" to his great work, in order that the early subscribers, if any existed, should be brought up by this means *au courant* to the medical literature of the day. For this supplement Copland was paid £1000. It may not be unworthy of notice in these recollections that the labours of Copland began in the "short hours" of the morning and after the duties of the day, whilst Cooper rose early and finished his literary labours before noon. This may account, to a great extent, for Cooper's success in bringing out new editions of his great work at the right time. Pope has said—

> "On morning wings how active springs the mind,
> But leaves the load of yesterday behind."

This is an aphorism not to be treated lightly. Astley Cooper and Benjamin Brodie invariably pursued their anatomical studies and literary labours in the early part of the day, when they could "leave the load of yesterday behind."

I have stated in a former article that Copland broke down in the most important crisis of the publication of his dictionary, with alarming symptoms of cerebral disturbance; in fact, he was incapacitated for a long period in his labours. When Copland had finished his dictionary he invited to his hospitable table many of his literary friends to dinner. I was present. Fortunately or unfortunately, I was the oldest member of the press on this memorable occasion. Those who were ever present at Copland's gatherings may readily conceive what a magnificent feast was spread for us. I had the honour of proposing his health on this occasion. We were in reality celebrating a great event. The wines were of the finest quality. I shall not easily forget the triumph with which a dozen bottles of Johannisburgh were produced on the table. "These," said Copland, "were given to me nearly forty years ago, and I made up my mind that they should not be opened till my dictionary was completed." They were now opened,—half a dozen of them were in good condition, the other half were vinegary and undrinkable.

It is worthy of note that both Cooper and Copland wrote very clear and distinct hands, as also did James Johnson, who for a long series of years edited the *Medico-Chirurgical Review*. Sir Astley Cooper wrote a clear and bold hand; Brodie made a scrawl on paper only to be equalled by the caligraphy of Elliotson. Samuel Cooper was an excellent teacher; his facts were stated with clearness and conciseness. He always lectured from notes, and was in the habit, when giving his clinical lectures, of writing down the main points of the cases and his observations on them in a neat little book about six inches by four, written in the neatest style, and stitched with the greatest care. The little manuscript book consisted of from sixteen to twenty pages, and he always handed this to me after the lecture. These valuable records were published in the pages of the *Lancet* at the time. I seldom found it necessary to alter or to add a word to them. At the bedside Cooper was painstaking, clear in diagnosis, but somewhat heavy and slow. He was a great favourite with the students, and always commanded their attention and respect. In person he was rather above the middle height, stoutly and firmly built; his eyes were a "sagacious grey," indicating power; his mouth was one of inflexible decision and firmness, if not obstinacy. Like Copland and Ryan (two of the greatest compilers of our time), his head was massive, and it might be said "grand." As an operator Cooper was careful, slow, and somewhat clumsy, but sure. He made mistakes, as all great surgeons have done. He had none of the celerity and mechanical genius or the *élan* of his colleague Liston.

(To be continued.)

MR. LOWE AT ST. THOMAS'S HOSPITAL.

The annual ceremony for distributing prizes to the successful pupils of this Hospital was held in the Governors' Hall on Wednesday, the 25th inst. There was a large assemblage of ladies and gentlemen interested in the welfare of the Hospital, who had come to contribute their quota of congratulations to the recipients of the coveted prizes.

Mr. Lowe commenced his address by congratulating the prizemen *en masse*, alluding especially to the House-Surgeon's Prize as one of great practical value for giving the advanced student a thorough insight into the details of practice before he was actually launched upon the world to act upon his own responsibility. He next alluded to a remark which had just fallen from the lips of Mr. Simon, to the effect that "as Medical Officer of the Privy Council he had derived much useful instruction and support from the heads of that department, especially Mr. Lowe, who had always shown himself most ready to promote the interests of the profession as far as he was able." Mr. Lowe regretted, on the other hand, that Mr. Simon had not imparted to him some of his vast store of medical knowledge, to enable him the better to address an assemblage of medical men. One disadvantage of being a prizeman was that he might become unduly elated by his success, and fall into a state of indifference respecting other more important duties belonging to his student career. Aristotle once said that men valued distinction because it confirmed them in their good opinion of themselves. There were other things better than obtaining prizes, such as the acquisition of useful knowledge. It did not follow that he who obtained a prize had done good work. He might have the guinea stamp—but "a man's a man for a' that." All depended upon how he succeeded in discharging the duties of life when he had to undertake them. The verdict of to-day might be reversed by the experience of to-morrow. There were many things necessary to a successful career which could not be gauged by previous prize-winnings; such were habits of industry and observation, which could not be tested by competitive trials. There were also many moral qualities, such as kindness, gentleness, honesty, shrewdness, etc., all which contributed to make a man a successful practitioner. The first object set before us in life is to do something to make ourselves useful, but that object will not be attained if it is pursued in a direction contrary to the career most befitting us. To

alleviate pain is the object and mission which medical men have ever to bear in mind. Even though they should fail to obtain corresponding remuneration, they would have the satisfaction of knowing that they had in a most disinterested way contributed to the relief of their fellow-creatures, and that was a higher object than pecuniary benefit to themselves. If the great object were to alleviate human suffering, doubtless they would prove the truth of the Scriptural maxim, "Seek God and His righteousness, and all these things shall be added unto you." Again, those who had failed to win prizes need not be discouraged, because it may have happened that their abilities were as great, but they did not display the same zeal in competition as their more successful rivals. They might be assured that there was no nobler profession in the world than the medical profession. The longer we lived the more we realised the truth of that observation of Dr. Johnson's, that length of days and great genius are not always necessary to success in life. Some men strove hard to obtain success and benefit themselves in mercantile pursuits, and they had themselves to thank; but no one could fully estimate, still less doubt, the benefits accruing to the world at large from the cure of disease by skilful physicians. The medical profession stood upon a solid basis: it was not subject to the caprice of fanatics; it rested not on the traditions of the fathers or on the writings of our forefathers; its precepts were subject to the unerring decrees of natural laws, because founded upon a thoroughly scientific basis only to be understood by those possessing a scientific knowledge of their profession, and the unalterable laws of nature. He also gave a word of advice to those about to enter upon the practice of their profession. He advised them not to seek to give patients the impression that they were more learned than they really were. The profession must not rest satisfied with present attainments. They would have much to learn as well as to unlearn. Medical men must become more scientific before they could be dogmatic. They should never assert as fact that which they were not prepared to prove. We had not yet arrived at the point when medical witnesses could always give off-hand an opinion that they could assert with the confidence that it could not be challenged. They should also remember that Nature is a kind nurse, and that she often assists one out of his difficulties. There are generally some odds in favour of Nature. They should endeavour, however, to administer remedies, not haphazard, but with a certain knowledge of their power and means of curing disease. Neither should they misuse the influence which they as medical men would obtain in the families attended. Their reputation should not suffer for the sake of self-aggrandisement. There must be real and substantial pleasure and satisfaction in the practice of the medical profession—where men are constantly bestowing enormous benefits upon their fellow-creatures. The talents committed to them should be used with discretion, and with equal regard to the poor as the rich. No one more richly deserved success than the hard-worked, disinterested medical practitioner.

REVIEWS.

Clinical and Pathological Observations in India. By J. Fayrer, C.S.I., M.D., F.R.S.E., F.R.C.P. of London, F.R.C.S. of Edinburgh; Honorary Physician to the Queen; Surgeon-Major Bengal Army; Professor of Surgery in the Medical College of Bengal; First Surgeon of the Medical College Hospital, Calcutta; Member of the Senate and late President of the Faculty of Medicine of the University of Calcutta. London: J. and A. Churchill, New Burlington-street. 1873. Pp. 648.

As a prominent member of the University of Calcutta, and Professor of Surgery in the Medical College of Bengal, Dr. Fayrer's name has been well known to the profession in this country; and his influence as a teacher amongst the Bengalees has been thoroughly acknowledged in the Medical College Hospital of Calcutta. To the pen of this gentleman we are indebted for "The Thanatophidia of India," a description of the venomous snakes of the Indian Peninsula, and of the effects of their poison upon life, which is now going into a second edition; as well as for a volume on "Clinical Surgery in India," published in 1866.

The contents of the present volume are, like those of its predecessor just referred to, of a practical character, being the outcome of several additional years of experience in an extensive field of observation. The book opens with an address on surgery, delivered at the annual meeting of the Bengal Branch of the British Medical Association in March, 1868. The first point the author draws attention to in this address is that certain changes, and the reduction of the number of patients in the wards of the Medical College Hospital, improved the condition of the hospital, especially by causing a diminution in the number of cases of pyæmia and osteo-myelitis. At the same time it is intended to be understood that the application of the antiseptic principle in the treatment of surgical disease has been in no small degree the cause of this decrease in blood-poisoning diseases. A long list of cases in which carbolic acid in some form or other was employed is supplied; but even with this and Dr. Fayrer's excellent remarks upon the cases in particular and the treatment in general, we do not find conclusive evidence of any beneficial results *special* to carbolic acid, and certainly no proof whatever of its acting in the manner imputed to it by its originator and many of its advocates. Another subject of importance briefly referred to in the address is the prevalence of malaria in Bengal; the different ways in which it expresses itself, and its influence in urethral affections after catheterism. Lastly, attention is drawn to an original method of operating for the radical cure of hernia introduced by the author in 1862 as more simple, and at the same time as efficacious a plan as that of Wutzer, employed by the author up to that time. The operation and instruments required for it are described at pages 45 and 46; but Dr. Fayrer wishes it to be understood that he regards the operation as of a somewhat uncertain character as to its results, though it offers a sufficient prospect of success to warrant the surgeon and justify the patient in its attempt. This we consider a fair and impartial as well as a sound opinion upon an important subject—a subject, too, which is clearly a pet one of the author's.

The remarks on "The Pyæmia of Osteo-myelitis" which follow immediately upon the address, are to a great extent combative of opinions expressed by Dr. Braidwood. There is not the slightest doubt to our minds that Dr. Fayrer is correct in stating that osteo-myelitis is often the precursor and cause of dangerous pyæmic symptoms. It may be remembered by some of our readers that an eminent surgeon in writing on pyæmia has lately expressed himself in these terms:—"Pyæmia may properly be considered as one of the natural sequences of osteo-myelitis, inasmuch as in a very large proportion of the cases which terminate fatally pyæmia is present. . . . The relations of pyæmia to osteo-myelitis are rendered more obvious by the fact that pyæmia is almost unknown except in connexion with suppurative inflammations of the bones." Here we have an assertion not only in support of, but going beyond, Dr. Fayrer's own statement; for while Dr. Fayrer fully recognised many other sources of pyæmia, Dr. Hamilton, of New York, whom we are now quoting, first states that pyæmia is a "natural sequence of osteo-myelitis," and then that "pyæmia is almost unknown except in connexion" with it: the inference from which is that osteo-myelitis is almost the only cause of pyæmia. Strong as the association of the two conditions is, this view of Dr. Hamilton's in our opinion unquestionably represents it as existing to an excessive degree; and even in the association, so far as it undoubtedly exists, we cannot go with Dr. Fayrer to the extent of admitting that osteo-myelitis is never the result or sequence of pyæmia, and ought never "to be regarded as merely one of a series of indications of blood-poisoning." On the contrary, we would with Dr. Braidwood place osteo-myelitis in the same category with other pathological changes significant of that morbid state —pyæmia,—though while doing so we would state our conviction that the bone affection more frequently precedes and causes the general condition than it follows as one of the sequelæ of general blood-poisoning. The great importance of determining whether the osteo-myelitis is a consequence or a probable cause of pyæmia in any particular case is of course in reference to the treatment. Both Dr. Hamilton and Dr. Fayrer have stated that the ablation of the affected bone, even after the supervention of pyæmia, is sometimes followed by recovery; whereas if the osteo-myelitis is only expressive of a general pyæmic condition, no operation is likely to be of service.

Another result of blood-poisoning on which Professor Fayrer has written in the *Indian Annals* and other periodicals, and to which he now draws attention in the chapter on "The Pyæmia of Osteo-myelitis," is the rapid formation of firm fibrinous coagula in the right side of the heart, and the consequent apnœa which in many cases proves rapidly fatal. The formation of these coagula takes place, as is well known, in

persons suffering from exhaustive diseases, such as croup, cholera, diphtheria, and others; and it has been often stated that these form either during dissolution or in the stage of these diseases which just precedes death, or as one of the last vital changes in pyæmia itself. But such, Dr. Fayrer asserts, is not the case, for again and again he has seen patients whose recovery had been reasonably prognosticated, and whose wounds were healthy, overwhelmed suddenly and carried off in a short space of time by the formation of these clots of fibrine. The occurrence of plugging of the right side of the heart as the result of blood changes in pyæmia, whether of osteo-myelitis or other sources of septicæmia, is frequently noted in patients in the Calcutta Hospital, and is a condition readily diagnosed in its incipient stages even two or three days before death; for, Dr. Fayrer remarks, "to the ordinary symptoms of pyæmia are added great rapidity and urgency of breathing (whilst at the same time the air is freely entering the air-cells), feeble and irregular pulse, with great restlessness and delirium, which ends in death." But, besides referring to this subject in the place and manner we have mentioned, and in his remarks upon individual cases of osteo-myelitis and pyæmia, the author gives up thirty-five pages to its consideration in a separate section, entitled "Fibrinous Coagula in the Right Side of the Heart as a Cause of Death after Surgical Operations." In this section the details of nine cases are recorded in which death followed upon surgical operations, of different kinds and different degrees of severity, and was caused, as post-mortem examination in each case established, by fibrinous plugging of the heart. The author is at special pains to point out that without the concurrence of ichorous toxæmia, and where, in all other respects saving the effects on the system of the injury or operation, the patient is in good health, these fibrinous clots may form and slowly or rapidly destroy life.

Dr. B. W. Richardson no doubt has had great influence in drawing the attention of physicians to the treatment of fibrinous depositions in the heart, even *in extremis;* and he it was who in 1850 and 1851 raised (to use his own expression) from a silence of nearly a hundred years the subjects of the nature, diagnosis, and treatment of fibrinous coagula during life. But much credit is due to Dr. Fayrer for the manner in which he has brought these same subjects before the notice of surgeons, and for the care with which he has proved that the formation of these coagula in the heart is a danger to be apprehended after any surgical operation. Further, Dr. Fayrer thinks that in not a few fatal cases of wounds or operations in which the cause of death has been attributed to shock or exhaustion it would be found upon a revision of the post-mortem examination that death resulted from the presence of such coagula. The following quotation will convey to our readers the author's views on this subject:—

"Pyæmia, shock, gangrene, tetanus, and secondary hæmorrhage are the formidable complications which, even to the layman's mind, render all surgical proceedings replete with dread; and terribly does the first of these interfere with our success. But that a patient may have recovered from the shock and first effects, and subsequently perish from another cause differing from any of them, yet directly traceable to the operation, is hardly generally known, and even professionally has received but little consideration. The cases I append are good examples of what I refer to, and merit consideration. The chief points of interest are, that in persons previously in fair health a condition of the blood may be induced, as the result of the effects of a severe injury, wound, or operation, which has a tendency to cause the formation of fibrinous coagula in the cavities of the heart, which may and do prove fatal."

With regard to the management of this accident in surgical patients, Dr. Fayrer says that "particular attention should be paid to the diet and the administration of such remedies as may counteract the spanæmic condition, which we may fairly assume to exist when these symptoms appear." The hyposulphites recommended by Polli, and alkalies, and especially ammonia, as recommended by Richardson, and, above all, plenty of fresh air, are the remedies advocated.

In a chapter on "The Uses of certain Articles in Surgery," the great utility of carbolic acid is again enforced, and a brief abstract of a few cases treated by petroleum warrants the author in concluding that it has been applied with benefit, and possesses some, if not all, the advantages assigned to carbolic acid. The use of horsehair sutures is highly spoken of. Well-selected white hair out a horse's tail is, in Dr. Fayrer's opinion, in many respects better than any suture hitherto devised. It has all the advantages of metal in its smooth and unirritating surface; it is not likely to excite suppuration, nor does it decompose; and it can be removed readily without hæmorrhage or pain. For wounds of the face, eyelids, and in plastic operations it is peculiarly suitable.

We could with pleasure and advantage notice each one of the chapters or sections of this book in the same manner as we have done the two or three of the earlier ones, but we can only just name the subjects treated of. There is less reason for us to do more since much of the material of the volume has previously appeared, in some form or other; but Professor Fayrer has done well to collect his separate theses together. The method of the book consists of practical and clinical remarks upon different topics, with the report of cases to substantiate and illustrate the points discussed. In this way are treated aneurism, tetanus, gunshot wounds, fractures and dislocations, bites of animals, diseases of the jaws, tracheotomy, hernia, stricture and urethral fever, elephantiasis of the leg and scrotum, iliac abscess, injuries to the head. Then follows a statistical account of amputations, and afterwards over a hundred pages are devoted to the accounts of miscellaneous cases, with the author's observations upon them.

An interesting chapter on the subject of hydrocele immediately precedes this collection of miscellaneous cases. In this the author points out that the disease in India is one of the many forms in which the influence called "malaria" expresses itself. Hydrocele is frequently found associated with scrotal hypertrophy of a simple or elephantoid character (generally the latter), and is one of the earliest symptoms in many if not all of these cases. In the natives of Bengal, hydrocele, without elephantiasis, sometimes attains the size of a man's head and even larger. In Europeans in India the disease seldom attains so great a size, though it becomes much larger than it is usually met with in Europe. Dr. Fayrer's remarks on the treatment of hydrocele must carry much weight with them, considering the frequency of the occurrence of the disease in Bengal, and the wide opportunities he has had of trying all varieties of plans and remedies.

Altogether, we can strongly recommend the book to the perusal of practical surgeons. In all probability they will derive some ideas which will be new to them, and, at any rate, they will be able to ascertain the results of the experience of a very discriminating and acute observer in their own field of labour.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, June 23.

The Health of Edinburgh—Rubeola—Typhoid and Milk—Miss Jex Blake and others *v.* the Chancellor and Senatus of the Edinburgh University.

This year has up to the present time been a comparatively healthy one here, notwithstanding the prevalence in our midst for some months of both measles and typhoid fever. The former disease has been for the most part of a very mild type until quite lately, when a number of cases of so-called rubeola or rötheln, with severe throat symptoms, have been met with.

It is a noteworthy peculiarity in the distribution of the disease in the present epidemic, that it has been almost entirely confined to the New Town, north of Princes-street. The poorer districts of the Old Town have escaped wonderfully. At the Royal Hospital for Sick Children there has not been a single application for admission from this cause during the present year. It further appears, from the weekly returns of the Medical Officer of Health for the city, that of ten fatal cases which have occurred during the past fortnight, nine were in the New Town, one in the Old Town, and none in the suburbs.

The districts which have been freest from measles are, generally speaking, those in which small-pox prevailed most last year. Is there any relation between these two facts? Typhoid fever is also amongst us, and seems to follow pretty closely on the beat of certain milkmaids.

Our Medical Officer of Health, Dr. Littlejohn, is engaged at present in inspecting the private wells of various dairies from which the city is supplied with milk. He has already had the

water of four private wells connected with dairies subjected to careful analysis, with the result that they have been found so much contaminated with sewage and other impurities that orders have been given to have them closed immediately. How the poison finds its way from the well into the consumer's system is a question which admits of many answers. I suspect, however, that the unscientific public see only one possible solution of the difficulty, and regard themselves as the latest discovered test for the adulteration of milk.

The judges of the Second Division of the Court of Session received on Wednesday last the opinions of the consulted judges in the case of Miss Sophia Louisa Jex Blake and others against the Chancellor and Senatus of the Edinburgh University. The Lord President, who is Chancellor of the University, being a party in the action, declined to give an opinion. The other First Division Judges, Lords Deas, Ardmillan, and Jerviswoode, concur in the judgment of Lord Gifford; while Lord Gifford's colleagues in the outer house, Lords Ormidale, Mure, Mackenzie, and Shand, are of opinion that the judgment should be reversed.

The consulted judges unanimously consider that the ladies had no right to enter the University prior to the existence of the regulations framed by the University authorities in 1869. They differ, however, in opinion regarding the validity of those regulations—one party holding that it is within the power of the University authorities to frame such regulations; while Lord Gifford's four colleagues in the outer house hold that the University authorities have no such power. However this may be, the regulations have virtually become a dead letter, as the Professors cannot be got to teach separate classes, and all of the consulted judges are of opinion that it is not within the power of the Court of Session or of the Senatus to decide that they should do so.

June 30.

The case of Miss Jex Blake and others against the Chancellor and Senatus of the University of Edinburgh was decided, on Friday, in the Second Division of the Court of Session. Three of the judges, Lords Cowan, Benholme, and Neaves, held that the interlocutor of Lord Gifford, which was in favour of the ladies, should be reversed; while the Lord Justice Clerk concurred in the interlocutor. The majority considered the resolution of 1869 to be quite beyond the power given the University authorities by the statute of 1858, and therefore illegal.

Unless an appeal is made to the House of Lords, and this decision is reversed, the question which has so long disturbed the Edinburgh University may be considered to be at rest for a long time to come.

We have always been hopeful that the good sense of Scotchmen would in the end prevail. The marvel has been that anything so ridiculous should have survived so long here, and that it should have had the support of so many reputed wise.

But, although

"Full oft we see
Cold wisdom waiting on superfluous folly,"

it is well if, in the end, the folly is recognised to be superfluous, and the wisdom weeded of it.

Many—including not a few of the ladies' former supporters—will not be sorry for this last affecting proof of how

"The best-laid schemes o' mice an' (wo)men
Gang aft a-gley."

GENERAL CORRESPONDENCE.

THE CHAIR OF ANATOMY AT KING'S COLLEGE.

LETTER FROM MR. EDWARD BELLAMY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I see a kind notice in your paper of my candidature for the Chair of Anatomy at King's College. I beg leave to state that I have some time since withdrawn my name from the list of candidates, on the understanding that a "pure anatomist" was the *desideratum* of the School. I was misled by the advertisement. I am, &c.,

June 21. EDWARD BELLAMY.

MRS. MOIR, widow of the late Dr. Andrew Moir, Lecturer on Anatomy in King's College, has been nominated to a pension on the Civil List of £45 a year.

NEW INVENTIONS.

LESLIE'S PLIABLE PLASTERS.

WE have received from Messrs. Mackey and Co., of Bouverie-street, Fleet-street, several specimens of these plasters. They appear to have the following advantages:—They adhere well, are limp, and are therefore easily applied to an unequal surface, and they are strong in texture. The pliable adhesive plaster is a very good plaster for ordinary use; the pliable holland plaster makes an excellent strapping to be used after larger operations. The pliable court plaster is spread on silk, and is an elegant plaster for domestic surgery.

OBITUARY.

DAVID MATHIAS, M.R.C.S. ENG., L.R.C.P. LOND., DIED at his residence, in High-street, Cardigan, on the 9th ult., aged 52. Born at Castleygarn, near Newport, Pembrokeshire, he studied at Middlesex Hospital, and obtained the diplomas of M.R.C.S., L.M., and L.S.A. in the year 1853. He entered into partnership with Mr. John Bartlet Bevan, then practising at Cardigan, whose daughter he married. On Mr. Bevan's death, after the long professional career of fifty-two years, Mr. Mathias succeeded to the practice, which he conducted with unremitting energy until within a few months of his death. His professional skill was universally acknowledged, not only by his patients, but especially by his professional brethren at Cardigan, whose esteem and confidence he held until the last. An excellent anatomist, a clever operator, a thoroughly practical man throughout his career; a cheerful, intelligent companion, a sympathising, tender friend to the sick, he was generally beloved by his large circle of friends, and his loss will be severely felt in the town where he resided. The hardships of a medical life amongst the Pembrokeshire hills, a too willing ear to the pressing calls of a terribly exacting community, combined with an unselfish spirit, which led him, utterly regardless of his own health, to constant acts of self-sacrifice—all eventually broke down his constitution. In 1871 he obtained the diploma of L.R.C.P. Lond., and became a Fellow of the Obstetrical Society. He was Medical Officer to District No. 2 of the Cardigan Union and to the Workhouse, Medical Officer of Health for the same district, and Certifying Factory Surgeon.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—At the Summer Commencements held in the Examination Hall of Trinity College, on Wednesday, June 25, the following Degrees and Licences in Medicine and Surgery were conferred by the Right Hon. Sir Joseph Napier, Bart., Vice-Chancellor of the University:—

Magister in Chirurgia honoris causa.

Porter, Georgius Hornidge.

Baccalaurei in Medicina.

Bredon, Alexander Macaulay.
Browne, Jacobus.
Clarke, Andreas.
Clarke, Thomas Kilner (*ad eundem Cantab*).
Crowe, Georgius Wyndham.
Foot, Edvardus Carolus.
Frazer, Gulielmus.
Garvey, Thomas Blennerhassett.
Gregg, Rev. Thomas Huband.
Kane, Nathaniel Henricus Kirkpatrick.
Levinge, Edvardus Georgius.
Marmion, Edvardus Johannes.
De Montmorency, Hon. Arthurus Hill Trevor.
Newman, Horatius Townsend.
Oulton, Gulielmus Henricus.
Pearce, Georgius Alonzo Creech.
Porter, Joseph Franciscus.
Stoyte, Jacobus Carolus.
Walker, Johannes.

Magistri in Chirurgia.

Clarke, Andreas.
Stoyte, Jacobus Carolus.
Kane, Nathaniel Henricus Kirkpatrick.

Doctores in Medicina.

Browne, Jacobus.
Clarke, Thomas Kilner.
Gregg, Rev. Thomas Huband.
Hocter, Robertus Barry.

Licentiatus in Medicina.

Hickson, Georgius.

The conferring of the honorary degree of Master in Surgery upon Mr. George H. Porter, Surgeon to the Queen in Ireland, and Senior Surgeon to the Meath Hospital, was the noteworthy event of these Commencements as regards the Profession of Medicine.

THE QUEEN'S UNIVERSITY IN IRELAND.—A meeting of the University was held in the Council Chamber, Dublin

Castle, on Monday, June 23, when Sir Dominic J. Corrigan, Bart., M.P., M.D., Vice-Chancellor of the University, conferred the following Degrees and Diplomas :—

The Degree of Doctor in Medicine.

Atkins, Ringrose, M.A., of Queen's College, Cork.
Corbett, John Lane, of Queen's College, Cork.
Corly, Henry, B.A., of Queen's College, Cork.
Davis, Francis E., of Queen's College, Cork.
Gormley, Joseph Andrew, of Queen's College, Galway.
Heath, Richard, of Queen's College, Belfast.
M'Millen, Hugh, of Queen's College, Belfast.
Mullen, Jarlath J., of Queen's College, Galway.
Pearson, William, of Queen's College, Cork.
Powell, Caleb K., of Queen's College, Cork.
Quinten, Richard Frith, B.A., of Queen's College, Belfast.
Robertson, Joseph, of Queen's College, Belfast.
Smyth, Carew C. Howard, of Queen's College, Cork.
Wilson, John Forsythe, of Queen's College, Belfast.

The Degree of Master in Surgery.

Armstrong, George W. F., M.D., of Queen's College, Cork.
Atkins, Ringrose, M.A., of Queen's College, Cork.
Benson, Phillip Lambert, M.A., M.D., of Queen's College, Cork.
Corbett, John Lane, of Queen's College, Cork.
Corly, Henry, B.A., of Queen's College, Cork.
Davis, Francis E., of Queen's College, Cork..
Gormley, Joseph Andrew, of Queen's College, Galway.
Heath, Richard, of Queen's College, Belfast.
Johnston, David, M.D., of Queen's College, Belfast.
Mullen, Douglas, M.D., of Queen's College, Galway.
Mullen, Jarlath J., of Queen's College, Galway.
Pearson, William, of Queen's College, Cork.
Powell, Caleb K., of Queen's College, Cork.
Simpson, William, M.D., of Queen's College, Galway.
Smyth, Carew C. Howard, of Queen's College, Cork.
Wheeler, John, M.D., of Queen's College, Cork.
Wilson, John Forsythe, of Queen's College, Belfast.

The Diploma in Midwifery.

Armstrong, George W. F., M.D., of Queen's College, Cork.
Atkins, Ringrose, M.A., of Queen's College, Cork.
Corbett, J. Lane, of Queen's College, Cork.
Johnson, David, M.D., of Queen's College, Belfast.
Mullen, Douglas, M.D., of Queen's College, Galway.
Quinten, Richard Frith, B.A., of Queen's College, Belfast.
Rutherford, Wm., M.D., of Queen's Colleges, Galway and Belfast.
Simpson, William, M.D., of Queen's College, Galway.
Smyth, Carew C. Howard, of Queen's College, Cork.
Wheeler, John, M.D., of Queen's College, Cork.
Wilson, John Forsythe, of Queen's College, Belfast.

The Secretary to the University announced that the following candidates had passed the first University Examination in Medicine :—

Allen, James Franklin, of Queen's College, Cork.
Auderson, Adam, of Queen's College, Galway.
Auderson, J. A. S. Fisher, of Queen's College, Belfast.
Balbirnie, Hugh De Vaux, of Queen's College, Belfast.
Burges, William Armstrong, of Queen's College, Cork.
Camac, Robert John, of Queen's College, Belfast.
Campbell, Arthur Robert, of Queen's College, Belfast.
Edge, A. Mathewson, of Queen's College, Belfast.
Ferguson, William, of Queen's College, Belfast.
Fisher, Turner J., of Queen's College, Belfast.
Freyer, P. Johnson, B.A., of Queen's College, Galway.
Gleeson, William, of Queen's College, Cork.
Grew, Francis, of Queen's College, Belfast.
Hamilton, James, of Queen's College, Belfast.
Holmes, John, of Queen's College, Cork.
Irwin, William Samuel, of Queen's College, Galway.
Jennings, William, of Queen's College, Cork.
MacAuliffe, Alexis, B.A., of Queen's College, Cork.
M'Crea, Hugh Moreland, of Queen's College, Belfast.
Maguire, Daniel, of Queen's College, Galway.
Maybury, Anrelius Victor, of Queen's College, Cork.
Martin, Samuel Edgar, B.A., of Queen's College, Belfast.
Murtagh, Edward Joseph, of Queen's College, Cork.
O'Connor, P. P. Fenelon, B.A., of Queen's College, Galway.
O'Sullivan, Daniel J., of Queen's College, Cork.
Pearson, Christopher, B.A., of Queen's College, Cork.
Robertson, David, of Queen's College, Belfast.
Ross, William, B.A., of Queen's College, Belfast.
Ryan, Michael Richard, of Queen's College, Cork.
Sherrard, Cæsar Dudley, of Queen's College, Cork.
Warren, John Monteith, of Queen's College, Galway.

DENTAL SURGEONS.—At a meeting of the Dental Board of the Royal College of Surgeons on the 30th ult., the following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Dental Surgery, viz. :—

Binns, Edmund, Croydon, student of the Westminster Hospital.
Bruce, Peter, Valparaiso, Chili, of the Middlesex Hospital.
Cursetjee Framjee Khory, of Bombay.
Gibbings, Ashley, Chichester, of King's College.
Hepburn, David, Portland-place, of the Middlesex Hospital.
Kissack, Edward Thomas, Douglas, Isle of Man, of the Middlesex Hospital.
Merson, James, South Molton, Devon, of St. Thomas's Hospital.
Merson, William, South Molton, Devon, of St. Thomas's Hospital.
Mummery, John Robert, Cavendish-place, of University College.
Phillips, Arthur Robert, Cavendish-square, of St. Thomas's Hospital.
Richardson, Edwin Joseph, Duke-street, Manchester-square, of St. Mary's Hospital.
Rodway, Henry Aloysius Barron, Torquay, of St. Thomas's Hospital.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, June 26 :—

Walker, John Robert, Clifton-gardens, W.

The following gentleman also on the same day passed his primary professional examination :—

Houlbrook, Edward, of the Leeds School of Medicine.

At the recent competitive examination for the Prizes in Botany, given annually by the Society of Apothecaries, the successful Candidates were—

First.—Todd, John, student of University College, London. A Gold Medal.
Second.—Cuming, Charles Henry, student of University College, London. A Silver Medal and a Book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BOSWORTH, J. R., M.R.C.S., L.R.C.P. Edin., L.S.A.—Medical Officer of the Banstead District of Epsom Union.

BIRD, P. H., F.R.C.S.—Medical Officer of Health for the Fylde District.

COLMAN, W. S., M.R.C.S. Eng., L.S.A.—District Medical Officer to the Brighton and Hove Dispensary.

FOX, CORNELIUS B., M.D. Edin., M.R.C.P. Lond., M.R.C.S. Eng., L.M., L.S.A.—Medical Officer of Health for East Essex.

JOHNSTON, RICHARD, M.R.C.P., L.R.C.S.I., L.M.—House-Surgeon to the District Hospital, West Bromwich.

KING, J. B., M.R.C.S., L.S.A.—District Medical Officer to the Brighton and Hove Dispensary.

MACKINTOSH, JOHN INNES, M.D. Aberdeen, L.R.C.S. Edin., L.R.C.P. Edin.—Medical Officer of Health for Caistor.

NICHOLLS, W. H., M.R.C.S. Eng., L.S.A.—District Medical Officer to the Brighton and Hove Dispensary.

NICHOLSON, JOHN METCALFE, M.D., M.R.C.S., L.S.A., L.M.—Medical Officer for the Hunslet Workhouse, Yorks, *vice* J. J. W. Gisburn, resigned.

SPURGIN, FREDERICK WILLIAM, M.R.C.S., L.S.A. Lond., L.R.C.P. Edin.—District Medical Officer to All Souls and Cavendish District, the Parish of St. Marylebone, *vice* Mr. William Clapp, resigned.

NAVAL APPOINTMENTS.

ADMIRALTY.—George F. A. Drew, Staff Surgeon to the *St. Vincent;* Maxwell Rodgers, M.D., Staff Surgeon, second class, to the *Egmont*, for service at the Falkland Isles; Thomas Harvey, Surgeon to the *Argus;* John W. Davis, M.D., Surgeon to the *Sultan;* A. Fisher, Staff Surgeon to the *Jumna;* Matthew F. Ryan, Surgeon to the *Jumna*. Henry Piers, Esq., has been authorised to assume the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet, from June 12, the date of his being placed on the Retired List.

BIRTHS.

COLLINS.—On June 26, at Euston-place, Leamington, the wife of C. P. Collins, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

GANGE.—On June 26, at Faversham, the wife of Frederick A. Gange, M.D., of a son.

HOGG.—On June 29, at Ainslie Lodge, Turnham-green, the wife of William Bruce Gordon Hogg, M.B., C.M. Edin., of a son.

HUNTER.—On June 30, at Bridge House, Dartford, the wife of R. H. Hunter, M.R.C.S., of a son.

KING.—On June 28, at 74, Victoria-park-road, the wife of William Talbot King, M.R.C.S. Eng., L.S.A., of a daughter.

MENZIES.—On June 25, at Castellamare, South Italy, the wife of J. A. Menzies, M.D. Edin., of a son.

ROGERS.—On June 26, the wife of Joseph Rogers, M.R.C.S. Eng., L.D.S., of 16, Hanover-square, and Lombardy Lodge, Kensington, of a daughter.

WHITE.—On July 1, at 1, Storey's-gate, the wife of J. Campbell White, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., of a son.

MARRIAGES.

CAMPBELL—WADDY.—On June 26, at Trinity Wesleyan Chapel, Bristol, Donald Campbell, Esq., M.D., of Calne, Wilts, to Emily Martha, daughter of the Rev. S. D. Waddy, D.D., Eadcliffe, Redland, Bristol.

FOSTER—COOPER.—On June 26, at Christ Church, Wanstead, Edward Walker Webb, son of William Foster, Esq., of Dunstall Court, Feckenham, Worcestershire, to Kate Clara, only daughter of William Cooper, M.D., of Martham House, Snaresbrook, Essex.

HEATON—HANCOCK.—On June 26, at the Rectory Church, St. Marylebone, Captain Arthur Heaton, late 15th Regt., son of the late John Heaton, Esq., and the Hon. Mrs. Heaton, of Plas Heaton, North Wales, to Frances Burrow, only daughter of Henry Hancock, F.R.C.S., President of the Royal College of Surgeons of England.

MORTIMER—HEAZLE.—On July 1, at St. Peter's Church, William Mortimer, LL.D., only surviving son of the late Major Mortimer, H.M. 36th Regiment, to Lizzie Heazle, widowed daughter of the late J. H. Sheppard, M.D., Abbeyleix, Queen's County.

NATHAN—WAGSTAFF.—On June 25, at the Church of the Holy Trinity, Weymouth, Henry Nathan, M.R.C.S. Eng., L.S.A., to Emily, youngest daughter of the late Thomas Wagstaff, Esq., of Kensington, Middlesex.

ROBERTS—TOWNEND.—On June 28, at St. John's, Notting-hill, John Kempe C. C. Roberts, M.R.C.S., eldest son of Stephen Roberts, Esq., of Veryan, Cornwall, to Gertrude, second daughter of the late Frederick Townend, Esq., of Clarendon-road, Notting-hill.

SMYLY—GARDE.—On July 1, at the Molyneux Church, Dublin, Matthew John Smyly, Esq., of 35, Upper Fitzwilliam-street, second son of the late Josiah Smyly, M.D., to Katherine Georgina, second daughter of John Davis Garde, Esq., of Fitzwilliam-place.

DEATHS.

BREWSTER, ANNA MARIA, widow of the late Dr. C. S. Brewster, of Paris and Versailles, and sister of Dr. Henry Bennet, of Grosvenor-street, Grosvenor-square, W.

BROWNE, TOBIAS, M.R.C.S. Eng., L.S.A., at 8, North-terrace, Camberwell, on June 29.

DAUBERRY, JAMES, Surgeon-Major (Retired) H.M. Bombay Army, after a short illness, on June 24, in his 53rd year.

WARNE, WILLIAM COLSTON, M.B., M.R.C.S., eldest son of Thomas Samuel Warne, Esq., at 1, Merton-villas, Rochester, on June 25, aged 22.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BASFORD UNION.—Medical Officer of Health. Candidates must be duly qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to R. B. Spencer, Clerk to the Rural Sanitary Authority, Public Offices, Basford.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Candidates must be legally qualified. Applications, with testimonials, to the House Governor and Secretary, on or before July 26.

BRADFORD INFIRMARY AND DISPENSARY.—Pbysician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Mr. Charles Woodcock, 65, Market-street, Bradford, on or before July 8.

BROMLEY, CRANBROOK, MAIDSTONE, TENTERDEN, AND TONBRIDGE.—Medical Officer of Health. Candidates must be legally qualified medical practitioners. Applications, with testimonials, to Mr. Joseph Snelling, Tonbridge, on or before July 10.

CHESTER, TARPORLEY, &c.—Medical Officer of Health. Candidates must be legally qualified medical practitioners, and registered under the Medical Act of 1858. Applications, with testimonials, to Mr. Walker, Town Clerk, Chester, on or before July 24.

GREENWICH UNION.—Dispenser. Candidates must be registered under the Pharmacy Act of 1860. Applications, with testimonials, to Samuel Saw, Clerk to the Guardians, Union Office, Woolwich-road, Greenwich, before July 10.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant Honse-Surgeon. Candidates must possess at least one legal qualification. Applications, with testimonials, to Dr. Alexander, Halifax, on or before July 15.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Applications, with testimonials, to be sent in on or before July 12.

KING'S COLLEGE, LONDON.—Chair of Anatomy. Applications, with testimonials, to the Council.

LEEDS, BOROUGH OF.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to C. A. Curwood, Esq., Town Clerk, on or before July 7.

LONDON TEMPERANCE HOSPITAL.—Visiting Physician and Visiting Surgeon. Candidates must be total abstainers. Applications, with testimonials, to Chairman of Managers, London Temperance Hospital, 112, Gower-street, W.C.

MILE-END OLD TOWN.—Medical Officer for the North District. Candidates must be duly qualified. Applications, with testimonials, to E. J. Southwell, Clerk to the Guardians, offices, Bancroft-road, Mile-end, E., before July 10.

NORWICH DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Treasurer, R. Chambers, Esq., Catton House, Norwich.

ROYAL ISLE OF WIGHT INFIRMARY.—House-Surgeon and Secretary. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, on or before July 14.

ROYAL BERKS HOSPITAL, READING.—Assistant-Physician. Candidates must be medical graduates of one of the Universities of Great Britain and Ireland, and be registered. Applications, with testimonials, to the Secretary, on or before July 14.

ST. THOMAS'S HOSPITAL MEDICAL AND SURGICAL COLLEGE.—Demonstrator of Anatomy. Applications, with testimonials, to R. G. Whitfield, Medical Secretary, on or before July 11.

SEAMEN'S HOSPITAL, GREENWICH.—House-Surgeon. Candidates must be F. or M.R.C.S. Eng. Applications, with testimonials, to the House-Governor and Secretary, on or before July 10.

SEAMEN'S HOSPITAL, GREENWICH.—Visiting Surgeon. Candidates must be F.R.C.S. Eng. Further particulars may be obtained from the House-Governor and Secretary.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon and Secretary. Candidates must be legally qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to the Chairman of the Committee, on or before July 14.

STOCKPORT INFIRMARY.—Assistant to the House-Surgeon. Candidates must possess some knowledge of surgical dressing. Applications, with testimonials, to the Honorary Secretary, on or before July 12.

STRATFORD-UPON-AVON, ALCESTER, AND EVESHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to J. C. Warden, Esq., 11, Guildford-street, Stratford-upon-Avon, on or before July 19.

TORRINGTON UNION, NORTH DEVON.—Medical Officer for the District of Great Torrington. Candidates must be legally qualified medical practitioners. Applications, with testimonials, to P. B. Glubb, Clerk, Great Torrington, on or before July 11.

VICTORIA HOSPITAL FOR SICK CHILDREN, GOUGH HOUSE, QUEEN'S-ROAD, CHELSEA.—Physician. Applications, with testimonials, to H. B. Scoones, Secretary, on or before July 10.

WEST HERTS INFIRMARY, HEMEL HEMPSTEAD.—House-Surgeon and Assistant-Secretary. Candidates must possess both a medical and surgical qualification, and be registered. Applications, with testimonials, to the Secretary, before July 10.

WESTMINSTER GENERAL DISPENSARY.—Surgeon. Candidates must be Fellows or Members of a College of Surgeons. Applications, with testimonials, to the Secretary, on or before July 14.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Governor and Secretary. Applications, with testimonials, to the Chairman of the Weekly Board, on or before July 7.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. For particulars, apply to Mr. J. G. Buckton, Secretary, 9, High-street, Wrexham.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Carnarvon Union.—Mr. Richard Williams has resigned the Llanrug District; area 26,928; population 10,283; salary £60 per annum.

Hinckley Union.—The Burbage District is vacant; area 11,035; population 4179; salary £60 per annum.

Lichfield Union.—Mr. E. H. Snoad has resigned the Yoxall District; area 7780; population 1883; salary £20 per annum.

Whittlesey United Parishes.—Dr. Thomas R. King has resigned the Workhouse; salary £20 per annum; and the Southern District; salary £60 per annum.

APPOINTMENTS.

Bedford Borough.—Charles Edward Prior, M D. Aber., F.R.C.S. Eng., L.S.A., as Analyst.

Driffield Union.—George G. A. Sutcliffe, L.R.C.P. Edin., M.R.C.S. Eng., to the Kilham District.

Huddersfield Union.—Thomas H. Haigh, M.R.C.S. Eng., L.S.A., to the Golcar District. George Wilson, M.D. Glasg., L.R.C.S. Edin., to the Paddock District.

Nottingham County.—Edgar B. Truman, M.D. St. And., M.R.C.S. Eng., L.S.A., as Analyst.

St. Thomas's Union.—Frederick Wicks, M.R.C.S. Eng., L.R.C.P. Edin., to the Woodbury District.

Towcester Union.—Artbur G. Evans, M.R.C.S. Eng., L.S.A., to the Towcester District and the Workhouse.

AT the *conversazione* at the Royal College of Physicians, on Wednesday, amongst the non-medical celebrities present were a brother of the Shah of Persia, and Archbishop Manning.

MR. STEELE, surgeon, of Ovenden and Halifax, has been appointed Medical Officer of the Todmorden Union.

MR. TALBOT has been elected Medical Officer of Health for the Northern District of the Limehouse District Board of Works, *vice* Dr. Woodford, resigned.

THE Marylebone Board of Guardians last week unanimously resolved to recommend to the Local Government Board that a superannuation of £45 a year be granted to Mr. Clapp, the late Medical Officer. Mr. Clapp was appointed in 1855. Mr. Spurgin succeeds Mr. Clapp as Medical Officer.

THE LONDON AND GENERAL WATER PURIFYING COMPANY.—His Majesty the Shah of Persia having, during his visit to Trentham, expressed a wish to see the process of filtering water adopted by the London and General Water Purifying Company, the Earl of Shrewsbury (the chairman of the Company), accompanied by the secretary, attended on Monday last at Buckingham Palace with models of the filters, and explained the process, with which the Shah seemed much interested.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JUNE, 1873.—The following are the returns (by Dr. Letheby) of the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·40	0·046	0·115	0·001	14·6	3·3
West Middlesex	17·10	0·029	0·126	0·000	14·1	3·0
Southwark & Vauxhall	18·10	0·043	0·104	0·001	14·2	3·4
Chelsea	17·70	0·042	0·115	0·002	14·0	3·3
Lambeth	17·93	0·044	0·105	0·002	14·1	3·4
Other Companies.						
Kent	27·90	0·004	0·243	0·000	20·8	6·0
New River	17·63	0·019	0·147	0·000	14·3	3·3
East London	17·47	0·038	0·165	0·002	14·3	3·6

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Chelsea and the Grand Junction Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 115,893,425 gallons; and the number of houses supplied was 503,562. This is at the rate of 35 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 30·5 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

Mr. Rogers has been appointed Public Analyst for the Limehouse District Board of Works, at a salary of £150 per annum.

School of Physic, Trinity College, Dublin.—The Surgical Travelling Prize, value £50, has been awarded to Mr. Andrew Clarke, scholar of Trinity College.

University of Durham.—At a Convocation held on June 24, the following degree and licences were conferred on the successful candidates at the examination held in the week commencing June 16:—M.B.: George Rowell, Lic. Med., M.R.C.S. Licentiates in Medicine: W. L. Emmerson, M.R.C.S., W. T. Wilson, B.A., Ralph Young, B.A.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

G. S. N.—"Mineral Springs of North America, How to Reach and How to Use them," by Y. Y. Moorman, M.D., Physician to the White Sulphur Springs, Professor of Medical Jurisprudence and Hygiene, etc., Washington University, Baltimore. London: Sampson, Low, and Co.

P. C. S.—His Excellency Sir George Bowen and Lady Bowen are patrons of the Melbourne Hospital.

Inquirer.—The Hôpital St. Louis, in Paris, is specially devoted to diseases of the skin. It is provided with 800 beds.

Geo. N., junior.—It is proposed to secure an annual payment of £50 to Dr. Wolfe, as Ophthalmic Lecturer at Anderson's University, Glasgow, on condition that all the students attending the medical classes have the benefit of his lectures and operations on payinga fee of 5s.

Medicus.—The number of students at Anderson's University, Glasgow, last session, was 2506—an increase of 292 on the previous year.

A Constant Reader.—The next examination of Surgeons in the Royal Navy who are eligible for the rank of Staff-Surgeons 2nd Class will be held at the Royal Naval Hospitals at Haslar and Plymouth on the 15th inst.

The Royal College of Surgeons of Edinburgh on the New Army Medical Warrant.

To the Director-General of the Army Medical Department.

The Memorial of the Royal College of Surgeons of Edinburgh sheweth:

That the Royal College of Surgeons of Edinburgh, having had under consideration the present state of the Army Medical Department, have reason to believe that the Royal Warrant of March 1, 1873, is in several respects unjust and injurious to the Medical Officers of the Army.

That the College consider that only justice would be done if promotion were granted to Surgeons after a stated period of service on full pay (say twelve years—as in the Indian Medical Service), and that this promotion should carry the pay of its rank, as under Clause 3 of the Warrant a Medical Officer may now serve fifteen years as Surgeon, and even then, if not promoted, does not get the additional pay of 2s. 6d. per diem to which he would have been entitled as Assistant-Surgeon under the previous Warrant.

That, as medical officers are now simply attached to regiments for a limited period, their relative rank, as far as regulating choice of quarters is concerned, should place them on the *cadre* of the regiment or corps to which they are at the time attached, according to seniority from the date of commission, and not from the date of joining a regiment. That this rule should not apply to the commanding officer, who of course should always be senior

That the forage allowance hitherto made should not be withdrawn, or, if withdrawn, that a money compensation should be granted in lieu of it.

That promotion from the rank of Surgeon to that of Surgeon-Major should be as stipulated by Royal Warrant of 1858, by seniority alone, excepting in the cases where proved inability forms a positive disqualification against the senior Surgeon on the list standing first for promotion.

That it would be but simple justice that the medical officers who had, previous to the passing of the Warrant, been gazetted to regiments, and paid the usual mess and band subscriptions, should have the same refunded to them, as from the date of the passing of the Warrant they are struck off the regimental list of officers.

That, considering the special work of the medical officers, and the severe strain upon their constitutions in hot climates, where now so much of their service is passed, and especially bearing in mind that when sickness is most rife, and the climate most unhealthy, and consequently their services in greatest requisition, they cannot get leave of absence as regularly as their brother combatant officers—the present scale of half-pay seems to the College so inadequate, that it will be in vain to expect that good men will be induced to join the Service.

That the College, in conclusion, humbly request that the Director-General will take these circumstances into careful consideration, with the view of affording a speedy remedy for the grievances complained of.

Signed in name and by appointment of the College,

Edinburgh, June 19, 1873. Wm. Walker, President.

Rotherham Hospital and Infirmary.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—We are about to build a mortuary in connexion with this Hospital. Our first intention was to build a distinct building apart from the Hospital building (in a corner of the grounds, and as much as possible out of sight); but it has been suggested that it might be made in a cellar underneath the "special ward." This ward is elevated, and the dead-house would be on a level with the ground. This is recommended on the ground of its being so much cheaper; and, as we are poor, economy is a very serious consideration. But I have been told that there are two objections. First, it is very undesirable in a sanitary point of view to have a mortuary and post-mortem room in a hospital or close to it, and in our case there are only the flooring-boards betwixt the roof of the proposed post-mortem room and the special ward, which is for infectious cases. This, as a medical question, I do not profess to understand. The other is a feeling of taste or prejudice, and I object to it because I believe it would have a very depressing influence on the poor patients, who would see the dead-house from the windows of the male ward: and I know how strong the prejudices of the poorer classes are. I am told it is the practice in some large hospitals (ours, of course, is a very small one); but I presume in such cases it is because they have no ground beyond the building. Now, we have plenty, and although, as I said before, we are poor, I would not on that account hurt either the health or the feelings of our poor sick patients.

Will you kindly answer the following questions:—

1. Do you know any hospital where the mortuary is part of the building?
2. Is such place approved or only adopted because no other could be obtained?
3. Would you recommend us to build a mortuary and post-mortem room under our special ward?

I offer no apology for troubling you on a question which appears to me to be so important. I am, &c., The Honorary Secretary.

June 18.

*** We know of no well-built and well-managed hospital where the mortuary is part of the building, or at least where it is in close proximity to the wards. No one in his senses would place a mortuary and post-mortem room immediately under any ward.

Greenway's Limb Suspender.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reference to my letter on "Mr. George Greenslade's Apparatus for Fractured Leg," and your accompanying note in your issue of to-day, I would beg to remark that when treating a fractured leg with my limb-suspender and convertible splint I never bandage the limb, but merely stay the foot to the foot-piece, and the thigh to the thigh-plate, with a strap and buckle. I do not consider this a "peculiar advantage" of either of the above appliances, but merely a mode of practice which may be carried out when using some of the most simple forms of splints. As regards the hinged side-splints (a very old idea), I consider them objectionable rather than advantageous, as the space between them cannot be altered to suit the limb; with a very spare patient a large amount of padding would be required to make good the deficiency. If necessary, either of my side-splints can be removed without disturbing the limb. When writing my last letter I was not aware you had done me the honour to notice in your issue of the 7th inst. some of my inventions exhibited at the International Exhibition. On referring to your report I find the term "very useful" applied to my "instruments and splints" as a whole. I esteem this a great compliment. I would avail myself of this opportunity to name some of the principal advantages afforded by my unilateral limb-suspender, irrespective of the splint:—The longitudinal trucks and rail, as in Salter's leg-sling, allow the patient to draw himself upwards or downwards in the bed, and prevent motion at the seat of injury or disease during such movement of the body; this action, however, is seldom brought into play. The transverse rail and trucks, the most frequently used, allow the body to be moved sideways, and, in conjunction with the swivel bar, enable the patient with perfect safety to abduct or adduct his limb, or to lie in a diagonal position across the bed. The form of the instrument being unilateral, it can be used for the upper extremity, and a sound leg is not thrown aside from its fellow by any intervening framework, thus preventing distress in the sound limb and obviating other inconveniences. The base of the apparatus being placed underneath the mattress, there is no possibility of the under bedclothes bulging up against the back of the limb and interfering with its free and easy movement. To prevent motion *in* a limb or strain *on* a limb there must be no obstacle to the voluntary or involuntary movement of a limb, horizontally, in any direction, and these conditions are fulfilled by this apparatus. Although the appliance was originally designed for suspending fractured legs, it is evident it would be equally useful in any case requiring the removal of the "dead-weight" of a limb from the bed, as in certain diseased joints, important wounds, gout, etc. Apart from its use in the actual treatment, it is also a luxury to the patient. By removing the foot-piece and thigh-plate from my convertible splint, the remaining portion can be applied to the upper extremity; and by entirely removing the iron plates from the splint-holder, almost any other form of splint may be substituted as the surgeon may see fit. I am, &c.,

Plymouth, June 21. Henry Greenway.

The Bangalore correspondent of the *Madras Times* says that the junior medical officers of the British service are much dissatisfied at "some new warrants," which have removed them from their regiments and placed them on a general staff list. Of twelve doctors who in January formed an actual and component part of the European corps and regiments stationed here, four only remain in April. Bistoury, of the Fleet Hoofs, now with his regiment at Malariabad, says that by this removal he loses some thousand rupees, which uniform, saddlery, chargers, band and mess contributions and subscriptions, cost the erudite disciple of Parkes and Maclean, of Netley, but a few months ago. Worst of all, the disconsolate Bistoury is deprived of the prestige, status, society, and home which his being in a crack corps gave him; and now he is a wanderer on the military-medical face of the earth at the nod and beck of the Director-General.

Comments on Medical Matters.—Medical Polity.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As an Edinburgh graduate, I think I have some title to express an opinion on matters relating to the organisation of the practitioners of the arts included under the head of medical practice in the British dominions. I see with great regret the general wish to reduce all medical practitioners to a dead level of Procrustean uniformity; as also I think it monstrous to oblige all physicians to qualify in Surgery and all surgeons to qualify in Medicine. No doubt it is convenient that the general principles of the two sciences should be reciprocally possessed; but if anything more is required the result will be a useless mediocrity and a degeneration of both Medicine and Surgery. The mental and moral qualifications for distinction in these sciences are not to be found in the same individual; and if they were, rare is the intelligence capable of mastering both. The revolutionary spirit has everywhere striven to bring about this amalgamation, and even in Brazil carried its point; but here the

course of study occupies six years, and the matriculation examination is most severe, and embraces all the subjects of the *Trivium* and *Quadrivium*. Efforts are, however, being now made to obtain the creation of a second order of practitioners, who will amalgamate better with the less educated and less wealthy classes, and will fix their residence in remote districts. The same want is also felt as regards pharmaciens, —those actually coming out of the schools being educated up to too high a standard for the conditions of existence in the country. The system which produced the great physicians and great surgeons of the seventeenth and eighteenth centuries ought not to be despised. What I would much desire to see created in the world-known and honoured University of Edinburgh is a chair of the "History of Medicine," and also of travelling fellowships, with the onus of passing one year in study at Montpellier. How many of our high-pressure London graduates could explain extemporarily the differences between the vitalist doctrines of Montpellier, the materialism of Paris, and the spiritualism of St. Thomas d'Aquinas, and their influence on points of practice? I am heartily glad to see that the Obstetrical Society proposes to care for the education of midwives. I think that as a rule midwifery practice may be left to educated midwives. Here in Brazil physicians only interfere in rare cases where operative procedure is required, notwithstanding the fact that the majority of midwives are negresses. My nine children, and numerous children on my estate, were all introduced to the world by such midwives. The Brazilian midwives are especially skilful in practising version by external manipulation. This practice is secularly traditional here, though only lately spoken of in Europe. I hope that in Ireland and Scotland measures will be adopted for a supply of good midwives; and it would be well if the Liverpool School of Medicine provided instruction for Welsh midwives. I am, &c.,

RICHARD GUMBLETON DAUNT, M.D. Edin.,
Campinos, S. Paulo, Brazil. Brazilian Citizen.

BOOKS RECEIVED—

La Variole au point de vue Epidémiologique et Prophylactique, par le Dr. Léon Colin—Maudsley's Body and Mind, second edition—Murchison on Fevers—Les Climats de Montagnes, par le Dr. H. C. Lombard—Old Age in Bath, by Dr. H. J. Hunter—Eighth Annual Report of the Glamorgan County Lunatic Asylum—Asylum Notes, by Dr. Yellowlees —Lusk's Etiology of Irregular Uterine Action during Labour—Braithwaite's Retrospect of Medicine, vol. lxvii.—Report of the Sanitary State of the Hackney District for 1872, by Dr. Tripe, Medical Officer of Health— Annual Report of the Surrey County Lunatic Asylum at Brookwood— Cobbold on the Grouse Disease—Report of the Aboo Lawrence School.

PERIODICALS AND NEWSPAPERS RECEIVED—

Gazette des Hôpitaux—L'Union Médicale—La Tribune Médicale—La France Médicale—Le Mouvement Médical—Gazette Hebdomadaire— Berliner Klinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Allgemeine Medizinische Zeitung Lancet—British Medical Journal—Pharmaceutical Journal—The Jewish World—Warrington Guardian—Birmingham Daily Post—Glasgow Herald—Philadelphia Medical and Surgical Reporter—Guy's Hospital Gazette—The Colonial Standard and Jamaica Despatch—Gazette Médicale—Bulletin Général Thérapeutique—The Medical Temperance Journal—Le Bordeaux Médicale—Science Gossip—Monthly Microscopical Journal—Popular Science Review—Practitioner—British and Foreign Medico-Chirurgical Review—Medical Record—Public Health—Medical Press and Circular—Edinburgh Medical Journal—Quarterly Journal of Microscopical Science—The Penny-a-Week Country Daily Newspaper.

COMMUNICATIONS have been received from—

Dr. COLLINS; Mr. P. D. BENNETT; Mr. J. BEDFORD; Prof. ROLLESTON; Dr. BOSWORTH; Mr. AMYOT; Mr. HINCKES BIRD; Mr. TEEVAN; Dr. BRAKENRIDGE; Dr. HANDFIELD JONES; Mr. C. L. KEMP; Dr. ARNISON; FIDES; Mr. JEAFFRESON; Dr. PEACOCK; Dr. J. HUGHLINGS-JACKSON; Mr. J. CHATTO; Mr. LAWSON TAIT; Dr. AVELING; PROFESSOR LAYCOCK; Dr. HARDIE; Mr. W. J. H. LUSH; Mr. T. M. STONE; Mr. J. F. CLARKE.

APPOINTMENTS FOR THE WEEK.

July 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

7. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

8. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

9. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

11. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 28, 1873.

BIRTHS.

Births of Boys, 1078; Girls, 1027; Total, 2105.
Average of 10 corresponding years 1863-72, 2071·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	578	551	1129
Average of the ten years 1863-72	669·8	617·2	1287·0
Average corrected to increased population	...	...	1416
Deaths of people aged 80 and upwards	...	...	38

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	5	1	1	5	...	3	...	4
North ...	751729	1	1	1	4	13	1	3	3	5
Central ...	334369	...	4	...	1	9	...	1	1	2
East	639111	...	8	2	...	16	1	2	1	7
South	967692	...	10	6	2	14	...	3	1	4
Total	3254260	1	28	10	8	57	2	12	6	22

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·893 in.
Mean temperature	62·0°
Highest point of thermometer	81·2°
Lowest point of thermometer	45·8°
Mean dew-point temperature	53·0°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 28, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending June 28.	Deaths Registered during the week ending June 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2105	1129	81·2	45·8	62·1	16·72	0·00	0·00
Portsmouth ...	118280	12·4	59	29	77·3	45·2	60·3	15·72	...	...
Norwich	81677	10·9	29	35	78·5	46·0	60·3	15·72	0·10	0·25
Bristol	189648	40·4	116	89	71·2	49·9	58·2	14·55	0·06	0·15
Wolverhampton ...	70084	20·7	51	25	73·4	45·0	59·0	15·00	0·05	0·13
Birmingham ...	355540	45·4	279	117	75·0	47·6	59·3	15·16	0·00	0·00
Leicester	102694	32·0	73	33	79·7	42·0	58·8	14·89	0·02	0·05
Nottingham ...	89557	44·9	68	43	82·7	43·0	59·7	15·39	0·01	0·03
Liverpool	505274	98·9	320	224	73·0	49·4	58·8	14·89	0·11	0·28
Manchester ...	354057	78·9	263	156	73·0	46·0	57·8	14·33	0·18	0·46
Salford	130468	25·2	100	58	70·4	45·0	57·1	13·94	0·28	0·71
Oldham	85141	20·4	40	25	70·0	...	...	...	0·18	0·46
Bradford	156609	23·8	133	67	76·0	49·4	59·3	15·16	0·06	0·15
Leeds	272619	12·6	293	107	77·0	48·0	60·0	15·56	0·09	0·23
Sheffield	254352	11·1	218	115	74·0	45·0	58·7	14·83	0·01	0·03
Hull	128125	35·9	79	50	77·0	42·0	58·3	14·61	0·29	0·74
Sunderland ...	102450	31·0	126	46	...	...	..	...	...	...
Newcastle-on-Tyne	133246	24·9	148	64	...	...	...	...	...	...
Edinburgh	208553	47·1	123	90	67·4	48·3	56·1	13·39	0·63	1·60
Glasgow	498162	98·5	331	259	64·4	48·8	55·9	13·28	1·42	3·61
Dublin	314666	31·3	199	151	73·6	46·1	59·4	15·22	0·16	0·41
Total of 21 Towns in United Kingd'm	7507575	34·5	5153	2917	82·7	42·0	58·8	14·89	0·20	0·51

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·89 in. The highest was 30·06 in. at the beginning of the week, and the lowest 29·70 in. on Tuesday evening.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON CASES OF PERITONEAL STRUMOUS DISEASE.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

Gentlemen,—I have thought it well to bring before you the following cases on account of their bearing upon topics that have lately, as you know, been much discussed:—

Case 1.—J. J. T., aged 44, painter, admitted Augnst 18, 1865. He had been ill near five months. Had pain first at lowest part of abdomen. Feet have never swelled. Abdomen now much enlarged; girth over umbilicus thirty-six inches and a half. Flnctuation distinct. Snperficial veins enlarged. Size of liver normal. Urine scanty; specific gravity 1015; not albuminous; deposits a large amount of lithates; high-coloured from presence of bile. Is not a spirit drinker. Heart's sounds normal. O. diet.

Augnst 26.—Right side of chest dull, almost to clavicle; breathing laboured, rather frequent; is jaundiced; hands cold; pulse extremely feeble. Died same evening.

Post-mortem.—Abdominal eavity contained a large amount of yellow serum. The peritoneum was everywhere roughened with a coating of lymph, which was very slightly rongh, and presented minute whity spots, but no trace of distinct tubercle. The omentum was shrunk up into a thick, firm cake at the upper part of the abdomen. The mesenteric glands were not enlarged. The liver was covered with fibrine, which formed areolated false membranes between it and some adjacent viscera and the diaphragm. The fibrine was soft and easily broken down. The liver, when cut into, presented a dark ground, with numerous bright yellow spots and patches of various sizes, none larger than a threepenny-piece; these were not tubercles or eancer nodules, but portions of altered hepatic parenchyma in a state of fatty atrophy. The intermediate tissue presented numerous whity ramifying streaks, evidently derived from the ramifications of Glisson's capsule. The hepatic cells appeared shrunk and wasted, and less granular than normal; it seemed as if the lobules were traversed by a sort of fibroid woof, thongh very few distinct fibres could be seen; some of the cells contained yellow matter. The spleen and kidneys were large, but normal. The left testis was enlarged and hard, and contained a large tubercular deposit, which had softened down into a purulent cavity in its interior. Two glands in the corresponding groin were also large and hard, and presented, on being cut open, masses of suppnrating tubercle. The heart was healthy as to its valves, and flaccid. The lungs were quite free from tubercle, bnt the right was much compressed by a large amount of yellow serum, which filled the pleural cavity. There was cretaceous deposit in the bronchial glands. On minute examination the whitish spots in the peritoneum were noted to be rondish, well defined, not bigger than the head of a very small pin, and to consist of nuclear corpuscles. They were not raised above the level of the serous membrane. I could not positively affirm that they were tubercles, but they seemed to be of that nature histologically.

Case 2.—B. C., aged 38, had been attending as out-patient several weeks, but on March 23 was taken very ill with severe pains in abdomen. When admitted he was in a state of collapse. He was pnt to bed, and stimnlants given; but he quickly sank, and died in eight hours.

Post-mortem (March 24, 1869.)—Peritoneum matted together by extensive adhesions. There were numerous firm oval or roundish whitish bodies of varying size in the serons membrane, some as small as a pin's head, others almost as large as a pea; they were single or in groups. The capsular surface of the left lobe of the liver presented numerous spots and streaks of greyish thickening. The intestinal mucous membrane was dark, and traversed by whity, prominent, firm ridges here and there, which looked very much like tubercle. The supra-renal capsules both contained degenerated caseous masses. In the apex of the right lung there were distinct remains of old semi-cretaceous tubercle, and in the left these were still more evident; and there was besides a cavity as big as a walnnt, lined with cretaceous deposit. The deposits in the peritoneum were firm, semi-translucent, and consisted of a fibroid basis substance embedding a few elongated nuclei. The lnngs were hyperæmic, but not consolidated. The bronchi were inflamed, the larger containing mucns, the smaller yellow pus. Bronchial glands were not enlarged; appeared normal.

Case 3.—T., aged 28, a short and spare man, admitted April 27, 1854. He had received a blow seven or eight years before on left side of face. Two or three months afterwards a lnmp appeared of the size of a pea; this grew to the size of an egg, and other lumps of like nature appeared. When admitted there was an enormous tumour on left side of neck, filling it np and throwing the head backwards. Went out June 23; re-admitted November 17 in very bad health, with constant cough and night-sweats. Tumour was wonderfully smaller—only one-third of its former size. He died December 3. Death was preceded some days by great pain in stomach, colliquative diarrhœa, and inability to take food.

Post-mortem.—Body exceedingly emaciated. Kidneys, liver, and heart healthy. A large mass of glands in neck had supnrated at various points. The pus was of good qnality. Thin sections of the glands were remarkably transparent, exhibited but few vessels, and consisted of a low, slightly fibrillated basis snbstance, embedding nnmerons nnclear corpuscles. Here and there small yellow foci were seen, without the least hyperæmia around them. On fnrther examination two of these were found to be simple deposits of yellowish or grey firm fibrine, and not pns. Microscopic examination showed the yellow stuff to be fibrine fattily degenerating; it was tolerably firm, made up of a consistent, semi-homogeneous, semi-fibroid stroma, embedding multitudes of corpuscles, chiefly of nnclear character, and a vast deal of punctiform oily matter. Tubercles were deposited all over the peritoneum; they varied from the size of a pin's head to that of a small seed or shot, were firm, feeling like sand or grits, semi-translucent, and lay in the membrane, whose translucency in the immediate vicinity they did not impair. Some of them, however, in the mesentery were raised from the serous surface, and hung at the end of a short pedicle into the cavity; some were more nearly sessile. In structure they consisted of a small amount of granular matter, with pretty numerous pale, dim, spherical nnclei, having less marked envelopes, less glistening contents, and much less trace of nucleoli than normal nuclei. When treated with acetic acid the tubercle appeared to be made up of multitudes of nuclei aggregated together by a faint, dim, uniting substance, the envelopes became better marked, and the cavities clearer. The tubercle substance appeared to be essentially identical with that of the enlarged glands. The lungs contained numerous miliary tubercles throughout their whole extent; there was no cavity in either lung.

Case 4.—Miss ——, aged 18. Not at all anæmic. Her first ailment was mumps, which occurred about six months ago; before that she had been very healthy. About the same time she had been kept in a state of alarm and semi-sleeplessness for several weeks, while residing in an old conntry house. Her parents were both healthy, and all their other children, but I think an aunt had died of phthisis. Last two months had suffered with abdominal uneasiness, with occasional darting pain. This pain has rendered riding intolerable; it is especially felt now before and after micturition, and was last night, when it woke her up, quite in the region of the bladder. Stools are natural; there is no diarrhœa, or rarely. At the right iliac fossa there is great tenderness; she cannot bear even the slightest pressure; turning in bed causes much pain. Similar tenderness, but not so great, extends over the abdomen, diminishing towards the left flank. During all the last two months the abdomen has been more or less tender. She has much flatulence. Tongue red and dryish; the midpart some time ago was quite raw, and very tender, just as if it had been scalded. Her appetite is good, but the digestive power is weak. She feels a craving for food, bnt after a few mouthfuls gets distended and uneasy. Has great thirst some days. She is much emaciated, but not more so the last month, nor has she lost strength. On account of the disorder of digestion she has been kept to a milk diet with much benefit. Lately her diet has been improved, and cod-liver oil has been given. The chest fronts moved fairly well and eqnally in full inspiration. Good breathing could be heard all through the lungs, though it was sometimes weak, and in the right apex a crepitation was heard at the end of inspiration several times. No cough; no expectoration; pulse 117; nrine pale, alkaline, not albuminous, deposited phosphates; weight, 74 lbs. For a time under treatment considerable improvement was obtained: her weight increased to 84 lbs.; she was able to eat a beefsteak without indigestion. On January 23 her weight was 87 lbs. 6 oz.,

but after this date she declined rapidily, had constant sickness, diarrhœa, consuming thirst, extreme emaciation, red aphthous tongue, and so sank away and died on February 23.

Post-mortem.—Peritoneum presented numerous old adhesions between the liver and parietes; in the pelvis there were several ounces of sero-purulent fluid; no general peritonitis. The mesenteric glands were greatly enlarged, and full of yellow tubercle, which seemed to be disintegrating. There were numerous tubercles, some of rather large size, under the serous membrane of the intestines, especially of the small; and in two places these formed dense groups, and had occasioned so much contraction of the canal by inflammatory thickening of the coats that in one spot I could only just introduce my little finger. In these places the mucous lining of the intestine was greatly inflamed, softened, and ulcerated. The stomach was quite pale and normal in appearance, both within and without; the upper part of the small intestine also appeared healthy; the chief seat of disease was the lower part of the small. The mucous lining of the cæcum was extensively ulcerated. The lower part of the large intestine was healthy internally; uterus normal; Fallopian tubes at outer parts both much enlarged and distended with cheesy tubercle; ovaries enlarged, their interior occupied by a pale, whity, lax fibroid tissue; kidneys healthy; liver pale, fatty-looking. Both lungs contained in the back parts of upper lobes largish masses of opaque crude tubercle, most advanced in left; right lung attached to ribs by adhesions, which were of some standing.

Remarks.—The foregoing cases seem to me undoubtedly *au fond* of the same genus, but they present some remarkable differences. Let us shortly compare them. In the first there was copious serous effusion into the peritoneum, with recent fibrinous false membrane about the liver. There was some amount of cirrhosis, but it seems to me very doubtful whether this was the cause of the ascites. There was similar effusion into the right pleura; and I suspect that both were produced by a like cause—viz., strumous inflammation. There was no positive tubercle of the peritoneum, but I have little doubt that the formations described were essentially of that nature. The lungs and the mesenteric glands were exempt, but the bronchial, two left inguinal, and the left testis contained unquestionable tuberculous matter. These latter strongly marked changes afford the key to the interpretation of the others. The patient is by them clearly proved, ἰος ἔμοιγε δόκει, to have been the subject of a special diathesis, and I shall therefore designate his peritonitis as strumous, though not positively tubercular. The tubercles were so small and latent that I do not think they could have evoked the peritonitis by the irritation they caused. Inflammation in a peculiar state of system gave rise, I believe, to the serous effusion, to the fibrinous, and the quasi-tubercles. Let it be noted that the cheesy deposits in the testis and glands produced no miliary tubercles. The disease seems to have been chronic throughout. Case 2 was a well-marked example of tuberculous peritoneum, and I cannot doubt that the deposit in the intestine was of the same kind. There was clear evidence that tubercle had formerly existed in the apices of the lungs and had become obsolete; but there was no miliary tubercle in them at the time of death: so that the cheesy masses in the supra-renal capsules had not produced pulmonary tubercle, even if they be thought to have generated peritoneal. Neither had the bronchitis, though affecting the small tubes with purulent inflammation, caused the deposit of recent cheesy masses. As I read the case, the man had the tuberculous diathesis, which originally manifested itself in limited pulmonary disease, probably in early life; this after a time retrograded, but the same disorder subsequently attacked several of the abdominal organs and destroyed life. Case 3 was a remarkable instance of lymphatic gland hypertrophy (false), occurring from slight provocation, such as one may reasonably conclude would have had no such effect in a non-predisposed system. It was what is now termed an adenoid growth, and it is worth a remark that I should have noted nearly twenty years ago its essential structural similarity to the peritoneal tubercle. Both had this in common—that they were low fibroid formations, but the lymphoma had much more power of growth in it than the tubercle. The miliary tuberculosis may have been dependent on the absorption of infective matter from degenerating patches in the lymphoma; and the history rather favours this view, as his health greatly deteriorated while the tumour was wasting. The connexion, however, I rather think, between the two events—the shrinking of the growth and the deposition of tubercle—was only of time and not of cause. Case 4 was simply one of rapid tuberculosis, manifesting itself, however, first and most prominently throughout in the peritoneum and abdominal organs. The tubercle in this instance was cheesy everywhere; it showed no tendency to retrogression, but to softening and decay. There was no reason whatever to regard it as derived from some pre-existing focus; it seemed to be of the same age in every part. In such an instance it must be admitted the tendency to a special form of disease—the tuberculous diathesis—was far stronger than in Cases 1 and 2. Nevertheless, it seems to have existed evidently in both, and I can see no ground whatever for divorcing the peritoneal affection from the associated strumous, and making it a separate disorder, with the title of granular peritonitis. Regarding the peritoneal lesion for the moment as one of whose nature we are ignorant, we have to try to ascertain its affinities. We may judge of these partly by its structure, partly by the co-existing lesions in other parts. Its structure is more like that of tubercle than of any other morbid formation, in my judgment. The co-existing lesions may be accidental and without relation to the peritoneal; but, unless this is shown to be the case, the presumption seems to me decidedly the other way. The gist of the cases is, I think, to show (1) that peritoneal tubercle may vary histologically from the most thoroughly cheesy quality to the most purely fibroid, the latter being the more usual condition, and that which betokens the least tendency to destructive decay; (2) to corroborate the old view as to the essential affinity of tuberculous and of strumous disease.

ORIGINAL COMMUNICATIONS.

ARE MORBID FUNCTIONAL STATES OF THE CEREBELLUM, MEDULLA OBLONGATA, AND SPINAL CORD CAUSES OF ALBUMINURIA AND BRIGHT'S DISEASE?

By THOMAS LAYCOCK, M.D., etc.,
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A YEAR ago an interesting polemic arose in the Royal Medico-Chirurgical Society as to the nature and causes of certain pathological changes in the minute arteries of the body in general, and in the kidneys in especial, found in cases of chronic Bright's disease. Differences of opinion were expressed by eminent physicians whose views will be always welcomed by the Profession, both as to the facts and the theories involved. A committee of the Society was appointed to judge between them, but it resigned office, and the whole matter is still undetermined.

Looking at the questions in dispute as a spectator anxious to derive useful knowledge from the very vivid discussions at the Society and in the lectures subsequently published to elucidate and round it off, I find the controversialists agreed as to this general fact of observation—that there is a change in the structure of the smaller arteries throughout the body generally, as well as in the kidneys, in a certain class of cases of Bright's disease. The difference in opinion was as to the nature of the change. Sir William Gull and Dr. Sutton reported it to be a hyaline-fibroid or fibroid thickening of the arterial wall, whereas Dr. Johnson held that it was a muscular hypertrophy. The obvious method of solution of this part of the question is that each observer should prepare demonstrations from the same subject, for if they be from different subjects it is quite probable that in the one may be hyaline-fibroid and in the other hypertrophic. In the absence of this procedure, it is fair to conclude at least that both observers may be correct.

But the polemic extended far beyond the anatomical facts to the causes of the changes observed. Dr. Geo. Johnson is an earnest humoral pathologist, and affirms that Bright's disease is not a mere local malady, and that "the proximate cause is in all probability a morbid condition of the blood." In proof, he observes that the disease is bilateral, and that it "occurs in association with morbid states in which a morbid condition of the blood may be confidently assumed to exist. Albuminuria, varying in degree and in duration, has been found more or less frequently associated with scarlet fever, measles, small-pox, erysipelas, pyæmia, typhus and typhoid

fever, rheumatic fever, malarious fevers, cholera, purpura, scurvy, diabetes, syphilis, certain forms of pneumonia, pregnancy, the absorption of secretions from the interior of the uterus after parturition, gout, the abuse of alcoholic liquors, excessive eating, certain forms of dyspepsia—resulting, as may be supposed, in the passage of crude materials into the circulation,—a poor and insufficient diet, purulent and other discharges, and, lastly, suppressed action of the skin by exposure to cold, and especially to cold and wet combined."(a)

It will be observed that in this copious exposition of causation, albumen in the urine, or "albuminuria," is taken as identical with, or necessarily leading to, Bright's disease. Further, that while in all these varied diseases the nervous system as well as the blood must be involved—in some more primarily than in others—it is wholly ignored in causation. And exciting causes of albuminuria traceable directly to the nervous system—viz., that kind following upon excessive brain-work, and due to lesions of the medulla oblongata and spinal cord—are omitted. In short, I do not find in Dr. Johnson's papers any reference whatever to any morbid state of the nervous system in general, or of that of the kidneys in especial, as an antecedent to the morbid changes in the kidneys or to those of the blood, which are supposed, "in all probability, to be their cause."

In reference to this omission of an important element in causation I may also refer to the recent discussion as to influence of "alcoholic" drinks on the production of Bright's disease. Neither Dr. Johnson nor the other disputants seem to realise the fact that the drinks of the drunkard are not all "alcoholic" in a definite meaning of the term, but contain other agents of a poisonous or injurious character, as fusel oil, bitters, etc., and that these have all a direct and primary action on the nervous system, and so their use leads to morbid conditions thereof which may be predisposing causes. Lead is another of these neurotic causes. What Dr. Johnson dwells upon is the series of diseases of the nervous system which coincide with, or are consecutive to, chronic Bright's disease, but which, according to his humoral pathology, also depend on a poisoned state of the blood, poisoned by the retention of uriuary excreta, and known by the term "uræmia." Yet he states a well-known clinical fact, which is of itself sufficient to upset the current theories of uræmic poisoning. "Let me add," he observes in one of his lectures, "that in some cases, notwithstanding the scantiness, and ultimately the almost complete suppression, of urine, uræmic symptoms are almost entirely wanting."(b)

But how, according to the humoral theory, is the arterial degeneration or hypertropy of the small arteries generally caused? and how the coincident hypertrophy of the heart, noticed by Bright? "About six years ago it occurred to me," Dr. Johnson observes, "that the hypertrophy of the left ventricle of the heart in cases of contracted kidney might be a result of increased contraction of the small arteries throughout the body, this contraction being excited by the abnormal quality of the blood."(c) And this kind of arterial change is also the cause of the neuroses in certain cases of Bright's disease—excessive contraction of the arteries of nerve-centres, "excited by the presence of impure blood," leading to arrest of supply of blood to the nerve-tissue. Here, again, it is observable how entirely the vaso-motor nervous system is ignored. Sir William Gull differs wholly, and I think rightly, from Dr. Johnson in respect to his humoral pathology.

For many years past I have directed attention to the influential part which the nervous system plays in all tissue changes whatever, showing the facts both systematically in my college course and at the bedside. I have drawn the conclusion from a large and varied series of facts, that the cerebellum, with its connexion downwards along the medulla oblongata and spinal cord and upwards into the hemispheres, is the great trophic centre; and that this centre is put into functional activity, not only by afferent impressions from the body, whether consciousness be coincident or not, but also by afferent impressions from the vast periphery of the hemispheres, and in this case also whether consciousness be coincident or not;—in short, that the hemispheres are not functionally restricted to intellectual processes, as is generally held, nor the cerebellum to muscular co-ordinations, but that both conjointly influence the whole of the organic processes in a way which physiologists and pathologists have, so far as I know, wholly overlooked. It is in accordance with these views that I regard the changes in the vascular system in general described by Dr. Johnson as due to concauses having their seat in the cerebellum, medulla oblongata, and spinal cord; that a special neurosis of the renal nervous system is a concause in all cases of albuminuria and consecutive structural changes in the kidneys; and that the dropsies, thirst, cardiac, vascular, lymphatic, pulmonary, gastric, and other phenomena must be reconsidered from this point of view to understand in any reasonable degree the true pathology and the prevention and cure of this large and common group of diseases. Hence I have put for consideration the question at the head of this note—Are morbid functional states of the cerebellum, medulla oblongata, and spinal cord causes, predisposing and exciting, of albuminuria and Bright's disease?

Edinburgh.

(a) Lecture in *British Medical Journal*, January 11, p. 27.
(b) *British Medical Journal*, February 22, p. 193.
(c) *Ibid.*, p. 192.

ON THE SEASONAL PREVALENCE OF SOME ERUPTIVE FEVERS IN INDIA.

By JOHN MACPHERSON, M.D.,
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Having been called on suddenly to produce a few notes on some subject that might invite a little discussion at a meeting of the Society,(a) that of the influence of season on the diffusion of some of the eruptive diseases in India has occurred to me. I have not much of absolute novelty to offer; still, facts on the subject have accumulated of late years, and a restatement of those facts and of their general bearing may be not without its use. On the whole, it has been considered a characteristic of contagious diseases in Europe that they are not much affected by season. This is certainly not the case in the East.

Small-pox.—Avicenna expressed the opinion that this disease was most prevalent and most fatal in the early months of the year. The contagion, he thought, was multiplied by dry weather and by southern winds. This statement is confirmed by the result of observation in India, as would appear by the following extracts from some recent reports:—

Punjaub Report for 1871, p. 26:—"The progress of the disease from month to month has followed what registration has now shown to be its regular and almost unvarying course in the Punjaub."

"It seems evident from the tables that I have prepared that the progress of the disease is very much dependent on the weather for its arrest or development. It commonly commences in February, and the sudden rise in May is no doubt owing to the increase of heat; but, either in consequence of the intense heat of June, July, and August, or as the result of the law by which rapid increase is followed by rapid decline, the descent during these three months is so precipitate that it generally sinks to near the place from which it had taken the previous six months to ascend."

Punjaub Report, 1870, p. 10:—"The period of maximum intensity would appear to be earlier the farther south we go, being affected no doubt by the earlier onset of the intense heat, which appears to destroy its power."

It is to be remembered that in either case the intense heat is the precursor of the rains.

Moving a little further south, we come next to the Central Provinces, which in all essentials agree with the Punjaub as to the period of prevalence of small-pox, always making allowance for some difference of climate.

Report of Central Provinces for 1871, p. 28.—"The chief small-pox season is March, April, May; and there, as elsewhere, it decreases to a minimum in the rainy months." "With respect to the rapidity with which small-pox spreads at different times," Dr. Townsend considers "that it is probably mainly dependent on variation in the seasons, and the drought of 1869 appears to have been favourable to its diffusion."

The facts in Calcutta have been long known, and are very striking. Taking a series of twenty years, 15,768 deaths occurred in the first six months of the year, 1821 deaths in the second, or scarcely one-eighth so many in the last as in the first half. The minimum prevalence of small-pox is in Calcutta during the rainy season, especially at its end. A few cases show themselves in the cold weather, but its epidemic prevalence is

(a) Read before the Epidemiological Society.

always in the spring or hot season. The advent of the rains seems to check it—at least, with their arrival epidemics cease.

Dr. Morehead and Mr. Leith showed, many years ago, that the same general law prevailed in Bombay as in Calcutta. Dividing the year into quarters, they found for the city of Bombay the following ratio of deaths by small-pox:—

In 1st quarter,	from February 1 to April 30 .	11·15	per cent.
2nd „	„ May 1 to July 31 . .	6·24	„ „
3rd „	„ August 1 to October 31 .	1·19	„ „
4th „	„ November 1 to January 31	1·36	„ „

Taking up accidentally the first return respecting Bombay that I can find, the same result appears for the year 1865—

1st quarter.	2nd quarter.	3rd quarter.	4th quarter.
368	111	21	66 deaths

Proceeding further south, we are supplied with information by Dr. Cornish's valuable reports.

The curves of small-pox mortality in Madras are not nearly so marked as in Northern India; still there is a distinct preponderance in the early months, and this is most marked in the northern districts, such as Ganjam and Vizagapatam, not differing widely in latitude from Calcutta, the Central Provinces, and Bombay. Cornish's Report, p. 195:—"The seasonal development of this epidemic was very marked in all the talooks. The largest mortality occurred in the month of February, but all through the dry months of the year the disease prevailed with great intensity, and it began to decline rather suddenly with the approach of the rainy season."

From Dr. Cornish's tables it appears that the further south one goes, and as the climate is less extreme, the less marked is the variation in the seasonal prevalence of the disease.

There is, therefore, a wonderful amount of accordance of observation in most parts of India on the season of prevalence.

Varicella.—If we come now to chicken-pox, the accounts of it in India are not very full or satisfactory. There is no necessity for our discussing its relation to small-pox; but there is sufficient evidence, both in Calcutta and Bombay, to show that it follows mainly the same laws as small-pox: it usually commences in the end of the cold weather, and attains its maximum in the hot weather. I have seen it during small-pox epidemics, but perhaps oftener at other times.

Measles.—It might be desirable to have fuller evidence respecting the season of diffusion of this disease. Still, there is abundant proof that the first half of the year is its favourite time of prevalence—indeed, tho Arabs would not have experienced such difficulty in distinguishing it from small-pox, had the two diseases prevailed at different seasons. Returns for Calcutta and Dinapore, and of a recent epidemic at Boorhampore—Dr. Morehead's evidence for Bombay—the fact of the prevalence of measles at Bombay and Madras early in the present year—all serve to show the same general law of prevalence as small-pox does. Thus it may be assumed that small-pox, chicken-pox, and measles all occur chiefly in the first half and in the second quarter of the year.

The *artificial propagation* of the variolous and the vaccine virus follows the same rule. The native inoculators commence their operations at the season of the year when small-pox spreads most readily. They have ascertained in Lower Bengal that this is the conclusion of the cold weather and commencement of hot. They accordingly conduct their operations with a success at this period which they know they could not obtain at other seasons.

The course of vaccinia is remarkably in accordance with all this. It is perfectly regular in Calcutta from the end of November to the middle of March; it falls off during the intense heat. As the rains set in, it degenerates, and crusts do not form; but when the rains have ceased, the vaccine improves again, and vaccination runs its usual course.

It has thus been shown that in the case of the ordinary prevalence of the purely contagious diseases, such as are believed to spread mainly by contact, or still more by emanations from the bodies of patients, certain conditions of heat, dryness, or moisture have very great influence either on the poison of the disease itself, or on the susceptibility of individuals to be affected by it. Of the two, the former is far the more probable, seeing that the non-susceptibility to artificial variola or to vaccinia is exceedingly rare. It would also appear that moist heat, which has so long enjoyed the character of favouring the development of contagious diseases, is decidedly inimical to that of several of them.

Some have attributed the annual reappearance of small-pox in India to the operation of the inoculators; but this idea is pretty generally abandoned now that it is known that small-pox follows the same course where inoculation is not practised.

But all that has been said does not touch on the great problem, why eruptive fevers are widely epidemic in one year and not in another; why, for instance, small-pox is always to be found in India, but is only epidemic once in four or five years; why, as Sydenham puts it, one and the same disease at one certain time attacks an infinite number and becomes epidemic, at another it is contented to attack one or two individuals, and to spread no further; why there should be what is called an explosion of an eruptive fever—for instance, in Calcutta measles arise much more suddenly than small-pox, which usually indicates its approach by an increased number of cases in the months preceding the outbreak.

Causes brought forward to explain outbreaks of other diseases—such as the state of drains, privy emanations, ground sodden with excreta, polluted state of drinking-water, conditions of ground-water, soiled clothes, opening of old graves—are not wanted where a markedly contagious disease like small-pox is endemic; and only the two last of these causes have at times been thought necessary to account for small-pox. Some of these causes may assist in producing individual predisposition, and doubtless aid the spread of the disease.

No one believes in the generation *de novo* of eruptive diseases, even if in the present case it were necessary to suppose it. Importation is scarcely required, where the disease is always present; and in Calcutta I never traced the spread of small-pox to imported more than to other cases.

Whatever result the study of the causes enumerated may have in other diseases, we have no reason from the history of the past to expect that they will throw much light on the history of eruptive fevers, or more particularly on the cause which determines an epidemic outbreak. But we have one fact of an encouraging nature—that the same conditions of weather that influence the ordinary occurrence of eruptive fevers, in an equal degree influence the progress of epidemics of them, a fact which tends to show that epidemic may, in some respects at least, be not very different from seasonal influence.

Meantime, while it is still uncertain how far these apparent effects of heat and moisture in India are reconcileable with what is observed of them in other parts of the world, I am far from assuming that what we know of the influence of temperature or moisture supplies an explanation of the *tertium quid* of epidemic influence, which, although its nature is unknown like that of malaria, has still, like it, been generally required to round off our theories. No doubt—as to the causation of disease—we have not made much of real discoveries, such as that of ozone, or of more doubtful ones, as that of vegetable or other miasms; yet the greatest hope of solving such large questions would seem to rest in a more minute study than has been hitherto carried out of atmospheric agencies, including electricity and atmospheric pressure—of which we know so little, even in the rough,—combined, of course, with clinical observation of the phenomena of disease, and aided by chemical and microscopic research. It is no doubt a slow and tedious process,—many years may elapse without any positive results. But we must remember that "*ars longa*" has always been a true saying in the history of Medicine. Meteorology is only in its infancy, as studied in its relation to disease; and Drs. Ballard and Morris and others have indicated the way in which such laborious investigations should be pursued. It is gratifying to observe how much attention meteorology is receiving in India, the reports from which country are so creditable to the service that has produced them. They are becoming of much value in the study of the more general questions connected with the generation and propagation of disease.

Homœopathy in the University of Michigan.—The Bill establishing two chairs of homœopathy has become a law. So far as the present Faculty is concerned, the question is simply, Shall they abandon their posts (which will result in placing the whole school in the hands of the homœopaths, and so ruin one of the best institutions of the country), or shall they maintain their ground and continue to teach truth right in the face of error, and without respect to the punctilious etiquette, miscalled ethics, which would make them turn tail to a mere shadow, and desert their proper work and duty. We say to them, as Sumner said to Stanton, "Stick!"—*New York Medical Record*, June 2.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

LONDON HOSPITAL.

A SERIES OF CASES ILLUSTRATIVE OF CEREBRAL PATHOLOGY: CASES OF INTRA-CRANIAL TUMOUR.

(Under the care of Dr. HUGHLINGS-JACKSON.)

(*Continued from page* 493, vol. i., 1873.)

Case 7.—*Convulsions beginning in the Left Great Toe—Syphilitic(?) Disease of the Lower Part of the Ascending Frontal Convolution—Indurated Patches—No Optic Neuritis.*

THIS is the case referred to in the footnote "b" to Case 2, in which case epileptiform seizures began in the left thumb. (See November 30, 1872, p. 597.) The present is the only case I have seen in which a very local lesion has been found associated with convulsions beginning in the foot. And unfortunately there was so much disease in the brain that the case does not supply any certain evidence as to localisation of movements. Such cases have their interest much widened by the recent researches of Dr. Ferrier: the artificial production of convulsions by galvanising the convolutions.(a)

I did not diagnose that this patient's brain disease was syphilitic. I do not see how such a diagnosis could have been arrived at.

Emily B., aged 45, a domestic servant, was transferred to my care by my colleague, Dr. Woodman, April 18, 1872. She had convulsive seizures beginning in the left foot. Her earliest symptoms occurred three years before I first saw her. She then had severe pain in her head in the morning, and she felt exhausted, but these symptoms passed off when she threw up a little clear water. In November, 1870, she had her first fit. When about to wash a frock, her eyes closed and she could not open them; then her left leg seemed to be getting bigger, and she felt as if going up to the ceiling; next, she lost consciousness. She had fits of this degree of severity—*i.e.*, attended by loss of consciousness—at intervals of about two months. In these she foamed at the mouth, but did not bite her tongue. But she had numerous partial seizures. All her fits, severe and partial, began in the left foot and in the great toe of that foot. She called the partial fits "cramps." She had constantly a strap on her leg ready for tightening to dissipate the spasm. This had been advised by my colleague, Dr. Ramskill.

I took great interest in her case, and I very often asked her as to the mode of onset of her fits. The account was always the same—the big toe was the part first seized in every attack. The fits, I took for granted, pointed to disease of the right cerebral hemisphere, although I had had no autopsy on a patient with fits of this sort. The only doubt was as to whether it was a coarse or a minute change, or, as it is inconveniently put, functional or organic disease. As the history shows, she had had severe pain in the head three years before I saw her, but on the first of her attendance on me she had none. There was no optic neuritis. For the reason that these two great signs of gross disease were absent, I thought there was no tumour. But later I concluded that there was a tumour, because she had then severe pain, and that of the *right* side of her head. She had no optic neuritis at any examination, nor were there any relics of it, so far as careful indirect examination showed.

From her manner I and all who saw her concluded that she was very weak-minded; her manner was silly.(b) However, her friend, a very intelligent woman, said the patient's memory was bad, and yet affirmed that her mind was good, and certainly as good as it ever had been. She spoke indistinctly towards the end of her life. About October she began to talk more indistinctly still, and her tongue was visibly tremulous; the articulation was not syllabic, it was thick rather. She became thinner—haggard-looking—but still conducted herself with a kind of jaunty silliness. Nevertheless, although I saw her in this worse condition on November 7, I was surprised to hear that she died on November 9, after a few hours' illness. She had been out the day before. I was not surprised to hear that this illness was at first considered to be hysteria, for she did, when in the out-patient room, conduct herself in a way which led to inquiries if the case was not one of hysteria. Nay, possibly she was hysterical as well as suffering from severe brain disease. She died so suddenly that an inquest was held. By the kindness of Dr. Riley I obtained the brain for an examination, which my colleague, Dr. Gowers, was so good as to make for me. The lesions are so various, that the clinical history loses much of its value. From the naked-eye appearances of the growth I supposed there was syphilis, and this inference Dr. Gowers' examination confirms:—

"In the brain I received from you on November 12, a small hemispherical tumour was attached to the dura mater, and projected into the right hemisphere in the lower part of the anterior ascending parietal ('transverse frontal') convolution, its lower margin being about one inch and a quarter from the lower extremity of this convolution in the bifurcation of the fissure of Sylvius. Dimensions—from before back, one inch and a half; above down, one inch; depth in most prominent part, one-third of an inch. No softening in neighbourhood. An area of softening about two-thirds of an inch wide, and one-third of an inch from above down, existed over the posterior cornu of the left lateral ventricle, extending back to within three-quarters of an inch of the posterior extremity of the hemisphere. Softening not recent. Softened tissue separated from the cavity of the posterior cornu only by thickened ependyma. Several areas existed in which the consistence of the brain-substance was considerably increased. The largest of these was situated outside the right optic thalamus, in the white substance: dimensions, about an inch from before back, and half an inch from above down. Another existed in the inferior portion of the right corpus striatum. (This was not discovered until the brain had been much cut about in ascertaining the position of the other changes, and its exact relations were somewhat doubtful.) A third caused a slight projection, about a quarter of an inch in extent, on the left hippocampus major, opposite the extremity of the optic thalamus. A fourth small area was placed outside the left lateral ventricle, opposite the descending cornu, below and outside the anterior extremity of the softened area.

"*Microscopical Appearances.*—The tumour attached to the dura mater was composed almost entirely of fusiform cells lying side by side, some long and narrow, others wide and short. In length they varied from $\frac{1}{1000}$ to $\frac{1}{250}$ inch, and in width from $\frac{1}{2000}$ to $\frac{1}{5000}$ inch. In all the wider cells a nucleus occupied the broadest part, containing one or two nucleoli. A few round and oval cells were seen, about the diameter of the fusiform cells, and with similar nuclei. In the longest narrow cells no nucleus could be distinguished, but one or two dark dots occupied its position. No fibres could be seen, except those formed by the elongated cells, nor any intercellular material. The growth at its edges could be seen to be invading the brain-tissue, extending chiefly along the vessels. The structure of the growth, though not characteristic of, was quite consistent with, and the mode of extension was very suggestive of, its syphilitic nature. The differences of structure of the firmer areas of the brain and the adjacent structures of normal consistence were very difficult to determine, on account of the post-mortem changes. The chief change seemed to be that throughout the firmer areas the nuclei of the neuroglia were increased in number, and mingled with them in varying proportions were other cells, mostly round or oval, with delicate outlines $\frac{1}{2500}$ to $\frac{1}{5000}$ inch in diameter, all occupied by a nucleus about half their own diameter, and containing one or two nucleoli. Apparently free nuclei, resembling those within the cells, were in some places grouped in aggregations of four or five. The cells were nowhere so numerous as to compose

(a) Dr. Ferrier has given a very brief statement of his main results in the *Brit. Med. Jour.*, April 26, 1873. A full account of his researches will appear in the forthcoming volume of Dr. Crichton Browne's West Riding Asylum Reports. Ferrier's facts, and those of Fritsch and Hitzig, to which he refers, are especially interesting to me as confirming the views I have long taken of the nature of epileptic and epileptiform seizures. I have already briefly remarked on this elsewhere (*Brit. Med. Jour.*, May 10), and shall do so more fully in an article in the next volume of Crichton Browne's Reports.

(b) The interest these facts have to me will appear if I give a quotation from a paper published several years ago. In the St. Andrews Graduates' *Trans.*, 1870, I wrote—"I think it of importance to consider the side of the body in which the spasm starting in the leg sets in. My reason is this, that mental defect (imbecility) sometimes occurs with hemiplegia in which the leg suffers more than the arm, and I believe that it occurs oftener when the left is the side paralysed. I fully admit that my facts on this matter are very few, and I therefore ask others to help me in this part of the investigation." My facts are still few, and I still ask for help. Trousseau, I believe, considered imbecility more likely to occur in cases of hemiplegia where the leg suffers more than the arm. I think the "imbecility" is really as *special* a defect as "aphasic" symptoms are; it is a loss of power to *recognise* (not to *see*) things.

tracts of tissue, but were seen to be scattered among the nerve-fibres. Here and there were a few fusiform cells, but these were not numerous."

Case 8.—Epileptiform Seizures beginning Unilaterally—Double Optic Neuritis followed by Atrophy—Very Large Head—Acute Cerebellar Symptoms—Enormous Tubercular Tumour of the Left Cerebral Hemisphere—Small Tumour of the Middle Lobe of the Cerebellum.

This case is interesting from many points of view, and not least from the occurrence (on February 5) of what I have called in the title "acute cerebellar symptoms." It was during life inferred from these symptoms that the boy had disease of the cerebellum, but its nature was not predicted,—it might have been localised meningitis. The peculiar position of the arms and the retraction of the head made me conclude that there was disease of the cerebellum.

J. S., aged 5, was brought to the London Hospital, March 30, 1871, for epileptiform seizures. It would seem that he had had different sorts of seizure at different ages.

First Variety of Convulsive Seizures.—When ten months old he had a series of fits over a period of about two hours; his gums were lanced. He was soon apparently well, and had no further attack until the age of two years.

Second Variety of Convulsive Seizures.—He then (at the age of two years) complained *occasionally* of his right foot. He said it hurt him, and he seemed to be in much pain, but all passed off when his mother rubbed the foot. The attack would last about five minutes. It may seem trifling to speak even so shortly of these attacks, but when it is added that after a while he had attacks in which the right leg would "jerk," and the "working" would go up the side and affect the right arm, the significance of the seizure is more obvious. Plainly they were epileptiform attacks, especially as we shall see he had other attacks, after which he became paralysed of the side occasionally convulsed.

Third Variety of Convulsion.—About ten weeks before admission (before March 30, 1871) he had another variety of convulsion. He had no convulsion of the second kind (the foot-beginning ones) for two months before the first of this, the third set. The first (a severe one) his mother did not see, but he had since been subject to slight seizures in which spasm affected only the *right side of his face, and in which his speech was lost during the continuance of the spasm.* The following note was made the day of admission:—He is not unconscious in the fits, knowing all that is said to him. He tries to speak; the mother supposes to, as he makes a noise "with his lips." He has had these partial seizures many times since the severe fit ten weeks ago. Sometimes he misses a day or two, and sometimes he has the attacks "all day long." After frequent attacks he talks badly; but, as usual in these cases, it is impossible to obtain precise information as to the kind of defect of talking. He "drawls his words," and it is sometimes "impossible to understand what he says." Another fact is that the right arm is useless for a while—about five minutes, she says—although no spasm is ever observed of it. I have noted this several times in cases of epileptic spasm limited to the face. I suppose the powerlessness of the arm depends on sudden cutting off of blood (by arterial spasm) from nerve fibres, the convulsion of the face being the result of discharge of grey matter.

When there is temporary loss of speech in a convulsion, there being no loss of consciousness, the spasm usually begins in the right cheek or tongue. Sometimes there is defect of speech after fits beginning *in the hand*, and when so it is, I think, defect of a higher kind—*i.e.*, the patient gets out a good many single sentences. The defect after fits beginning in the face or tongue is more often "an ataxy" of articulation. I must not attach much importance to such symptoms in a child. Besides, I saw several seizures, and in these his speech was not affected. I do not think this disproves his mother's statement, as the fits I saw were slight. The fits I saw, although they only affected the cheek, were clearly epileptiform. They affected that part of the face which suffers most in the common form of hemiplegia. Those I saw did not spread to the orbicularis palpebrarum. I have witnessed fits so limited in patients who have had at other times convulsions which (beginning in the cheek) spread all over the body. Sometimes a patient who is hemiplegic will have occasional spasm of the *paralysed* part of the cheek or of the hand.

This patient was slightly hemiplegic of the right side, but it was simply impossible to make precise observations, as he was indocile and slightly feeble-minded. There was only a little weakness of the side.

So far evidence has been given only to show that there was disease of the left side of the brain. On this point there could be no doubt at all. Further, the convulsive seizures rendered it almost certain that the *surface* of the brain was diseased, not that the disease was limited to the surface. The word "disease" is vague, but we could easily go a step further and say that there was instability of the grey matter of the convolutions of the left side of the brain. To say that there was such instability is to utter a truism, for that there was a discharge was manifest, as certain muscles were occasionally put in motion. But the important question remains, By what pathological process was this local instability produced? This is a distinct question. There are probably many ways in which instability of grey matter is produced, but the point of practical importance is this—Is it produced by the action of an adventitious product or not? or, as it is sometimes put, Is the fit "caused by" organic disease? This question, in most cases, admits of easy answer.

Let us first recapitulate. 1. The fact that the right face, arm, and leg were affected showed that the part (organ) diseased was the left side of the brain. 2. The fact that the motor affection was, although only in part, a mobile one—viz., spasm of the right side of the face—rendered it certain that the disease was such that grey matter was unstable, for there was a discharge now and then. After this recapitulation we take up the next question—Was there an adventitious product (foreign body, "coarse disease," etc.)?

The common signs of organic disease are severe headache, vomiting, and optic neuritis. It is very remarkable that to this stage of the illness he had had scarcely any pain in the head, and no vomiting, nor had he got thinner; but he had double optic neuritis, and this, considering there were one-sided motor symptoms, was enough to make it certain that the disease in the left cerebral hemisphere was an adventitious product. Now, the reader is asked to bear in mind that there was no evidence that his sight was defective,—nor was there until his death. His mother, and afterwards the hospital nurse, considered his sight good. It may have been defective, but it was impossible to test it even roughly. Unless the ophthalmoscope had been used we could not have guessed that there was anything wrong with the nerve. However, as there was no headache, the instrument was of the greatest value in diagnosis. The eyes were examined by Liebreich,(c) Hermann Pagenstecher, by my colleague Dr. Gowers, and by many others. I concluded, then, that there was an adventitious product of *some kind.* But there still remains the question, Of *what* kind?

At first I thought it probable that there was a cerebral abscess. This would have accounted for the symptoms. My reason for thinking so was that he had had discharge from the left ear at the age of two years. But he had not recently had any discharge, nor had he had earache; the aural discharge had been from the ear on the side of the brain disease. It was simply impossible to test hearing: the boy was too careless and dull. Another reason for thinking that there was an abscess was that the boy's head was large. I thought myself that it had probably got large recently, and, as the sequel will show, this supposition was no doubt correct; but his mother was convinced that it was no larger than it had been before his illness. Nearly always mothers think similarly until a child's head is of a very large size. Hence we must not let their opinion be decisive; we must consider the *shape* of the child's head, on which more later.

The child attended as an out-patient, and was in hospital some weeks, but no notable changes occurred; he used to pass his time pleasantly, being only slightly paralysed. I then lost sight of him until October 28, 1872.

His mother brought him again to the Hospital on October 28, 1872. His head was larger than before; this, as his mother now admitted, was obvious. He was still hemiplegic on the right side, and the paralysed parts—hand and foot—had undergone slight rigidity. His speech was not obviously affected, but he seemed apathetic, and spoke little.

He was admitted into the children's ward. He seemed dull, but the dulness was more like that of ordinary lack of intelligence. He had pain in the head now and then, and once had diarrhœa. A note of his condition taken on December 7, 1872, will suffice:—He is sitting up in bed playing with pictures.

(c) On May 5 Professor Liebreich examined the eyes, and declared the discs to be in the after stage of neuritis. He pointed out, also, some small spots on the retina, near the macula. They looked to me like bits of gum, and not like the dots usually seen in cases of chronic Bright's disease, and now and then, but rarely, in cases of cerebral tumour.

He can see so well that neither his mother nor his nurse have supposed that there is anything the matter with his sight. When asked they say his sight is good. He would call to the nurse to let her know that the cat was going into the cupboard. But to test his sight carefully was impracticable; he would take no notice of our requests. He has atrophy of both optic nerves; there are still at the macula in each eye the little dots mentioned previously. His sense of smell is not lost: he said oil of cinnamon was nice, and promptly and vigorously expressed disgust at asafœtida. His hearing to ordinary observation was good, but careful testing of it was impossible. There was hemiplegia of the right side; no obvious distortion of face or tongue. He kept the head well up, although it was very large. The arm was rigid; the leg also was rigid, and he walked (when assisted) on his right toes; he could not walk without help. Speech, articulation, and voice were good. His head was very large, and especially prominent above the ears. The anterior fontanelle was soft, and the sutures were beginning to gape slightly.

There is nothing of importance to narrate until the onset of certain acute symptoms shortly before his death. But as these symptoms have an importance almost apart from the rest of the case, I will recapitulate once more.

The position of the disease was the left cerebral hemisphere. The functional nature of the change of the nerve-tissue was instability. That instability was the result of the "irritation" of a tumour. All these things were simple obvious matters. And on his second admission there was clear evidence that his head was not only enlarged, but enlarging—there was gaping of the sutures. So we got further, and felt certain that the adventitious product *was a voluminous one.* There could be only one difficulty in such a case. It was the old one—Of what nature was the voluminous product? The fact that the mass was evidently voluminous made me think chiefly of two things—a large hydatid cyst and a vast cerebral abscess. But I went no farther than the diagnosis of a voluminous adventitious product, and I confess it did not occur to me (as it would do in future) that the mass was a scrofulous tumour.

Nearly the whole of the following notes are by my then clerk, Mr. (now Dr.) Lechler:—

February 5 (from statements of nurse).—Patient is worse to-day. Yesterday morning he said he was much better, but soon after complained of pain in his head, put his hands to his head, and said he was going to be bad. During the day he looked flushed and feverish. About eleven at night he began to scream, and when the nurse went to him she noticed that his head was retracted, that he was trembling all over, and that his right side was convulsed. He was quite unconscious.

This morning he is lying on his left side, *with his head retracted;* his right arm is rigid, flexed, and the hand is drawn up to the shoulder. The right leg is in an almost constant state of tremor. Every now and then he suddenly begins screaming; then the tremor increases, he jerks his right leg about, and moves his right arm. The right arm moves at the shoulder, and is kept in the position before mentioned. During the "convulsion" the fingers are flexed—the thumb bent across the palm with the nail pressing firmly on it.

6th.—Continues in the same state. The fits of screaming and the "convulsion" occur more frequently, and are now almost constant. He is unable to swallow, and had no food yesterday. He has had a little wine this morning, but a teaspoonful remains in the mouth for some minutes and causes constant gurgling sounds. Motions and urine are passed involuntarily. Temperature 101·2°.

7th.—A little better this morning. Lying on his back, *with head retracted.* Breathing quick, and somewhat stertorous; voice a little hoarse. *Both* arms are now flexed, and the hands are placed on the shoulders. There is a constant tremor of the *left* arm, and occasionally of the whole body. The right hand is constantly moved backwards and forwards, and the hand is spasmodically closed. He still cries out at intervals, but his voice is not so loud. The convulsive seizures observe no regular order; most of them first affect the left leg, then he begins to scream, and then his hand is convulsed. Is conscious this morning; knew his mother; protruded his tongue when asked to do so. Is able to swallow better; has taken nothing but wine. The intervals between the crying fits and convulsive movements are much shorter; the latter are almost constant, and the former weaker. Temperature 101·2°; pulse 90; respirations 32.

Note made about 4 p.m.—Lying partly on his back; his chest very prominent, and apparently as if fully expanded. Belly quite soft except occasionally, when, as it seems, he is holding in his breath. His head is thrown back, and is twisted on the trunk, so that the right side of the occiput touches the shoulder, which is raised to meet it. His face looks upwards to the left, and the left side of his head and face rests on the pillow. The right sterno-mastoid is stiff, but not very; the left is not. The finger cannot be inserted without force betwixt the shoulder and the back of the head. The right leg is supple; arms placed as described in previous note; the left hand is in form somewhat as in tetany. 9 p.m.: Since six o'clock he has been in almost constant convulsion, which affects trunk, lips and chin, and left side. It commenced by frothing at the mouth, then universal twitching of muscles, movement of body laterally being the chief movement.

8th.—Has been very restless all night. Convulsions mentioned at last note ceased about ten last night. Mother says he was convulsed at intervals during the night. Is lying half on left side and half on back. Head much more retracted; occiput almost touching upper part of back; back more arched. Right arm extended down back; hand closed; left arm lying at side and extended. Eyeballs turned to left, oscillating up and down; conjunctiva sensitive. Shows no sign of consciousness; has not screamed since yesterday morning. Respiration rapid, entirely abdominal. Pulse 132, small and fast; respirations 52.

9th.—Died at 3.30 this morning.

Post-mortem Examination.—The head was very large. The bones of the cranial wall—*i.e.*, those sawn through—were soft and very thin; the left side of the skull was markedly thinner than the right. There was slight separation at the interparietal sutures, and also at the left coronal. In two places, each of about the size of a sixpence, the bone was gone. The enlargement of the head was seen to be the result of an enormous tumour of the left cerebral hemisphere. It occupied the middle region, extending from the deepest part of the Sylvian fissure, involved the convolutions of its upper wall, and reached the surface of the brain at the middle line. The frontal convolutions were pushed forward. At the uppermost part, and at the outer side, the dura mater was attached to the mass; in other parts there was a thin layer of brain-matter over it. Except where the dura mater was attached, the tumour was easily turned out, the brain-matter being soft about it. The corpus striatum was soft, and in parts diffluent. The tumour on section was of a grey-green tint; it felt tough and elastic; its edge showed growing tissue. *It weighed more than eleven ounces.* The rest of the encephalon was normal, except that there was a mass, the section of which was of twice the area of that of a pea, of a grey-green tint, in the lower part of the middle lobe of the cerebellum, about the position of the uvula. The tumour was altogether about the bulk of two peas. There was no change of importance in any other part of the body. Tubercles, caseous matter, etc., were carefully looked for in the lungs and other viscera, but no such products were found, nor anything like them,—nothing any way abnormal.

Dr. Moxon was so kind as to examine the tumour for me. He gives me the following note, enough for my present purpose:—"The tumour has the characters of tubercle. Its size renders it a most unusual and interesting example. Its substance is caseous in nearly all parts, so that it generally shows only traces of structure. The outer layer, for a depth varying from one-tenth to one-quarter of an inch, shows signs of having spread by the formation of new foci being made up of small granules resembling ordinary tubercles. This lymphoid structure of the recent parts is like tubercle in its characteristic form."

Académie des Sciences.—Sir Charles Wheatstone has been elected a Foreign Associate in place of the late Baron Liebig, by the votes of forty-three of the forty-five members of the Academy who were present.

Spontaneous Expulsion of the Entire Uterus.—Professor Gallard republishes, in the *Union Médicale* for July 5, a case originally published in the *Journal de Médecine de Toulouse* for 1844-45, which, as far as his researches have extended, is unique. In consisted in the expulsion of the entire uterus of a woman 35 years of age, the cervix of the organ having been destroyed by cancer. She died twelve days afterwards from peritonitis, which was produced by contact of urine. The expelled organ was carefully examined and laid before the Toulouse Medical Society.

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Medical Times and Gazette.

SATURDAY, JULY 12, 1873.

THE PROPAGATION OF CHOLERA.

The news of the spread of cholera in Austria has aroused attention as to the propagation of this fatal malady, and certain intelligence which has reached us from the East, if possible, heightens the interest we must all feel as to what might be called its natural history. All through the winter and spring cholera has lurked in Poland and Galicia, and now, with the weather most favourable for its propagation, it has begun to spread north by the Vistula to Dantzic, and southwards into Northern Italy, as well as lower down the Danube at Rustchuk. Fortunately for us, it has shown little tendency to spread westward, and so we may possibly again escape this year—the more so that the disease does not show the same tendency to rapid and extensive outbursts it has previously exhibited when about to become widely epidemic. We have reports of cholera from America, but these must in the meantime be received with caution until more exact details are known.

It is, however, from Russia that the most alarming intelligence reaches us. As is tolerably well known, the Russian State authorities, with Pelikau at their head, differed considerably in their conclusions as to the recent outbreaks of cholera in that country and Eastern Europe from those of most other nations. They concluded that these outbursts were not new importations, but were due to the seeds of the disorder having remained latent from former epidemics, even as far back as 1852. They have now sent to this country the evidence on which this opinion is founded—evidence which seems fairly irrefragable, and as a consequence of which we are fain to confess that in all probability cholera is now fairly naturalised as an endemic malady in Eastern Europe. We had already been compelled to assent to the statement that cholera had become naturalised in Persia, but we were hardly prepared for the same disquieting fact as regards Europe; but that being so, all information as to the mode in which it spreads assumes an increased importance, and we have seen nothing of greater importance on the subject than an abstract of modern views on the subject by Professor Parkes in the appendix to the recently issued Army Medical Report.

This deals at some length with the views of Pettenkofer, as recently enunciated by him in a somewhat modified form in reply to adverse criticisms from Sander and Küchenmeister. There is no denying their importance, not only from the weight of Pettenkofer's authority, but from the influence they exercise on the minds of many, both in this country and abroad. They have materially modified modern research in the matter, and should they turn out to be wrongly founded, this influence must have been most pernicious. The foundation of Pettenkofer's theory rests on the assumption that the cholera contagium is mainly or entirely propagated outside the human body; and thus the malady, from his point of view, though readily carried by human beings, and in the main following the lines of human intercourse, is not strictly speaking contagious, but rather miasmatic. The quantity of this contagious matter, according to his views, undoubtedly tends to increase, but it does so in the surroundings of the individual, not in himself; and the most important of these foci of new growth is the ground itself; and on peculiarities of soil he holds that the development of cholera mainly depends. He rejects *in toto* the theory of propagation by drinking-water, which he says in many instances he has investigated was impossible. Shipboard has been selected as a telling instance, where neither soil nor ground-water could be imported into the case, and has by some been considered utterly fatal to the ground theory of cholera. This Pettenkofer does not admit, and yet is compelled to acknowledge that cholera has broken out in ships in epidemic fashion, though it is most frequently brought from the shore. Here he tries to import some new factor into the case analogous to the ground on shore, but seems to fail. Direct contagion, without any interference on the part of the soil, seems to be only too well established, yet Pettenkofer rejects it entirely. Nevertheless, in all probability the ground has some influence, though what it is seems as yet not quite clear; nor does it seem to be exercised in all cases. It is always a misfortune if a man resolutely blinds himself to any side of a question save that on which he himself is intent.

At all events, all recent facts tend to support the belief in the agency of man in the spread of cholera; and Bryden's theory of wind-spread is at a discount, except in so far as the prevailing winds affect human intercourse. The theory has been, moreover, tested by the light of certain known cholera movements in Madras, and found wanting. On the other hand, the facts tending to support the theory that cholera is often propagated by the agency of food and drink, as well as by more direct contagion, are increasing in number; and as they are more strictly examined now than formerly, they are becoming more valuable. Thus we have in Dr. Parkes's report a record of a localised outbreak among a single caste at Delhi, nearly all of whom had attended a funeral feast in the house of one who had died of cholera. Some, too, were affected who did not attend, but ate of the food which had been spread on the floor over which the discharges from the deceased man had flowed. A similar outbreak, where probably the water was the means of propagation, is also recorded as occurring among the 24th Hussars at Secunderabad, which is dead against Pettenkofer's theory, though the evidence in favour of the water theory is not so strong as it might be; but in a localised outbreak among the artillery at Morar, in Gwalior, there seems to be no room to escape from the belief that water was the means of disseminating cholera among the men. Thus it is true that Pettenkofer's theory sometimes helps us to an explanation of the localisation of cholera, but in others it completely breaks down. The whole question as to how cholera is spread is not yet ripe for final decision; but the fungoid theory so popular some time ago has completely collapsed.

THE PHYSIQUE OF THE BRITISH ARMY.

The statements put forward in the House of Lords last week by the Duke of Richmond on the subject of recruiting for the British army exhibit a terrible amount of mismanagement on the part of some person or persons in authority, and give rise to grave apprehensions as to what is likely to be the sort of *physique* to be met with in the bulk of our troops in the future, unless some of the past blundering is amended, and wiser counsels are allowed to prevail. The dearth of recruits during the past year or two has been so great that men—or it would perhaps be more correct to say boys—presenting themselves for enlistment without possessing the requisite chest measurement of thirty-three inches have been accepted, and by an order of the Inspector-General of Recruiting returned as up to that standard. Again, the standard of height has been gradually lessened till from five feet eight inches it has finally got so low as five feet five inches. The returns for the year 1871 show that of first year's recruits 13·19 per 1000 were invalided during that period, while of the men examined for attestation about 6000 out of every 10,000 were under the age of twenty. These facts cannot be looked upon as satisfactory, and, taken into consideration with the short service system instituted by the present Government, would appear to justify the remark made by Earl Forteseue during the debate, that at no distant period, and by the help of the means now employed, the British army would consist almost entirely of boys, instead of seasoned soldiers. In the present age of destructive and death-dealing missiles, any close encounter, such as a bayonet charge, is a thing almost unheard of; yet in future wars, should such a contingency occur, it would be somewhat mortifying to learn by actual experience that our old Peninsular *prestige* for solidity and weight had deserted us, or that our men had been driven back—not by superior pluck, but by sheer brute force, because we had neglected to obtain the same hardy and stalwart class of soldiers who had fought for their country in our forefathers' time. The Government representatives who took part in the discussion can scarcely be said to have been very warm in defence of the present system, and it would almost appear as if a mistake had been made somewhere, as in the case of the new Army Medical Department Warrant. It is an undoubted fact that the number of recruits presenting themselves is far below the number required to fill the vacancies in the ranks; whilst so far from the new system having attracted a higher and more intelligent class of men to the service, as was expected, results show that the *matériel* is still furnished by what Viscount Hardinge happily termed "the waifs and strays of society." If even this latter contingent are to be accepted of an inferior strength and stature, would it not be wise on the part of Mr. Cardwell and his advisers to pause and reconsider their plans before running the risk of subjecting England to defeat in the future through a dogged adherence to a policy which fails to charm even themselves? Our individual province may not be to deal with the military portion of this question; but we raise a protest against sweeping in the stunted and badly-developed boy, whilst the hardy stalwart man is shut out from the army because the pension he might formerly have looked forward to at the termination of his service has been withdrawn.

THE WEEK.

TOPICS OF THE DAY.

Mr. Simon has issued a "Minute on the Precautions to be observed against Cholera," which is drawn up with commendable clearness of expression. Mr. Simon teaches the public that cholera is but little contagious in the sense that small-pox and scarlatina are contagious, but that it has a peculiar infectiveness of its own, which, when local conditions assist, can operate with terrible force and at considerable distances from the sick. He then goes on to explain that it is in the infective power of choleraic discharges that the danger lies; and he warns against the contamination of water and clothes, and the danger of breathing air foul with effluvia from the same source. He gives clear general directions for meeting the danger. Up to the present time we have heard of no case of cholera in England. The deaths from diarrhœa rose last week to sixty-eight, but the corrected average number for the corresponding week in the last ten years is 130. There were three deaths referred to infantile cholera. Of the other zymotic diseases hooping-cough was most fatal, having caused forty-three deaths, whilst from small-pox there was only one, and eleven from scarlatina.

We hear that Mr. Jonathan Hutchinson has resigned the Senior Surgeoney at the London Hospital.

The collections in connexion with Hospital Sunday now amount to £27,000.

There is a rumour that there will be a vacancy before long in the Chair of the Institutes of Medicine in the University of Edinburgh, through the retirement of Professor Hughes Bennett. Dr. Rutherford, of King's College, London, and Dr. McKenrick, Professor Bennett's present assistant, are spoken of as probable candidates.

On the occasion of the recent visit of the Shah of Persia to St. Thomas's Hospital, that potentate was, it is said, particularly interested in the cases of eye disease which he saw in Mr. Liebreich's wards. One paper goes so far as to say that the Shah constituted himself a *pro tempore* out-patient. He asked, it is said—

"Was it well for him to read much? Ought he to abstain from writing? Well, if the Professor said that one might with glasses properly adjusted to weakened sight, and with the book or paper held at a proper distance from the eyes, read or write with impunity, what was the proper distance, and what the best position to stand or sit in? Was it a good thing to put your face in water, and let the cool water 'get into your eyes'? These and other questions of similar purport the Royal out-patient, with great animation and earnestness, put to the Professor, his Majesty speaking in Persian and Dr. Liebreich carrying on the conversation with the interpreter in French, and in the course of the consultation received advice which, it is to be hoped, will be attended by beneficial results."

A COMFORTABLE NIGHT'S REST IN A RAILWAY CARRIAGE.

Those of our readers who have undergone the misery of the night journey in winter to Scotland—the fatigue, the cold feet, the cramped muscles, the uneasy snatches of sleep, the futile attempts to read by the miserable light, the close irrespirable air when the windows are up, and the bitter draughts when the windows are down; the petrified condition in which you at last are deposited on the platform, and your utter unfitness for enjoyment, unless it be the enjoyment of a warm bed, the next day—those, we say, who have undergone all this will appreciate the value of any reasonable proposal to furnish our English railway carriages with comfortable and suitable sleeping compartments wherein a quiet night's rest between clean sheets and a good wash in the morning may be had for a moderate extra charge. The Americans have long ago obtained these luxuries, which, in fact, become necessities when a railway journey lasts a week. In England we have from time to time talked of them as most desirable; but we continue to shiver, catch cold, contract all sorts of congestive diseases depending on checked action of the skin and emunctories, without any attempt to mend our condition. The wealthy can get no better appliances than a stuffy "first-class" and a foot-warmer; those whose purses are not so long have to be content with bare boards and their plaids. Men in our own profession who have to take long journeys on short

notice, know by personal experience, and have plenty of opportunities of learning from their patients, how great is the demand on the vital power made by a night journey by rail. We therefore hail the prospect held out by a company which has been started for providing our trains with Colonel Mann's railway sleeping-carriages. Colonel Mann is an American engineer, and his carriages are, we believe, shortly to be introduced on most of the great "through routes" on the continent of Europe. His cars, besides excellent sleeping accommodation, provide lavatories and all other necessaries for personal comfort. They are well ventilated and warmed, and means are taken to deaden sound by double floors, sides, and roofs, the interspaces being packed with sawdust. We hope that we shall on our next journey north be able to avail ourselves of the sleep-compelling invention of the countryman of Rip Van Winkle. "Blessed is the man who invented sleep," said Sancho Panza. We think it was Charles Lever who added, "Thrice blessed that he did not keep the invention to himself."

DIFFICULTIES IN SANITARY LEGISLATION.

A LETTER from the Committee of Management of the Homerton Hospital was read at the last weekly meeting of the Poplar Board of Guardians, calling the attention of the guardians to the case of a young man, aged 19, who was admitted to that institution on May 30 last, and died from small-pox sixteen days afterwards. The youth had been vaccinated; only one vaccination mark was perceptible upon his arm, and that was imperfect. In connexion with this matter, Mr. Smith, the vaccination officer, reported that he was not aware of small-pox existing in the house in question until May 30, and he then took steps for the immediate removal of the patient to Homerton. In all cases of contagious diseases he caused the patient, if a pauper, to be removed within twenty-four hours of the report reaching him; and if the person was not a pauper he gave immediate notice to the sanitary inspector. The vaccination officer added there was great reluctance on the part of persons not paupers to send their relatives to the Hospital, and consequently they did all they could to conceal the fact of their being afflicted with the disease from the relieving officers and the sanitary inspector, and he was sorry to say that many of the medical practitioners connived with them in order to enable them to do so. A copy of this report was ordered to be sent to the Hospital. Whilst we admit the justice of Mr. Smith's remarks in the main, we think that he was neither courteous nor just in using the word "conniving" with respect to the conduct of any medical practitioners, be they few or many, as to the isolation of cases of small-pox. We feel assured that no respectable member of our profession would "connive" for the purpose of the non-isolation of a patient affected with a contagious disease. He would take every means to prevent the spread of the disease. He would *de facto* so isolate the affected person as would make him, in a private house, as harmless to spread disease as if he were in a hospital. We know that amongst the poorer classes this isolation is all but impracticable; but a very different state of things exists in the higher and middle classes. It is to the public interest that the law regarding the isolation of affected persons should be rigorously carried out, but Mr. Smith himself will, we are sure, acknowledge on reflection that it would be neither wise nor just to carry out these provisions when they were really not necessary.

THE WIMBLEDON CAMP.

WE have received the following medical intelligence from the Camp:—Staff-Surgeon Temple and Dr. Mayo are in charge. The Camp is slightly fuller than usual, but all are healthy. Moule's earth-closet apparatus is working well. Up to the present time there have been no accidents.

DISTRIBUTION OF PRIZES AT ST. MARY'S MEDICAL SCHOOL.

THE annual distribution of prizes at St. Mary's Hospital Medical School took place on Wednesday, July 2; Sir Dominic Corrigan, Bart., M.D., M.P., presiding on the occasion. There was a very large attendance of students past and present, and of others interested in the School and Hospital, the company including an unusual proportion of ladies. The Dean, Dr. Cheadle, read a highly satisfactory report of the progress of the School during the past twelve months, which showed that the increase in the number of students continued, and that out of eighteen students who had gone in for the recent primary examinations seventeen had been successful. The prizes were then presented to the successful students by Sir D. Corrigan, who afterwards delivered a very eloquent and interesting address. He commenced by pointing out the advantage which men of science possessed in being able to follow out the search for truth without being trammelled by the ties of party or sect, like the politician or the theologian—without being bound by the commands of superiors like the soldier—or having to snatch a verdict by special pleading like the lawyer. Men of science alone were free in their pursuit of pure and simple truth. The speaker then proceeded to combat the fallacy which he contended was still rife, that a medical man must resort to artifice in order to gain practice, and quoted numerous examples to prove that the public were on the whole good judges of the qualifications of their doctors, and sought those who knew their work best and could best supply what was required of them. Good, honest, hard work was the usual means of success, and the only certain road to it. Sir Dominic then spoke of the imperfect appreciation of the value of medical knowledge in its relation to questions of the highest importance to the well-being of the State, urging the necessity for the fuller representation of the Profession in the House of Commons, and concluded by impressing upon its younger members the duty of working for the public good rather than for the narrow end of their own personal and private advancement and reward. The address was listened to throughout with most profound interest and attention, and was warmly applauded by the audience.

DUTIES OF SCHOOL MEDICAL OFFICERS.

DR. MCDONNELL, the Medical Officer of the Schools, having refused to obey the order of the Schools Visiting Committee of the Guardians of the Parish of St. Marylebone to make a weekly examination and report of the children, application was made to the Local Government Board for Dr. McDonnell's removal from the office; Dr. McDonnell also addressed the Local Government Board on the subject. A copy of the Board's reply to Dr. McDonnell was laid before the Guardians at their meeting last week, and was to the following effect:—The Board stated that Dr. Bridges, their inspector, had reported to them his conference with the Schools Visiting Committee of the Guardians, and they consider that the position taken up by Dr. McDonnell in declining to give effect to the directions of the guardians, except under the stipulation that he should receive additional remuneration in respect of services required of him, was untenable. The Board further stated that it was his duty, under Articles 53 and 59 of the Order of June 1, 1860, to comply with all the reasonable and lawful orders of the guardians and with the regulations of that Board which may be issued from time to time; that they could not allow the orders of the guardians to be set at defiance so long as those orders were reasonable and lawful; and that unless he was prepared at once to discharge the duties imposed upon him it would be imperative upon the Board to call for his resignation of the office. We think the Local Government Board have arrived at a just conclusion in this case. The "extra duties" which the Schools Committee requested Dr. McDonnell to per-

form would have involved so little trouble and time that it is to be regretted he declined to perform them. We hope, however, a proper understanding has been arrived at, and that ultimately harmony will prevail.

A PLEA FOR SAILORS.

SOME sensible, pertinent, and at this time very seasonable remarks, instigated probably by the recent revelations of the hardships and cruelties practised upon our sailors, which have been brought before the public by the untiring zeal of Mr. Plimsoll, appear in *Frazer's Magazine*. It may be that the article is written in view of the Committee of Inquiry of the House of Commons now sitting on the subject, whose attention might well be called to the laxity of our maritime laws in respect to the causes of deaths at sea, and to the important suggestions contained in the article in question. The writer, urging medical registration and coroners' inquests in cases of deaths at sea, the same as if they had occurred on land, quotes the old maritime law—

"*Item*. Lett inquiry be made concerning the death of a man whoe hath beene killed in a ship, vessell, or boate, or apparrell of any ship, how and whoe killed him, and whether by the ship's apparrell, by what apparrell, *and unto whome the ship did belong*."

Such was the ancient sea law of the dark ages, as recorded in the "Black Booke of the Admiralty," in an addendum to the "Inquisition taken at Queenborow by the command of our Lord King Edward the Third." We live, however, in more civilised times. "How and whoe killed him? . . . and unto whome the ship did belong?" would in these days be very troublesome and awkward inquiries for living men: they might interfere sadly with the principles of free trade. True, landsmen bear the burden of such inquiries when they concern seamen with equanimity, inconvenient as they must be to modern commerce.

THE JEWS AND POOR-LAW MEDICAL RELIEF.

IT has been determined by the Jewish Board of Guardians that out-door medical relief be discontinued for a period of three months from August 1, on the grounds that the Jewish poor are able to obtain gratuitous medical relief when it is to be had; that many persons avail themselves of this charity who are able to pay for it; that many apply for and obtain medical relief who from a medical point of view do not require it. Our Hebrew brethren have shown a wise discretion by passing the above resolution. It is valuable in itself as a step in the right direction; but it is doubly valuable as emanating from a body of men by whom, when charity is really required, it is dispensed in a generous and "open-handed" spirit, which occasionally contrasts most favourably with the conduct of some Gentile boards.

A SAPIENT BOARD OF GUARDIANS.

THE *Wakefield and West Riding Herald* of Saturday last states that the Guardians of the Dewsbury Union were engaged for a considerable time the day before in discussing the propriety of appointing a vaccination inspector. It was ultimately agreed to send up a notice to the Poor-law Board with twenty reasons against the appointment of such an officer.

PRECAUTIONS AGAINST CHOLERA.

WE are glad to observe the vigilance shown by the chief municipal bodies of the metropolis with respect to the adoption of precautionary measures in view of the approach of cholera in the metropolis. The Metropolitan Board of Works have ordered the greatest possible dispatch to be used in completing the works connected with the Pimlico pumping-station for filtering and deodorising sewage before its discharge into the river. The works are now kept going day and night. The Board of Works resolved at their last meeting to refer to a committee the questions as to whether any additional sanitary precautions were advisable.

FROM ABROAD.—DISPOSAL OF THE SEWAGE OF PARIS—DIMINUTION OF THE NUMBER OF STUDENTS AT BERLIN.

IN an article on the sewers of Paris, in the *Révue des Deux Mondes*, July 1, M. Du Camp describes them as unique and as surpassing any construction of the kind in ancient or modern times. The paper has evidently been written in ignorance of the system of sewerage which constitutes one of the marvels of London, but we are noticing it here only in order to make known the results which he says have attended the experiments in utilisation of the sewage. Although in so imperfectly a drained town as Paris, and one so much less in size than London, the mass of this which has to be dealt with is infinitely less than in our own capital, yet the information of what has been and is about to be effected is of great interest.

The drainage, then, of Paris, as far as this has been accomplished, is prevented entering the Seine by means of two huge "collecteurs," situated one on each side of the river; but this is accomplished only for a short distance, as the sewage is poured into the river again below Clichy and St. Ouen. Here it causes such an obstruction to the navigation of the river as to require the annual removal from its bed of 120,000,000 kilog. of solid matters, at an expense of from 100,000 to 150,000 francs. Quite recently, this expensive waste of useful material has been sought to be in part prevented, with great success. The Seine, by the enormous bend it makes from Neuilly to Chatou, encloses a vast area of sandy land, known as the plain of Gennevilliers, which has long been proverbial for its utter sterility, and even at the very gates of Paris only fetched from 78 to 86 francs per hectare per annum, some wretched specimens of beetroot being all that was produced. In this apparently blasted spot a change as if by magic has been worked, for the sewage-water led on and distributed has given rise to a wonderful fertility. The experiment has only been continued during four years, but the result is regarded as entirely decisive, and the land so treated now lets for 600 francs per hectare. A celebrated Parisian perfumer has set up his factory amidst his flourishing scented herbs, and finds that the peppermint which he had always had to import from England can be advantageously grown. Asparagus, which in ordinary soils demands from three to five years to attain perfection, here scarcely requires two years; and beetroots, which formerly were looked upon as marvels if they attained to 800 grammes, now usually reach eight kilogrammes, and may even attain to fourteen. Artichokes, cabbages, rhubarb, and lettuces become colossal. Fruit-trees thrive apace, and a gardener transporting his espaliers from Montreuil has found his peaches attaining most unusual sizes. These advantages had to be forced upon the inhabitants of this sterile spot, they declaring that they were made the victims of the tyranny and selfishness of the Parisians, who were getting rid of their poisonous refuse at the expense of their neighbours. The only way to deal with such opponents was to purchase some of the worst spots and treat them with sewage; and when they saw the flinty soil rapidly converted into a flourishing market-garden they at last consented to accept the precious product which was gratuitously offered. They were knowing enough, also, to not infrequently profitably dispose of to others that which had been given to them for nothing—always, however, maintaining that the Parisians were the really obliged by having been allowed to eject their filthy fluid on other peoples' land: a privilege, in fact, which by right ought to have been paid for.

After so successful an experiment, the municipality soon saw its way to its expansion, and has voted the money necessary for its execution. Large steam-engines have been erected,

and in the course of two or three years the whole 2000 hectares of this sandy plain will have its vegetable products ready close to the Parisian market. The Seine will then be entirely freed of its impurities and the present expensive dredging discontinued. As soon as the entire sewage is thus diverted from the river, the sewers will be made to communicate with private houses, and the fearful stenches and lumbering night-carts, with which visitors to Paris are only too familiar, will disappear. How vast the improvements hence resulting will be may be judged of by the fact that there are at the present time 85,775 *fosses d'aisance* in Paris, 52,128 of which necessitate the labours of nightmen.

It has been suggested that the sewage would accumulate in the reservoirs in quantities so considerable as to render it materially impossible that it should be utilised, and that the surplus quantity would still have to be poured into the Seine again. This is to a certain extent true, but the procedure will be unattended with any danger, as the water will have become restored to its pristine purity. Again and again have attempts been made in vain to purify sewage; but MM. Chatelier and Durand-Claye have at last entirely succeeded in solving the problem by precipitating all solid matters held in suspension by the foul stream. A kind of "clarification" is effected, and in fact the contents of a sewer may now be as certainly and more speedily clarified than a pipe of wine. A diluted solution of sulphate of aluminium is employed for this purpose; a litre of this falling drop by drop will precipitate all solid matters of 2000 litres of sewage. The purifying basins are thus filled with clear and insipid water, and when this has run off there remains a bed of greyish, compact, homogeneous mud, which is shovelled out into heaps, and constitutes the valuable manuring agent, and is given gratuitously to all who apply for it. The water is limpid and absolutely inodorous, while 1000 kilos of the dried deposit have been found by eminent chemists to be composed of—

Azote	16·01
Organic matters	263·61
Phosphoric acid	5·85
Lime	119·20
Magnesia	3·46
Various mineral substances	591·87
	1000·00

It constitutes a most fertilising manure. The cost price of the azote and phosphoric acid would give it a value of 34·63 francs, while a cubic metre produced from sewage does not cost one quarter of that sum. In a few years the whole of this sandy plain, covered by a market-garden, will not be recognisable; and there will be a factory of dry manure, which, if required, may be forwarded all over France.

Some time since (*Medical Times and Gazette*, March, p. 231) we noticed the diminution of the numbers of the medical profession which is taking place in Prussia, and in a recent number (June 16) of the *Berliner Wochenschrift* the subject is recurred to, the diminution of the number of the students at the Berlin University being characterised by the strong epithet of "terrible." That it is considerable is seen from the fact that the whole number of matriculated students for the present summer semester only amounts to 1590, while in the preceding summer semester they amounted to 1990. In the winter semester of 1872-73 they numbered 1918, and in that of 1871-72, 2603. The medical students have diminished from 450 in the summer semester of 1872 to 340 in that of 1873. The entire number of students for the present semester has sunk below that of the year 1862, when it was 1704.

In seeking for the causes of so rapid a diminution, this certainly cannot be solely explained by the much greater expense of living at Berlin compared with formerly, although this may have much to do with it. It is more profitable to inquire whether there are not causes of degeneracy existing in the University itself, than to close the eyes to these, and seek for reasons of its diminished popularity in other directions. If students are expected to undergo the greater trouble and cost of studying here in preference to other places, they must be assured that abundant opportunities of acquiring a thorough education will be offered them; and, in fact, no other university can show greater teaching power or more scientific work. If such teaching power has not proved attractive, this has arisen from the defective division and arrangement of the teaching material. Laboratories are wanting, and clinical teaching is defective. There is no want of patients; but in place of distributing these so that they may be utilised for the students' benefit, the plan is followed of concentrating them in a few hands, so that no real benefit results. Of what use can it be for a hundred students to be crowding around a patient's bed if they have not the opportunity also of regularly watching them in smaller subdivisions and learning how to observe their cases? That fertile principle, the division of labour, is set at nought, the costly material supplied by the State institutions remaining unemployed for the purposes of science and education; while professors and docentes are wasting their energies in striving with insufficient means, deprived of the position and assistance which the interests alike of science and the University should extend to them. What is it that attracts students and young practitioners in such numbers to Vienna? Is it that the teaching power is so much stronger than at Berlin? Certainly not. It is the much-envied General Hospital that there attracts the industrious student from every side. There the rich material is rendered accessible and profitable for education. There flourish special clinics, which have never been thought of in Berlin, or have pined away. Clinics, which in Vienna are attached to the hospital for every special branch of knowledge, have in Berlin to be carried on by private persons with very insufficient appliances. The small universities, of course, only can deal with limited material, but this is well chosen and carefully employed; and the more abundant material in the larger institutions is not of more avail, for want of sufficient subdivision. It is not the rare cases, which, of course, are of more frequent occurrence in a large university, from which most is to be learned, but those which are met with daily, providing that the student is taught to set sufficient store by them.

However, better hopes may be entertained for the future. All are agreed that the great defect of the University of Berlin is that it has no great hospital attached to it. Beyond a most defective surgical and obstetrical clinic, it has entirely to depend upon the Charité Hospital for the supply of cases. This establishment, however, has to supply the wants of the military medical school, and is under the direction of Ministers, who are not, perhaps, sufficiently aware of university necessities. A large university hospital is in the course of erection, which it is expected will supply every need, whether of general or special clinics. Meanwhile, polyclinics (dispensaries) for various special affections are also set on foot, and laboratories for pharmacology and experimental physics are being erected. Altogether, it is hoped, by these and other exertions, that Berlin will recover ere long the power of attraction it once possessed.

It is to be observed, however, that the number of medical students has diminished throughout Prussia. At Bonn, which is liked as a summer residence, they are fewer than last year, and at Greifswald they have diminished from 346 to 298. And, indeed, is this not to be expected? Prussia has entered on a new and expanded career, and with increased wealth numerous pursuits will hereafter enter into competition with the medical, and will absorb many who heretofore would have entered the profession, either as practitioners or professors.

PARLIAMENTARY.—HEALTH OF THE PORT OF LONDON—SANITARY AFFAIRS IN IRELAND—THE CHOLERA—SEDUCTION LAWS AMENDMENT BILL—PUBLIC HEALTH BILL.

In the House of Commons, on Monday, July 7,

Mr. Stansfeld, in answer to Mr. Cadogan, said there had no doubt been some delay on the part of the Corporation, who were the sanitary authority of the port of London, in fulfilling their duties under the Public Health Act of 1872. But some arrangements had now been made by the sanitary authority. One of her Majesty's ships had been placed at the disposal of the Corporation by the Admiralty for the purpose of a hospital ship, and would be moored off Gravesend. A duly qualified medical practitioner had been appointed to the command of that ship, with authority to appoint other medical officers, and two ship-captains would reside on board with their wives. In cases of emergency the directors of the Seamen's Hospital at Greenwich were prepared to receive a limited number of cholera cases. Arrangements had also been made for the treatment of dangerous infectious diseases.

The Marquis of Hartington, in reply to Mr. Bruce, said the Local Board of Ireland was aware of the necessity of having similar digests of sanitary law for Ireland as had been prepared for England, but it was necessary to postpone framing this digest until Ireland had been divided into districts for sanitary purposes.

Mr. Stansfeld, in reply to Mr. Dent, said that plain directions as to the precautions to be taken for preventing the spread of cholera had been prepared, but it was not proposed to do what had never been done before—namely, to give directions to the medical men in the various localities as to the treatment of cholera.

The House went into Committee on the Seduction Laws Amendment Bill, and the following clause was agreed to:—"Whosoever shall unlawfully and carnally know and abuse any girl under the age of twelve years shall be guilty of felony, and, being convicted thereof, shall be liable at the discretion of the court to be kept in penal servitude for life, or for any term not less than five years, or to be imprisoned for any term not exceeding two years, with or without hard labour." Mr. Wharton moved a clause providing that whipping may be added to other punishment if the girl is under twelve years old, which was carried.

On Tuesday, July 8,

Sir C. Adderley, in moving that the House do go into Committee on the Public Health Bill, stated that its main object was to consolidate the law relating to the public health, and make certain amendments in various parts of the existing law which the Commissioners, in their report, had declared to require alteration. The amendments of which notice had been given were not numerous or hostile to the Bill. If the House went into Committee he should not press any portion of the measure against what he found to be the sense of the Committee.

Mr. Corrance opposed the motion. He thought the Bill wholly insufficient for its objects, while it increased the public burdens, and added greatly to the powers taken by the central government. He believed he was entitled to ask the right hon. gentleman to withdraw this Bill, as he thought it had no chance of passing this session.

Other members also opposed the motion.

Mr. Stansfeld said that his right hon. friend (Sir C. Adderley) was the chairman of the Sanitary Commission which sat for two years, and whose invaluable report was the basis of the measure which the Local Government Board passed last year. The rest of the report of the Commission was embodied in the clauses of the present Bill. He had been obliged, in reply to a question in an earlier part of the session, to state that the time at his disposal was not sufficient to justify him in bringing in a measure this session, but that he was bound to offer all the assistance in his power to his right hon. friend, who was entitled to place this Bill before the House, and to demand the support of the Local Government Board. He maintained there was no clause in the Bill which would add one farthing to the local rates in any sanitary district, and he would therefore appeal to the House to allow it to go into Committee.

A Committee was appointed to meet on Friday, July 11, to discuss the clauses of the Bill.

The Court of Common Council have resolved to appoint a medical officer for the port of London at a salary of £400 a year.

THE HARVEIAN ORATION,

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, ON WEDNESDAY, JUNE 25TH,

By GEORGE ROLLESTON, M.D., F.R.S.,
Linacre Professor of Physiology in the University of Oxford, etc.

(*Concluded from page* 18.)

I pass from this reflection to an exposition of the claims which have been put forward on behalf of Walter Warner, the editor in 1631 of Harriot's "Algebra," to the discovery of the circulation of the blood; and I do this by a natural transition, Walter Warner having been a man in whose mind, all his mathematics notwithstanding, the *idola* in question greatly abounded. Warner's claims are alluded to by Dr. Willis in a note to his excellent "Life of Harvey" (see p. lxiv.) They are put forward by Anthony Wood, upon the authority of Dr. Pell, a man distinguished as one of Oliver Cromwell's diplomatists, and afterwards as an assiduous supporter of the then young Royal Society; and upon that of Dr. Morley, some time Dean of Christchurch, and afterwards Bishop of Winchester (see Wood, "Athenæ Oxonienses," i., 461, ed. 2nd of 1721, vol. i., p. 302, ed. Bliss). Aubrey, a contemporary of Wood's, appears, from a note at p. 417 of the second volume of his "Lives of Eminent Persons," to have had the same story from Izaak Walton, who gave Dr. Morley again as his authority; and Aubrey repeats the tale with certain additions, and notably with that of Dr. Pell's authority, at p. 577 of the same volume. The same story was pointed out to me by one of the officials in the Bodleian Library as being given in an anonymous biographical miscellany to be found in the Rawlinsonian Collection, B 158, p. 152-153. This MS. appears to be of the latter half of the seventeenth century, and its legend runs to the following effect:—A certain Henry, Earl of Northumberland, being imprisoned in the Tower, did, for the better passing of his time, get several learned persons to live and converse with him; one of these men—whom Aubrey tells us (*l. c.*, p. 368) the world called the Earl of Northumberland's magi—was "Mr. Warrener." And the MS. proceeds: "He was the inventor, probably, of the circulation of the blood, of which subject he made a treatise, consisting of two books, which he sent to Dr. Harvey, who epitomised and printed them in his own name; he usually said that Dr. Harvey did not understand the motion of the heart, which was a perfect hydraulik. . . . . Dr. Pain, that very ingenious and learned canon of Christchurch, told me that he had seen and perused this book of Warrener's." Finally, the excellent "Biographia Britannica" has embalmed Wood's and Aubrey's story, in the articles "Harriot" and "Harvey," pp. 2542 and 2550, ed. 1757. Many *à priori* improbabilities will be seen at once to attach to this story, and it is easy enough to discredit more than one of the witnesses. But I have better than indirect evidence to bring forward, and I will have the agreeable mental exercise of excogitating it to the ingenuity of my hearers, which ingenuity will be sharpened, no doubt, by their regard for their own Harvey, and strengthened by the belief that

> "Whatever records spring to light,
> He never shall be shamed."

I may be asked, after this quotation, why I should have thought it worth while to investigate Walter Warner's claims at all. I will shelter myself, in the first instance, behind the example of Sir George Ent, who, feeling and acting by Harvey as Launcelot in his better days felt and acted by Arthur, took similar pains to set aside the similar fable as to Harvey's indebtedness to Father Sarpi. And, in the second place, I will remind my hearers that it was but as recently as 1838 that an article appeared in the *London and Westminster Review*, in which the claims of the Italian monk just mentioned were once again brought forward with surprising confidence, plausibility, and ignorance.

It was possible, I thought, that the same paltry but evil spirit which animated Dutens in writing his "Inquiry into the Origin of the Discoveries attributed to the Moderns" (1769), and in coming to the conclusion that every great man in modern times had been anticipated by somebody or other in ancient ones, might still be going about in dry places, and

might wholly enter into and entirely fill up the soul of some small antiquary, who, coming under such inspiration and guidance upon the passages which I have collected, might proceed to instruct the literary public as to Warner's claims. Whilst considering what indirect evidence might be brought together to rebut this possible attempt at detraction, I came upon what led me to the discovery of the direct evidence I have promised to lay before you, in the shape of a clue which brought me, after a somewhat tortuous course, upon Walter Warner's actual autograph MS. I found, whilst following up Dr. Pell's history, scattered through Dr. Birch's unindexed "History of the Royal Society," that Dr. Birch had procured a number of MSS. of Mr. Walter Warner's for that Society mixed up with Dr. Pell's (see vol. 2, p. 342; vol. iv., p. 447). Coupling this statement with the voucher for Warner's claims, ascribed by Wood and Aubrey to Dr. Pell (who, however, is never reported in Dr. Birch's "History," so far as I found, to have given currency to this statement), I thought that by these MSS. I should be able to test the truth of these statements. But the librarian of the Royal Society knew nothing of any MSS., either of Pell's or of Warner's; and, as the result will show, it would have been odd if he had—at least, in his official capacity. I then made inquiry of the Duke of Northumberland, in whose library the MS. of Warner, once a pensioner of his house, might possibly be preserved; but Mr. J. E. Martin informed me that this hope was a vain one. I found that Sion College had once possessed one MS. of Warner; but I learnt from the Rev. W. W. Milman that they had lost it, and much besides, in the great fire of London in 1666. Finally, when taking the register of Merton College up to the British Museum for the purpose of comparing the entries made in that volume during Harvey's wardenship with his one authentic autograph MS. now in the national collection, I bethought me of making, at the same time, some inquiries as to Warner and Pell; and at last, when I least expected it, and had long ceased to hope for it, I came upon Walter Warner's MS., contained in Dr. Birch's collection, which, according to him, had been made over to the Royal Society, under the title "4394, Birch Collection," numbered on in continuation of the "Sloane Collection."

Mr. E. Maude Thompson, by the employment of various scientific methods, the observation of which went some way to compensate me for the tedious labour entailed upon me by the result to which they brought him, identified the MS. as being really Warner's, and even in bringing its date down to the same, close upon 1610—half a dozen years or so, therefore, before Harvey first lectured at the College of Physicians. The MS. being thus identified, I set myself down to look through its 416 folio pages, the average number of lines in a page being thirty-three or thirty-four; the average of words (many of them idle ones) being eight or nine in a line. I do not think it is very likely that I have missed any clearer exposition of Warner's views than the one which I am about to read from page 138; nor do I think that, by choosing it, I can in any way misrepresent them, for they are stated elsewhere in the "Treatise" in very much the same words, *e.g.*, p. 137. These, then, were his views:—"By this spontaneall pulsatory motion the bloud is continually extracted from the vaines (propter fugam vacui) as well originally exsuctory as secondarily circulatory and propelled into the arteries (propter fugam penetrationis), but with some diversity in the distribution, some part thereof being propelled up into the head by the internal jugular arteries, ad plexum choroideum for spirito-faction, the rest into all the rest of the arteries in universum corpus for organo-faction. Out of that part of the blood that is propelled by the jugular arteries up to the head, the spiritus confusus or immersus thereof being expressed and segregated in plexu choroidi, either by excussion or exhalation, and animal spirits, thereof made by the self-operation of the præexistent in somno, it is again distributed as before, one portion thereof being still derived and transmitted to the heart, ad motum spontaneum pulsationis ciendum, and so about again, perpetuâ circulatione durante fabricâ corporeâ, and all violent destructions or impediments abstracted."

It is, perhaps, needless to dwell further upon Warner's claims—certainly I do not propose to trouble you with reading to you any more of his speculations and conclusions. I have, however, had a copy made of folio pages 140, 141, 142, 194, and 185, and, though the gift may not seem a very valuable one, it will enable any fellow of Harvey's College to satisfy himself abundantly, and within our own walls, as to the real merits of the claimant before us, if the College will allow it to find a place in their library. In the words of Harvey's favourite poet,

> "His saltem accumulem donis et fungar inani
> Munere."

In all seriousness it is something to know what a contemporary of Harvey, and he a mathematician of some eminence, could write only some ten years before the actual demonstration of the circulation of the blood was given to the world.

Let me say, however, that I do not think it by any means impossible that Harvey may have read this treatise of Warner's, hard though the labour must have been to him, and little though he could have profited by it; for, in many parts of Harvey's treatise, "De Motu Cordis," we meet with phrases which seem as if they had been used with a special reference to Warner's views. And his dissertation has at least this claim upon my gratitude, that it has made me think that I understand Harvey's meaning the better for having read it. I fancy, in fact, that I recognise such phrases in Harvey's words ("De Motu," p. 58; p. 56 ed. Willis), "Absque dolore vel colore *vel fugâ vacui*," and in such words as "longè plus est quàm partium nutritioni congruens est." He might have been alluding to almost any page of Warner's MS. in his repudiation (p. 116, see "Epistola Secunda ad Riolanum") of the hypothesis of various sorts of spirits. But there is one of Harvey's many noble and candid, whilst measured and well-balanced utterances, which seems to me to be admirably suited to serve as a text for an exposition, which perhaps some future Harveian Orator may undertake, of the exact relation which his discoveries held to the knowledge and the ignorance, not only of Walter Warner, but of all others of his contemporaries or predecessors. These words run thus ("De Motu," p. 34 ed. 1766, p. 33 ed. Willis)—"Sed et hoc" (namely, the transmission of the blood by the action of the heart, from the veins into the arteries, through the ventricles of the heart into the whole body), "omnes aliquo modo concedunt et ex cordis fabricâ et valvularum artificio positione et usiu colligunt. Verum tanquam in loco obscuro titubantes cœcutire videntur et varia subcontraria et non cohærentia componunt et ex conjecturâ plurima pronunciant ut ante demonstratum est." This may be translated thus: "But it may be said, that all competent persons accept these views in a more or less modified form, and have been convinced of the truth of them from the structure of the heart, and the contrivance, position, and use of the valves. But they seem to me to make as little use of their eyes as men do who are stumbling about in a dark place, and their account of the matter is made up of heterogeneous, contradictory, and incompatible statements, and very much of it is pure guess-work, as I have already shown." These words—the Latin ones, not my translation of them—were published, if not written, nine years (see p. 5, "Harveii Opera," ed. 1766, *Dedicatio*) and more after Harvey had first proved the facts of the circulation, and from them we gather that his discovery had, even so early as that date, got out of the stage in which a discovery is considered to be untrue, and got into that in which it is said that everybody knew it before. In no subject could it have been easier to make out a plausible case than in this of the circulation of the blood. Piccolhomini (an acquaintance with whom I owe to Mr. Walter Warner, see his treatise, pp. 194, 200, and 201), had given a diagram—it is there before you, copied from the copy of his work in our library—of the junction of the portal and hepatic twigs, incorrect enough, no doubt, and obtained by a false method (see Harvey, "Epistola Prima ad Riolanum," p. 105, ed. 1766), but still something in the way of a working hypothesis (see Piccolhomini, "Anatomicæ Prælectiones," Romæ, 1586, p. 117). Servetus had speculated, but rightly, as to the lesser circulation; so had Cæsalpinus; and on Harvey's own showing (p. 15, "Opera," ed. 1766), Realdus Columbus and Walter Warner, p. 132 (4394, "Birch Coll. MS."), had spoken of the heart, in 1610, as being "a mere muscle, very strongly and artificially woven, and contrived with omnimodal nerveous fibres, direct, transverse, and oblike, as it were of purpose for dilatation and contraction, according to the fashion of other muscles." And of the action of the auriculo-ventricular and arterial valves, Harvey himself, *nivcâ animâ*, with untarnished sincerity, repeatedly (see "De Motu," pp. 14, 51, 53, 67, 81) speaks as of something known to all men, "id omnes norunt" (p. 44). What, then, it might have been triumphantly asked, was there left for Harvey to discover, when the action of the valves of the heart, its muscular character, and so much else, was already to be found in the writings or teachings of his

predecessors? To all this we can answer, as, indeed, it seems probable, was practically answered even within Harvey's lifetime,—what was left for Harvey to discover was nothing less than *the circulation itself*. His predecessors had but impinged, and that by guesswork, upon different segments of the circle, and then gone off at a tangent into outer darkness, whilst he worked, and proved, and demonstrated round its entire periphery. His demonstrations and direct proofs were all new, and his indirect arguments nearly all new. Whenever he made use of anything already known, he most punctually acknowledged it. Of his demonstration in the way of injection I have already spoken; of his demonstration of the use of the valves in the veins, and his proof that they are similar in function to the arterial, a fact previously unsuspected (see p. 65, *loc. cit.*), the thirteenth chapter of the Treatise "De Motu" speaks with figures; of his indirect, but irrefragable argument, in the eighth chapter, from the quantity of blood thrown out by the heart at each pulsation, an argument which a mathematician such as Harriot or Warner might have hit upon, but, so far as I have found, did not, he speaks himself as being "adeo novum et inauditum ut verear ne habeam inimicos omnes homines"; and finally, the argument, which, though only indirect, every morphologist will allow to be not only most exquisite, but also most convincing, for the circulation in the adult warm-blooded animal, drawn from the relations held by the venæ cavæ to the efferent arteries in the embryo, and in all animals with but a single or an imperfectly divided ventricle, "unus dumtaxat ventriculus vel quasi unus," and of which I would recommend everyone who is not already acquainted with it to gain a knowledge from the seventh chapter of the same book, was his, and his alone. With regard to all these points—with regard, that is, to the circulation as a whole,—with regard to the actual demonstration and exhibition of it as opposed to mere guessing about it,—with regard to all, or nearly all, sound reasoning as to any large portion of it,—Harvey might have said with Lucretius,

> "Avia Pieridum peragro loca nullius ante
> Trita solo."

or, in the words of a poet of another country and a later age—

> "We were the first that ever burst
> Into that silent sea."

I do not wish to assert that Harvey was wholly independent of the works of his predecessors; he himself would, as his repeated references to them show, have been the very last man to make any such claim for himself; nor would I say that he owed nothing to the times

> "The spacious times of great Elizabeth,"

in which he lived. It is true, I think, in science, as it is also true in morals and polities, that the times make great men as much as great men make the times. Many metaphors have have been used to express this latter half-truth. Such is the metaphor (an acquaintance with which I owe to Mr. Pieton's new and striking work "The Mystery of Matter," p. 265) used by St. Augustine, in which great men are compared to great mountains, dwelling apart in loneliness, and sending floods of blessings down upon the little hills and plains at their feet. Such, again, is the metaphor used by Wordsworth in apostrophising Milton:

> "Thy soul was like a star, and dwelt apart."

Such is the metaphor used by Sir Coutts Lindsay, in his poem on the "Black Prince," where a hero

> "Stands like a beacon, throwing light far out
> Over the rippling tides of centuries."

Now, all these metaphors strive, and profess to express, but half a truth, and they are imperfect even for this imperfect purpose, as they are borrowed from inorganic nature and the arts, and are unfit to be used as illustrations of the complexities of life and thought. I would venture to suggest a metaphor which has struck me, during this investigation, as being more appropriate and close-fitting, even if less beautiful, than those which I have quoted. A group of horsemen are attempting to cross an arm of the sea, up which the tide has been running, and obscuring the ridge, or spit of sand, by which it is fordable. They form themselves into a line, and advance slowly: rider after rider flounders off into deep water, and, if wise, retires towards the rear of the cavalcade of his companions, who still feel and advance upon the bottom beneath them. The line by degrees narrows into a column, and the column, after a longer interval, narrows into a single file. To the foremost horseman courage is necessary, as imagination is to the discoverer, and, impelled by this feeling, he may put a wide interval between himself and his companions, and, reaching the opposite bank long before them, may have leisure to look down upon them, may be looked up to by them and by the rest of the world, whilst for some time in solitary occupation of that vantage-ground. Such I conceive to be a fair representation, in the way of metaphor—the best and shortest way, perhaps, of representing such complex relations—of the relations held by Harvey, and indeed by most or all discoverers, to their contemporaries, to their compeers, and to the conditions whereby they are surrounded.

It may be expected perhaps that, coming from Oxford, and having been recently elected a Fellow of the College—the wardenship of which Harvey held for something more than a year (April, 1645-46, midsummer)—I should have made search for whatever records there may be left of him unpublished in Oxford, and especially in Merton College. After diligent search, I have to report that there is but little to be learned of Harvey's history from any unpublished document which I have been able to find in Oxford. The Merton College Register gives an account of his election, from which it appears that, having been nominated by a majority of the Fellows—of whom the distinguished John Greaves was one—to King Charles I., who exercised the functions of visitor after the execution of Archbishop Laud, he was duly elected on receipt of the King's letter, after a dispute, of which it is needless to give an account. A couple of days after his admission to the office (on April 11, 1645) Harvey summoned the Fellows into the hall, and made a speech to them, to the effect that it was likely enough that some of his predecessors had sought the office of Warden to enrich themselves therefrom, but that his intentions were quite of another kind, wishing as he did to increase the wealth and prosperity of the College. (I would here remark that it was well perhaps for the College of Physicians that Harvey was, by the success of the Parliament, forced to vacate the office of Warden; otherwise he would, no doubt, have kept his word, and Merton College would have gained what the College of Physicians, or some others of his legatees, would have lost.) He finished his address to the assembled Fellows with an earnest appeal to them to cherish that mutual concord and amity amongst themselves which recent occurrences, we may suppose, had tended to weaken. In the other pages of the Register for the period between April, 1645, and the midsummer of 1646, I find the name of Charles Searborough, the *protégé* of Harvey, and afterwards frequently an office-bearer in this College; but there is little or nothing of special interest to us in the rest of the record, beyond the fact that Harvey appears to have attended the College meetings, and so to have discharged his duties, amongst which the providing for the contingency of a siege and famine was one. Dr. George Paget has put on record, as has also Mr. Pettigrew, the fact that Harvey's signature is to be found in the *Liber Computorum* of Merton. The College Register, however, is not so enriched, as I can state upon the authority of Mr. E. Maude Thompson, who compared the pages relating to Harvey's wardenship with the autograph MS. in the British Museum, when I took the Register up to London for that purpose.

Of Harvey's, as of Berkeley's sojourn in Oxford, we know little; little, indeed, has been recorded, with the exception of the somewhat uncertain gossip of the gossipping Aubrey. But what we do know of the place during those years which elapsed between the battle of Edgehill in 1646, makes us certain that scientific, and, indeed, any other work, must have been carried on in it under great disadvantages. We read of the plague, and of the "morbus campestris," described by a former Harveian Orator and Linacre lecturer as desolating the town and driving people out of residence. It was, besides, a centre for military operations; and military life has been shown, by the experience of all ages (though this experience appears to have been lost upon the carelessness and ignorance of this), to be out of harmony with the habits of men, old as was Harvey then, young as our undergraduates are now, who are or who ought to be devoted to study. Whatever else of Aubrey's tales of Harvey I may disbelieve, I can believe that the words addressed to Charles Searborough, "Prithee leave off thy gunning, and stay here," were his.

If, however, we wish to have a real and truthful picture and image of Harvey before us, we must do by him as we have to do by Shakespeare, by Aristotle, by Butler, and several other great writers: we must lay our minds alongside of his, as it is revealed to us in his works. It is only the writings of great men which will bear or repay such treatment: no commentary nor any biography can give us the real and vivid

sensation of having the men before us which we get from a perusal and reperusal of their books. Having used for this purpose what Mr. Tom Taylor has recently spoken of as "the invaluable three hours before breakfast," I have come to persuade myself that I have obtained something like a trustworthy idea of what Harvey really was. Previously, however, to doing this, I gave Christian burial to much of what Aubrey has left on record about him, feeling more and more strongly, as I grew better acquainted with Harvey, that—

"These were slanders: never yet
Was noble man but made ignoble talk."

I will speak first of his scientific *character*, though it may seem strange to speak of scientific *character*, as *character* implies, perhaps, a moral element; and science, so far as it is really science, and based exclusively upon sound reasoning, has no moral element in it; reasoning, so long as it is sound, being of one kind always, and devoid, therefore, of all distinctive or personal factors. Still, the times in which a man lives, even if we do not regard them as making up some considerable part of the man, justify us at any rate in adding something to our quantitative estimate of him if he be seen to have been superior to the disadvantages of an unfavourable, or to have attained just results without the help of a favourable, environment. I do not forget that Harvey was but eighteen years junior to Bacon,

"Whom a wise king and Nature chose
Lord Chancellor of both their laws."

But neither do I forget that the "Novum Organum" was published in 1620, subsequently to the discovery and actual demonstration of the circulation (see *Dedicatio* to the treatise "De Motu Cordis"), if not to the publication of the "Treatise on the Motion of the Heart"; and that the Royal Society, with its motto, "Nullius addictus jurare in verba magistri," was a foundation of a much later date; and consequently, I think, we may feel justified in saying that, so far as the purely scientific factor of a man's nature can be said to have any distinctive or personal character at all, independence, or robustness, or manliness,—whichever word we may like to choose,—as shown in superiority to mere authority and the weight of great names, was a distinctive character of Harvey as a man of science. With Riolanus in full vigour, and Van der Linden growing towards maturity, as champions of antiquity, it required not a little manliness to assert, "contra receptas vias per tot sæcula annorum ab innumeris iisque clarissimis doctissimisque viris," (Riolanus is often thus spoken of), "tritam atque illustratam" (*Dedicatio*, p. 5), the claims of simple nature "quâ nihil antiquius majorisve auctoritatis" ("Epistola Secunda ad Riolanum," p. 123). This element of real manliness shows itself again, I think, in Harvey's power of abstaining from suggesting a *rationale* of what he felt he did not understand; as, for example, in what is known (out of England, at least) as the "problem of Harvey" (see "De Partu," p. 549)—a problem, which, I think, could not have been answered till the "works and days" of Bernard; and in the cases of several other problems instanced by himself (p. 132, "Epistola Secunda ad Riolanum"), and hidden then, to use his own metaphor (p. 630, "Epistola Prima ad Horstium"), in the well of Democritus.

For the culture which Harvey had bestowed upon his literary faculties we have better evidence than Aubrey's, better even than that of two more trustworthy witnesses than Aubrey—Bishop Pearson, to wit, and Sir William Temple—we have the evidence of his own writings as to his familiarity with one of the greatest writers of antiquity. Bishop Pearson, as Dr. George Paget has reminded us (see page 15 of his "Notice of an Unpublished Manuscript of Harvey," 1850), and Aubrey (see page 32 of "Life," by Dr. Willis, prefixed to the Sydenham Society edition of his "Works," 1847), have told us of Harvey's high appreciation of Aristotle's writings; but in his own writings he refers to the Stagirite more frequently, I think, than to any other individual. And as regards Virgil (the Latin author whom probably, if but one Latin author's works could be saved from destruction, most men would choose to be that one, as Aristotle's works would be the similarly-to-be-chosen Greek), Sir William Temple ("Miscellanies," part ii., "On Poetry," p. 314) has told us that "the famous Dr. Harvey, when he was reading Virgil, would sometimes throw him down upon the table and say he had a devil." It was a similar spirit which dwelt in Sir Philip Sidney, who never heard the famous ballad of Percy and Douglas without feeling his "heart moved more than with a trumpet." It is but a small matter to vindicate for our great discoverer claims to a familiarity with Greek. Still, anyone who will look at such passages as the one in the "Exercitatio De Partu," p. 553, where he speaks of the mischief done by meddlesome midwives, or other passages (pp. 116, 129, and 123, "Epistola Secunda ad Riolanum"; p. 613, "Ep. ad Slegelium"), will see, I think, that he had Greek in abundance at his command, and used it just when it helped him to express his thoughts more clearly and concisely than any other words at hand at the moment. He used it, in fact, like a man of sense and real learning, when the use of it would save him time or trouble—two things, of one of which he had all too little, whilst of the other he had all too much for his and our good. Let me add, that in the one authentic MS. which we now possess of Harvey's (No. 486, "Sloane Coll.," British Museum), a MS. never intended for publication, and consisting but of rough notes for lectures to be delivered, I find that he employs Greek words in several places—*e.g.*, p. 656 and p. 87.

His style has been spoken of as being more or less inelegant and unadorned; and the Latin tongue, which he used, lends itself but grudgingly and awkwardly to the purposes of science, being strictly a political language, habituated and framed to describe the march of the legions, the disputes of the forum, or the denunciations of the moralist. Still Harvey's style has always an impressiveness and solidity of its own; and sometimes—as, for example, in the glorious eighth chapter, "De Motu Cordis"—it rises into real eloquence where a great occasion justifies the use of repetitions, of antitheses, and abundance of metaphors. But, though the use of stilted phraseology was common enough among Harvey's contemporaries, and though his imagination was vivid and active enough, his study (for to this I would ascribe it) of the excellent models mentioned saved him, as such a study can save a man, from falling into the use of false or extravagant imagery.

Harvey, besides the advantages accruing from acquaintance with the great minds of the past, enjoyed also those which may be gotten from familiar intercourse with great contemporary minds. These advantages constitute in themselves a second education; and they were at Harvey's command for a period of more than forty years, during which he was prominently before the public. It is recorded of John Greaves (see "Life," by T. Smith, 1699, p. 44), the once celebrated astronomer and antiquary, and a man whom, as a Fellow of Merton, we can well believe, though I know not that we can prove, to have done more than give a silent vote for Harvey when he was chosen Warden, that he was one of the friends of Harvey. His well-known connexion with the Court must have constantly brought him into relation with the statesmen of those stormy times. His legacy to his "good friend Mr. Tho. Hobbs, to buy something to keepe in remembrance" of him, is touching, even if trifling, evidence in the same direction.

Travel, which even in our days confers a kind of culture peculiar to itself, must have been doubly necessary in days when, in the absence of the steamship and the railway, an insular position must have kept its inhabitants very nearly as inaccessible to "the thoughts that move mankind" as it had happily kept them to the Armada. Sir George Ent's interesting and entirely trustworthy account of the interview with Harvey which resulted in the publication of the treatise "De Generatione," will show anyone who will consult it that Harvey had drawn from his opportunities an insight into what might be expected, and what since his time to some extent has been realised, from enlarged opportunities of observing not only "men, manners, cities, climates, governments," but also the wonderful facts of the unequal allotment, in the various parts of the earth, of useful inorganic products, and of that mystery of mysteries, the distribution of organic life. (See "Works," ed. 1766, p. 162; ed. Dr. Willis, p. 146.)

Having been thus fortunate in securing for himself all the advantages which the various educational agencies of his age would furnish, he added on to all that they had effected, or could effect, the yet more elevating and glorious discipline of long-sustained and finally successful labour. He attained a position of mental dignity in which he could feel neither unduly anxious for the applause of his compeers, nor unduly moved by the reproaches and misrepresentations of his enemies (see *Dedicatio*, p. 164; "Epistola Secunda ad Riolanum," p. 109); the impact of these opposite forces resulting, however, in much benefit for mankind, as without them Harvey might, it is likely enough, have delayed the publication of his works indefinitely. Being self-contained without being self-conscious, he was yet, like all

men of real genius, large-hearted and sympathetic. Whilst he could, in a spirit of perhaps a little over-strained charity, make excuses (see p. 614, "Epistola ad Slegelium") for the irrepressible and pestilent Riolanus, he would, we may be also sure, have felt an emotion of gratitude upon each of the many instances in which his own true-hearted adherents, Sir George Ent and other Fellows of this College, fought his battles for him, and vindicated for him successfully and during his own lifetime his own irrefragable claims. And I can believe that, answering to the character of the dignified and stately man so well drawn by the author whom he often quotes, and considering himself worthy of great respect, being worthy of it, he would not have looked disapprovingly upon our attempt to show him respect by the Tercentenary Memorial to which you, sir, have lent the sanction of your name. I can further conceive of Harvey as entirely sympathising with the men who have now in their hands the torch of knowledge which once passed through his, of applauding without any shadow of jealousy the work of the many workers who in these days are going over the ground trodden by him under far less favourable circumstances and with far less assistance from ancillary sciences and their various and still novel instruments and methods. The same spirit which caused him repeatedly to say (as, for example, to Sir George Ent, p. 163; to Horstius, p. 630), "hæc cum mirâ, ut solet, promptitudine effundens," that he doubted not that much now hidden in darkness would be brought to light by the indefatigable industry of the coming age; the same spirit which dictated the provision in his will bidding "his loving friend Mr. Doctor Ent" sell certain of his "books, papers, or rare collections," and "with the money buy better," would have caused him, could he have been amongst us, to point out, as a matter for congratulation, in how many directions his discoveries had been extended and added to, and how well replaced had been the many works the loss of which had been so "crucifying" to him.

There was not in Harvey's mind that defect in the way of a deficiency of interest in theological questions which constitutes in the minds of some eminent scientific, and some eminent literary, men such a lamentable void. He has, on the contrary, in several places taken pains to state his views upon this highest of subjects. To one of these passages (from the work "De Generatione Exercit. Quinquagesima," p. 385, ed. 1766; p. 370, ed. Dr. Willis), as Mr. E. B. Tylor has pointed out to me, Professor His of Leipzig, a worker whom Harvey would have hailed as a colleague, has referred to it in one of his always excellent papers, published in the *Archiv für Anthropologie*, Bd. iv., 1870, p. 220, on "Die Theorien der geschleitlichen Zeugung." It is just in the investigation of the problems indicated in these last words that, as has often been remarked, the question of the existence of other than purely material forces presses itself most closely upon the mind; and hence, perhaps, the repetition by Harvey of his views regarding it, more than once or even twice, in his treatise just referred to (see "Exercit." 49, p. 370; Ex. 50, p. 385; Ex. 54, p. 419-420.) These statements are all to the same purposes. I have chosen one of them—the last one of the three just cited (not the one quoted by Professor His)—to repeat here, because, besides its philosophical and other interest, it has some literary claims upon our attention, it being not quite impossible, considering its line of thought and arrangement of words, that Pope, who borrowed on all sides and made acknowledgments on none, may have had it before him when he composed his Universal Prayer. It runs thus:—

"Nempe agnoscimus Deum, Creatorem summum atque omnipotentem, in cunctorum animalium fabricâ ubique præsentem esse, et in operibus suis quasi digito monstrari; Cujus in procreatione pulli instrumenta sint gallus et gallina. Constat quippe in generatione pulli ex ovo omnia singulari providentiâ, Sapientiâ divinâ, artificioque admirabili et incomprehensibili exstructa ac efformata esse. Nec cuiquam sane hæc attributa conveniunt, nisi omnipotentirerum principio; quocunque demum nomina id ipsum appellare libuerit: sive mentem divinam cum Aristotele; sive cum Platone Animam mundi; aut cum aliis Naturam naturantem; vel cum Ethnicis Saturnum aut Jovem; vel potius, ut nos decet, Creatorem ac patrem omnium quæ in cœlis et terris; a quo animalia eorumque origines dependent, cujusque nutu sive effato fiunt et generantur omnia." (From Harvey's "De Generatione Animalium," Ex. 54, p. 419, ed. 1766; p. 402, ed. Willis.)

I have detained you far too long; but, feeling that my praise of Harvey has been all too feeble, I am anxious, in ending, to use words in his honour, the singular appropriateness of which is only less remarkable than their beauty and force—

> "Remember all
> He spoke among you, and the man who spoke;
> Who never sold the truth to serve the hour,
> Nor paltered with Eternal God for power;
> Who let the turbid streams of rumour flow
> Thro' either babbling world of high and low;
> Whose life was work, whose language rife
> With rugged maxims hewn from life;
> Who never spoke against a foe.
> . . . . . .
> Whatever record leap to light,
> He never shall be shamed."

SURGICAL INSTRUMENTS AT THE INTERNATIONAL EXHIBITION.

(*Continued from page* 693, vol. i., 1873.)

Mr. Matthews shows several of Sir William Fergusson's instruments for stone, among them a model neatly carved by himself in oak for the rack and pinion movement, as now in general use for lithotrity instruments; Dr. Playfair's flexible intra-uterine probes; also a continuous stream enema.

Messrs. Arnold and Sons send a portable and convenient obstetric case; also Dr. Greenhalgh's metrotome; and Mr. Greenslade's fracture cradle, a full description of which appeared in a recent number of this journal.

We were reminded of the bales of lint manufactured by the ladies of England out of their old sheets, etc., for the wounded in the Franco-Prussian war by the case of lattice-cloth exhibited by Messrs. Maw and Son as a substitute for lint dressing. The special advantages of this method of dressing are that openings are left for the escape of pus from the surface of the sore, and there is no chance of loose portions of the cloth adhering to the sore.

Messrs. Blaise have sent several varieties of *bistouries cachées*; some of them are very ingeniously constructed. Also the combination of scissors and forceps used for skin-grafting.

The instruments sent by the College of Surgeons from the Hunterian collection are very interesting, such as Frère Corni's *bistourie caché;* a lancet attached to a finger-ring for opening abscesses secretly (such an instrument would be found useful at the present day: the incision could be made as soon as the customary *tactus eruditus* was completed, without the terrifying effects and suspense accompanying the usual display of cold steel); a Maltese bleeding instrument, shaped like a cross-bow, the knife being thrust forward by the rebound of the bowstring. John Hunter's lithotomy-knife is also shown; it must have been very badly cared for since it was last used by him—the edge is more like a saw than a knife. Lemere's fistula-knife is shaped like a sickle, the point of which is prolonged into a flexible probe. In this way the fistula can be divided with one sweep of the instrument. We noticed also in this case lithotomy-forceps with four blades, and a great variety of cutting gorgets; among them Pagola's gorget with a concealed blade. Also some circular saws for amputations.

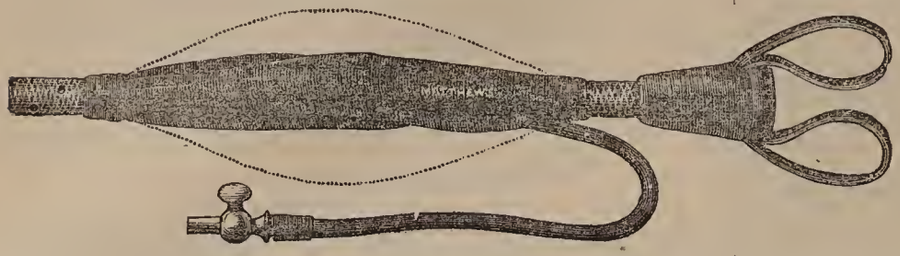
In the College of Physicians' case are several old instruments, including a bullet-extractor made like a corkscrew for boring the bullet and then extracting it. The bullet-forceps would probably in every case be found more serviceable.

Professor Lazarewitch, of the University of Karkoff, has sent a case of obstetric instruments. Among them are pelvimeters for external and internal measurement; and Professor Castellani has a collection of ancient Roman surgical instruments found in Italy.

Mr. Winchester exhibits the model of an invalid bed, so arranged that the mattress can be removed from under the patient without disturbing him. The body is suspended by broad strips of linen, fixed to the sides of the bedstead during the time that the mattress is being changed. In the same case is Mr. Jabez Hogg's demonstrating ophthalmoscope. The advantages which he claims for this instrument are that, instead of the usual biconvex lens, he has fitted a pair of plano-convex lenses into an adjusting tube, for the purpose of correcting spherical and chromatic aberration.

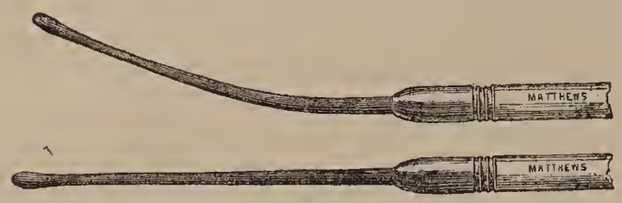
Sir William Fergusson shows a collection of lithotrites in Matthews's case. This collection includes the earliest as well as the latest forms of this beautiful instrument. There is shown the model of a screw lithotrite made by Sir William Fergusson himself—a feat which we presume is unique in the annals of surgery.

An admirable lithotomy-tube is here depicted. Round an ordinary lithotomy-tube is bound a thin bag of indiarubber, in which iced water is injected. Any amount of cold and pressure



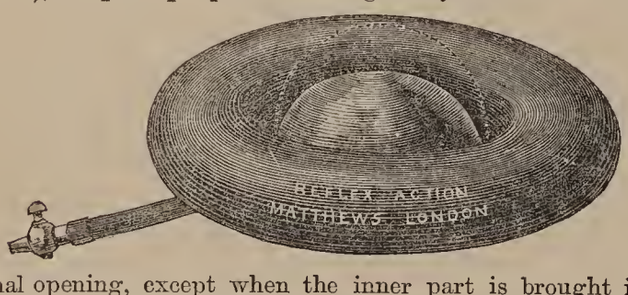
is induced by this means, and the hæmorrhage is much more under control than by the usual expedient of plugging around the tube.

Dr. Playfair's probes for the treatment of chronic uterine catarrh are also exhibited. They are made of flexible metal;



the probe portion being engine-turned, to allow the cotton-wool to be bound round them more readily and safely, for the application of solution of carbolic acid or anything else the obstetrician may deem advisable to use.

The reflex action pad for umbilical hernia (registered) is a very ingenious invention of Messrs. Matthews, and consists of an elastic pad in two compartments, the outer of which reflects the action of the abdominal muscles on the inner (shown by the sketch), the principal pressure being always *around* the abdo-



minal opening, except when the inner part is brought into action by any exertion of the abdominal muscles—such as coughing, sneezing, etc.,—under which circumstances the inner pad advances, so as to be in immediate apposition to the opening itself, thus effectually checking any tendency of the hernia to protrude caused by the additional exertion. The pad is secured to a well-fitting abdominal belt with a centre strap, so as more directly to control the pressure on the pad. It has been used with much success in adult cases as well as with children, carrying out Mr. John Wood's principle of marginal pressure.

Matthews Brothers' guarded perforator is worthy of being extensively adopted by the profession, the point and edges of

the instrument being perfectly protected during its introduction, and readily withdrawn by a movement of the forefinger. The simplicity and handiness of this perforator deserve special notice.

Messrs. Matthews exhibit Mr. John Wood's handy little saws,—the same kind as are constantly used at King's College Hospital; as also Wilcox's forceps, which, by their arrangement of teeth, are exceedingly useful in operations where large flaps are made, being less tiring to the operator than the ordinary dissecting-forceps, and less likely to loosen their grasp. These forceps are invariably used by Sir William Fergusson.

In the University College collection are several of Professor Liston's instruments, among them a pair of old-fashioned bellows for injecting the intestine in intussusception, also an apparatus called a seringotome for dividing fistulæ, and a lithotomy-scoop made like a fishing-net, having an indiarubber bag for catching the stone or removing grit from the bladder.

Mr. Robson, of Newcastle, sends a photo-perimeter, designed for the purpose of measuring the field of vision, and thus ascertaining the amount of sensibility of the peripheral portion of the retina. In the same way the different meridians for astigmatism and relative position of the two images in diplopia may be accurately determined by this instrument.

Dr. Allen has sent a small case of instruments for aural surgery—Eustachian catheters, ear douches, and Politzer's apparatus for dilating the tympanum. The novelty in this case is a convenient form of plug, consisting of a cone of cotton-wool surrounding a thread of silk. The plug can be passed to any distance with the certainty of being easily withdrawn. Much harm has resulted from the insertion of plugs of cotton-wool and their retention for an indefinite time, giving rise to irritation from the discharge being pent up.

The apparatus used by Professor Lister for the antiseptic treatment of wounds is exhibited by Mr. Macfarlane, of Edinburgh, including gauze steeped in the carbolic solution, so that the interstices are filled by it; also boric lint, a more recent dressing for the antiseptic treatment of superficial wounds or sores, but not for cavities. It is found to be less irritating than carbolic acid. In aseptic cases the sore is to be washed with a saturated watery solution of boric acid, and a protective of oiled silk the size of the sore overlays that; one or two layers of dry boric lint should be laid over all. There are also in the same case bottles containing carbolised catgut ligatures ready for use; also carbolic lac plaster and Lister's spray-producer.

Mr. Robert Ramsay, of Great Malvern, shows some artificial velums and casts for the treatment of cleft palate without operation.

Mr. Tufnell proposes to treat stricture of the rectum by constant pressure, with the view to promote absorption, as is frequently done for urethral stricture. The rectum bougie is tubular. A guiding rod is first to be passed through the stricture—the exact situation of the stricture ascertained—and then the bougie is passed over that, and retained till the stricture is cured. The contents of the bowels are passed by the tube.

Mr. Napier has an ingenious instrument for the detection and removal of vesical calculi. The detector—an ordinary bougie made of tin pigmented at the end with nitrated silver—gives ocular instead of aural demonstration of the existence of a calculus by scratches upon the surface. For a complete description of this instrument *vide* the *Medical Times and Gazette*, June 14, 1873.

Lynch and Co., besides exhibiting trusses, pessaries, specula, etc., have some double-channel catheters for washing out the bladder; also Mr. Durham's many-jointed tracheotomy tubes of various sizes.

In addition to the instruments sent by Mr. Hawksley, and described in our previous notice, we may mention a useful speculum vaginæ designed by himself to avoid corrosion from acids or alkalies. It is made of papier maché of the ordinary shape and is lined with mica. The illumination of the interior of the vagina is effected as well with this as with metallic instruments. Dr. Bristowe's gynæcological solid stethoscope with a globular end is also in this case.

Testimonial to Dr. O'Keeffe.—A very flattering mark of the respect in which Dr. P. O'Keeffe is held by the people of Cannaway, among whom he performed his arduous duties as a painstaking and attentive public servant for several years, was bestowed upon that gentleman yesterday, when a number of his friends assembled at the Victoria Hotel and presented an address and a purse containing 110 sovereigns. The address was read by the Very Rev. Canon Murphy Ovens, in the absence of Sir Augustus Warren, Bart. About thirty gentlemen sat down to a *déjeûner* on the occasion, and the proceedings were marked by the warmest wishes on the part of all present for the success of Dr. O'Keeffe in his new sphere of duty as Medical Superintendent of Spike Island.

UNIVERSITY OF LONDON.

Proceedings of Convocation.

In consequence of a resolution passed by the Annual Committee, requesting the Senate to summon a meeting of Convocation to consider the report of the Committee upon the alterations in the Matriculation Examination consequent on the vote of the Senate of February 12, 1873, a general meeting was held on Wednesday, July 2, at the University Building, in Burlington-gardens. The Chairman took the chair at five o'clock, when the report of the Annual Committee was presented, and its reception moved. The following were the principles (as stated in the report) which served as the basis of deliberation of the sub-committee specially appointed to report upon the subject of the Matriculation Examination:—

"(i) That the difficulty of passing the Matriculation Examination should be lessened (*a*) by the admission of optional subjects, (*b*) by the entire removal of one subject from those now ('prior to the resolution of the Senate on February 12, 1873') required from candidates; but that the aggregate amount of work should indicate an equal degree of intellectual acquirements.

"(ii) That the examination should introduce the plan of 'bifureation' of studies, and should adapt itself to the two classes of degrees to which it is preliminary, and to the classical and modern forms of many leading schools.

"(iii) That in the compulsory portion of the examination equal weight should be given to the side of literature and language, and to the side of mathematics and science; but that a choice should be offered to candidates between an extra scientific subject and an extra language.

"(iv) That one modern language other than English should be required from all candidates."

The special subjects which had occupied the attention of the Committee before submitting their report to Convocation were the following:—

"(*a*) The necessary alternative of Greek.

"(*b*) The introduction of optional subjects, and the omission of Chemistry or French.

"(*c*) The 'Natural Philosophy' examination.

"(*d*) The necessary changes in the arrangement of the examination."

As the result of deliberation upon these points, the adoption of the following resolutions was recommended in the report:—

"(A) That in the opinion of Convocation candidates at the Matriculation Examination who do not select Greek should be required to pass an examination in German.

"(B) That in the opinion of Convocation it is desirable that at the Matriculation Examination candidates who are examined in Greek should be required to pass an examination in either French or Italian.

"(C) That in the opinion of Convocation it is desirable that at the Matriculation Examination candidates who are examined in German should be required to pass an examination in either chemistry or botany.

"(D) That in the opinion of Convocation the examination in chemistry at matriculation should not include questions on 'heat.'

"(E) That in the opinion of Convocation it is desirable that every candidate for matriculation who selects either chemistry or botany should be required to pass a practical examination in the selected subject.

"(F) That in the opinion of Convocation it is desirable that the examination in "natural philosophy" at matriculation should consist of elementary questions in mechanics, hydrostatics, heat, and light, contained in two papers, to each of which three hours should be allotted."

All these resolutions were adopted by the general meeting of Convocation, except the last—viz., that the questions in the examination in natural philosophy should be contained in two papers, the time for answering each of which should be three hours.

It will be seen that the Committee endeavoured in their recommendations to accomplish several important objects which have been under the consideration of the Senate and of Convocation for the last few years, and which may be briefly stated to be—1. To lessen the numbers of subjects required and of the candidates rejected at the Matriculation Examination. 2. To adapt the requirements of the University more closely to the modern changes in school education and to its own examinations for degrees. 3. To require of the candidates a more exact and thorough knowledge of all the subjects of the examination.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XXVIII.

By J. F. CLARKE, M.R.C.S.

For nearly forty years on the Editorial Staff of the "Lancet."

ESTABLISHMENT OF THE LONDON UNIVERSITY AND HOSPITAL.

(*Continued from page* 21.)

Robert Liston as Lecturer and Operator.

It would be difficult to find in the history of Surgery two men who were so diametrically opposed as Cooper and his colleague. The fame of Liston had preceded him in his career as a London surgeon. He was second to Cooper in the Hospital, and there can be no doubt that his great reputation as an operator did much to exalt the fame of the North London School. In teaching Liston had no method: his clinical lectures were most unsatisfactory, meagre, and uninteresting—in fact, they were a mere burlesque on surgical tuition. After an operation he would make a few disjointed remarks upon the case, sit upon the operating-stool, look round the theatre to recognise his friends, and make a bow of acknowledgment to them. He would then say—"Gentlemen, you have seen the operation, and I think the patient will do well. I am not your lecturer upon surgery; you get full instruction on its principles, at least, over the way. Whatever may be said of operations as the 'opprobria of Surgery,' when they are necessary I think you will agree with me that they should be quickly and efficiently performed. I have done my best to fulfil my duty. I hope you are satisfied." He would then jump off the stool, and make his bow amid the enthusiastic applause of always a crowded audience. He always prided himself upon the celerity with which he operated, and no doubt to a great extent justly so. To see a patient placed upon the operating-table for the removal of a limb and carried to his bed at an interval of less than two minutes perfectly astonished the students. The dressing and the securing of small arteries was left to the after-treatment of his assistants. He was a consummate actor, but no one who knew him would deny he was one of the greatest and most successful operators of our time. Celerity in operations at this period was unquestionably a most important item for consideration. Ether and chloroform were unknown, and the saving of even a few minutes in the performance of a painful operation deserved to receive, as it did receive, the approbation of surgeons and students. The late Mr. Wakley, who was once, and only once, at my solicitation present, at probably the most important and successful of Liston's operations, remarked to me afterwards—"He is the greatest surgeon that I have seen operate, but he employs too much physical force to make him a perfect operator." This remark was just, and indicative of the shrewdness of the man who made it. It was something almost dreadful to see the great hand, which was compared not inaptly to a leg of mutton, wield the great bone-forceps in cutting through some large bone in a second of time instead of employing the saw, which would have been equally effective, though slower, in obtaining the desired end. I must confess, though I admit the force of the remark of Mr. Wakley, I never saw any case in which the use of the bone-forceps appeared to have been injurious to the patient, but I recollect many instances in which the operation was materially shortened and the sufferings of the patient consequently mitigated. Liston was a man of action; he was deficient in the higher qualities which constitute a great surgeon. He was deficient in the reflective faculties. He seemed to arrive at the diagnosis of the case under him almost by intuition; but having arrived at his diagnosis he acted with the greatest decision. This led him to make great successes; but it led him into more than one lamentable failure. I have recorded in these "Recollections" more than one case in point.

It is due to his memory that I should mention certain instances in which his great sagacity entitled him to the highest admiration. One of the most interesting cases with reference to his success was that of a man who was admitted into the wards with what was believed to be a syphilitic node on the shin-bone, and had been treated as such in several of the London hospitals. On learning the history of the case from his house-surgeon, Liston, who always studied effect, said, "Give me the trephine." It was handed to him; he applied it with the effect of evacuating a quantity of matter from the tumour. The effect of this proceeding upon the students may readily be imagined. He said nothing, but, with the greatest *nonchalance*, went to the bed of the next patient under his care. The case, however, that decided what may be called the fate of Liston was that of a girl named Sarah Griffiths. I believe I am right in stating she had been turned out as incurable from most of the London hospitals. The operation on this poor girl was that one of Liston's cases at which the late Mr. Wakley was present. It was certainly a most extraordinary case. I reported it at the time in the *Lancet*, with an illustrative woodcut. This report and the illustration were subsequently embodied in Liston's great work on "Practical Surgery." The girl was suffering from a fibrous tumour of the upper jaw. It involved both bones of the superior maxilla, forming a large tumour, which so affected deglutition and breathing as to imperil her existence. Liston decided on its removal. It is not necessary to enter into the details of the operation, but it was mainly effected by means of the scalpel and the bone-forceps. In ten minutes the entire tumour was removed, and no one anticipated at the moment that the case would be a successful one; but it was. An artificial palate was made by Mr. Hunter, then the dental surgeon to the Hospital, and the girl presented an appearance afterwards which was truly remarkable. As far as I know, she is living at the present time, affording an illustration without a parallel of the beneficent powers of operative surgery. Liston at this time had all but made up his mind to try his fortune in America. He was prevented from taking this very doubtful step by the following article, which, as it bears so much on the career of the great surgeon, I offer no apology for reproducing in these reminiscences:—

"In the report of the formidable operation which was recently executed by Mr. Liston in the University Hospital for the removal of an enormous tumour of the mouth, and the bone to which it was attached, we have to record one of the most splendid triumphs which operative surgery has ever achieved. Nor was the profoundly scientific and masterly mode of accomplishing the operation the most prominent trait which the ability of the surgeon presented. The sagacity displayed by the pathologist in forming a correct diagnosis belonged possibly to a higher class of merit than did even the tact and dexterity which were evinced by the operator in the theatre. Eighteen months since, when the tumour was comparatively small and the roots of its growth could be accurately traced, the sufferer was discharged—not only as incurable, but as an unrelievable object of affliction—by the surgeons of Guy's Hospital. The opinion of Sir Astley Cooper, the consulting surgeon of that institution, was not once solicited on the case of the unfortunate patient, so utterly destitute of hope was the miserable condition of the woman in the estimation of the surgeons of Guy's Hospital. Eighteen months since, she left that once-renowned institution, with a mind frenzied by agony and despair, whereas she is now about to be restored to her friends, relieved from a mass of diseased growth, which, whilst it rendered her an object of hideous and unsightly deformity, hourly threatened her with death in two of its most terrific forms—starvation and suffocation."

From this time Liston's practice increased, and he told me himself that his receipts rose from £3000 to £7000 a year. This was the highest sum that he ever received, and he succumbed to an insidious disease at the time he had arrived at the zenith of his great reputation. Liston was a man of great physical power and energy; his frame was Herculean. Exercise of a severe character was a necessity to him. In Edinburgh he hunted constantly. In the season it was no uncommon thing to see the great surgeon pursuing his duties in the wards in his red coat and top-boots. When in London he was in the habit of rising at an early hour, and taking very long walks before breakfast. His favourite route was up to the Swiss Cottage on the road as far as Hendon and back. Some of the more athletic of his pupils would occasionally accompany him, but it was only a very limited number who were able to keep up with him. Sometimes he would propose in these early excursions a "steeplechase" to some object in the distance, and it was in the strict sense of the word a "steeplechase." Away went he and his companions over "hedges and ditches," and, if necessary, through "ponds of water." He was generally the first at the goal. One of his companions, in his walks at least, was my friend, John Churchill. Churchill told me that on one occasion when walking with Liston they met Anthony Todd Thompson in the inner circle of the Regent's-park. Thompson expressed his pleasure at having met his colleague on that occasion, and regretted that, as Liston took his morning walks, he had never met him before. "If you want to meet me," said Liston, "you must come into the outer circle or far beyond it; the inner circle of the park does not afford sufficient space for me." On arriving at home Liston used to take a bath, and partook of a breakfast worthy of the times of Queen Elizabeth,—a quart of strong beer, with mutton-chops or beefsteaks, furnished his morning meal. Liston was a free liver, and after dinner drank his port out of tumblers. "Small glasses," he would say, "were only made for children, and not for men; I could not sip my wine out of them." Liston was a member of the celebrated Beefsteak Club, which was then held at the Lyceum Theatre, of which the late Mr. Arnold was the proprietor. At this club the fashion of eating substantial food and of "drinking deeply" was kept up. It is only a few years since that the club ceased to exist, and its famous utensils were sold by auction. Liston had an earnest affection for all dumb animals. He buried his famous hunter at Edinburgh in the erect position, as a mark of his estimation of his worth. His favourite when in London was a huge black cat, who was his companion in his consulting-room and in his carriage rounds. Those who did not understand Liston thought him selfish and cold. This was a great mistake: I can testify to many instances of necessitous patients, to whom, instead of receiving a fee for his services, he would generously give a fee. I have said that Liston had a Herculean frame,—he was upwards of six feet high, strongly knit, and with a face denoting great intellectual power; a forehead broad and massive; grey eyes beaming with intelligence; a nose such as the First Napoleon thought essential for success in his marshals; a mouth and chin denoting decision and power. What were Liston's claims to be estimated as a surgeon of the foremost rank? I think he was deficient in some of the higher mental faculties. He had much more perception than reflection. He formed his diagnosis too quickly: a few short questions as to the history of the case, an examination short and always decisive in its results. This rapid mode of arriving at an opinion impressed some people with the idea that there was a certain amount of carelessness about him. This to some extent may be true, and will account for some of the great mistakes he made, but these were counterbalanced in the eyes of the students by some marvellous instances of correct diagnosis when other surgeons had failed. I do not believe that Liston was a profound thinker: he was wearied by long descriptions and with what may be called with all due respect "minute and unnecessary details." Like Astley Cooper, as I have before said, Liston studied effect. Those who have watched him, as I have done on hundreds of occasions, could not fail to be struck by his simplicity—by his grasp, as it were, at the moment, of the salient points of a case. I do not believe that he was hasty or careless. He was earnest in all he did, as was manifested by the steadfast observation of his truly sagacious eyes. He had a thorough contempt of "physicians," and used to say in his lectures that "a physician treating disease was like a blind man with a club—he might hit the disease but was just as likely to hit the patient." Yet, with all his assumed contempt of medicine, he was always foremost (at least, in surgical cases) to try the effects of new remedies. I believe he was the first surgeon in the metropolis who employed ether in what he used to call "operative procedure." He used belladonna in erysipelas when it was first recommended. He was not scrupulous in the opinions which he expressed with regard to the practice of other great surgeons, and more than once he got into difficulties in consequence. With a great deal of the "canniness," he had an amount of impulsiveness which appeared to ignore that characteristic of his countrymen. I have seen all the great operators of Liston's time, and, with the exception of Aston Key, I have never seen anyone to excel him. In the most delicate operations, as well as the most formidable, his "leg-of-mutton fist," as somebody termed it, was equal to all emer-

gencies. I recollect on one occasion, when witnessing a delicate operation on the eye, a provincial surgeon exclaimed "Why, his hand is like the tusk of an elephant!" "Yes," said a bystander, "it is, but it has all the intelligence of the elephant's trunk." This was true. Liston succumbed to an aneurism, no doubt brought on by the extraordinary bodily exertions to which I have alluded. To the last his courage never failed him. A few days ago I was talking to John Churchill, senior, respecting Liston's last illness. Churchill was one of the earliest friends of Liston when he came to London, and that friendship continued to the last moment of the great surgeon's life. Churchill called upon his old friend two days before he died.

"I found him," said Churchill, "sitting in the chair inhaling from a tube to allay the irritation of his throat. He welcomed me thus—'Well, old Bibliopole, you have come to see me; I suppose they all say I am dying.' Taking a note from the table, and looking out of the window, he said, 'I will keep this appointment to-morrow': it was for a consultation to a lady of title." In about forty-eight hours Robert Liston had ceased to exist.

Such is, I believe, a just account of a great surgeon—a man who has left his mark upon the time. Only one portrait of his fine intelligent face, as far as I know, is worthy of him; it was one, half-length, painted by Sir F. Grant. It has been engraved and printed. Liston was the author of the "Elements of Surgery" and "Practical Surgery"—the first a great, cumbrous, ill-written, and soon-forgotten volume; the second the very opposite. Liston for a short time lectured on surgery at Lane's School; but he did not succeed—in fact, he could not bear the "formal drudgery of systematic lecturing."

(To be continued.)

ANNUAL DINNER OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

The annual dinner of the Fellows of the Royal College of Surgeons of England took place under the presidency of Professor Humphry, M.D., of Cambridge, at the Albion Tavern, Aldersgate-street, on Thursday evening, July 3, after the election into the Council of the four successful candidates for that honour, whose names we mentioned last week—viz., Sir James Paget; Mr. Haynes Walton, of St. Mary's Hospital; Mr. George Southam, of Manchester; and Mr. John Marshall, of University College Hospital.

No fault could be found with the dinner arrangements, which were very complete, with the exception of the absence of all music whatsoever. This want was commented on by Sir J. Cordy Burrows, who could not help regretting that the strains of sweet music had not been added to the entertainment to heighten thereby the harmony of the evening. Professor Humphry made an excellent and genial host, and proposed the various toasts which fell to his lot in terms of great good taste and appropriate enthusiasm.

Sir William Fergusson, in proposing the toast of "The Medical Council," the youngest but the leading medical institution, remarked that as yet we have had no great novelty resulting from the meetings and discussions of this body. He said that, with all proper respect and deference to the gentlemen who composed the Council, nothing of any importance to the profession, with the exception of the Pharmacopœia, had emanated from this institution. What the Council lacked was, Sir William Fergusson thought, a little more effrontery, so to speak, and then he was quite sure it would do more good. It would be well if a friendly collision were to arise every now and then with the old institutions—the Colleges of Physicians and Surgeons. In speaking of the comparative value of education and examination as a guarantee for a man's fitness for the profession, Sir William was strongly of opinion that the method and mode of education ought to stand before examination. It would take two or three years to examine a candidate so as really to know whether he was fitted for the responsibilities of practice; so that examinations without the guarantee that the candidate had been properly and regularly educated would be unsatisfactory and insufficient.

Dr. Paget, of Cambridge, whose name was coupled with the toast, replied in an amusing speech to the friendly and courteous strictures of Sir William Fergusson.

Mr. Charles Hawkins proposed the toast of "The Medical Corporations," coupling the names of Dr. Burrows with the College of Physicians, Mr. Hancock with the College of Surgeons, and Mr. Thorn (the Master) with the Society of Apothecaries.

Mr. Hancock, in returning thanks as President of the College of Surgeons, said that the profession need have no apprehension or misgiving that any step would be taken by which the College of Surgeons would ever relinquish its prestige or cease to control the surgery of England.

Mr. Erasmus Wilson proposed "The Provincial Schools," coupled with the name of Mr. Harrison, of Liverpool. Mr. Wilson had expressed a hope that the watchword of these schools would continue to be, as it had been, "Work."

Mr. Harrison, in replying, said that there was ample evidence of the manner in which many of the provincial schools were giving earnest of their intention of vindicating this watchword.

Mr. Bartleet, of Birmingham, proposed the toast of "The Metropolitan Schools and Teachers," coupled with the name of the distinguished teacher who had that day been elected into the Council of the College—viz., Mr. Marshall, of University College.

Sir James Paget, in a polished and cheery speech, gave "The Health of the Chairman," whom, he said, he regarded with great esteem as one of his first pupils, and as a friend of more than thirty years' standing; and with admiration for the manner in which he fulfilled his position in the University of Cambridge, being at the same time a teacher of surgery in its minutest details, and of anatomy upon its broadest basis.

Professor Humphry, in returning thanks, observed that he was the youngest Fellow who had ever had the honour of occupying the position he then held as Chairman, as well as the youngest Fellow ever admitted to the Fellowship of the College of Surgeons. He received that honour before the statutory age of twenty-five, and was for a long while designated by the *sobriquet* of the "Baby Fellow." He admitted to owing his success to a good and early start, and this start was chiefly through the kindness and friendship of Sir James Paget himself.

The toast of "The Stewards" was proposed by Mr. Procter, and responded to by Mr. Paget, of Leicester.

The Chairman then proposed "The Health of Mr. Carr Jackson, the Honorary Secretary," upon whose exertions the enjoyment of the evening and the success of the dinner had so much depended.

A very large gathering of London and provincial Fellows was drawn together on this occasion. The interest taken in the proceedings of the morning, and the anxiety evidenced by many of the provincial Fellows to insure the election of Mr. Southam as their representative on the Council of the College of Surgeons, had no doubt much to do in swelling the numbers at the dinner. While we congratulate the country Fellows on the attainment of their desire to secure Mr. Southam's return, we must protest against the distinction which it has been attempted to draw between country and London Fellows. It might almost be supposed, from much that we have heard upon this subject, that the interests of the provincial Fellows were adverse to or different from the interests of the London Fellows; that, in fact, the whole body of the Fellows might be grouped into two opposite sects—provincial and London,—as the House of Commons is into Liberal and Conservative. No such distinction, however, exists, or can exist. The interests of the provincial, as of the London Fellows, are the interests of the profession—viz., the advancement and improvement of all surgery and the honour and dignity of all surgeons; together with the guardianship of the library, and of that treasury of knowledge and monument of surgical and anatomical researches—the Hunterian Museum of the College. If, then, this is the case, is it not raising a false cry and establishing a radical misunderstanding and error to declare that country Fellows require special representation by one of themselves, and that the London Fellows who are elected on the Council do not represent their *provincial* as well as their London brethren?

The men whom the great body of the Fellows should elect as Councilmen are those of their number who, from their position in the profession, may well be considered leaders of Surgery, and who from their characters as men are fitted to represent and have a share of the control over a learned and

honourable profession. These requirements, we are proud to admit, are not limited to London, but can be easily found amongst the Fellows in the provinces. There is, however, another desideratum for a College Councillor, and without which the good qualities we have mentioned cannot be brought to have their proper influence: we speak of *regularity of attendance* at the meetings of the Council.

Now, there are some, but not many, leading country Fellows whose time and whose engagements will permit of the frequent visits to the metropolis which the meetings of the Council require. The expense and loss of time must be very considerable, and must tend to have the effect of limiting the number of attendances of those residing at a long distance. For this reason we cannot hope to see any increase in the number of country Fellows on the Council. We will not say country representatives, because, as we have shown, all members of the Council are as much country as London representatives, though we can heartily congratulate the Fellows upon those provincial gentlemen who now hold seats on the Council.

REVIEWS.

Human Longevity: its Facts and its Fictions. Illustrated by Examples. By William J. Thoms, F.S.A. London: Murray. 1873.

We have been a good deal entertained and amused by Mr. Thoms' book. It is on a subject which interests alike the physiologist, the historian, and the genealogist. Of course Mr. Thoms is, as everybody knows, a co-disbeliever with the late Sir G. C. Lewis and the late Mr. Dilke in the generally accepted cases of human longevity. But it strikes us that his book has done more to place the fact of human beings occasionally attaining the age of a hundred years and more on an irrefragable basis than any other which has yet seen the light. In the first place, he himself records instances of it attested by unimpeachable public documentary evidence; and, in the second place, although he has certainly proved that some of the claimants to centenarian honours have been impostors, he as certainly attacks others by a process of special pleading which we are sure will convince many readers of the truth of conclusions exactly opposite to those to which Mr. Thoms would lead them. That numbers of people live to upwards of ninety no medical man for a moment doubts; that some live to a hundred Mr. Thoms himself has most clearly proved. There is, therefore, nothing like improbability or impossibility in the matter. Of course, the opponents of centenarianism have hitherto had the comparative uncertainty of baptismal registers on their side of the argument. The present system of registration of births has not been long enough in existence to throw the light which it hereafter must throw upon the subject. The present generation, therefore, must be content to rest on Mr. Thoms' admissions and on popular testimony. The amusement, however, which the book has afforded us has been derived from the Quixotic fervour with which Mr. Thoms has thrown himself into the controversy. Society is no doubt obliged to him for cutting off a few years from the weary roll of a few poor old soldiers. Well, truth is always valuable; but we almost doubt whether the result is worth the pains,—considering that, as we have said, there have been and no doubt are people of a hundred years old who are *not* impostors. With regard to the case of Henry Jenkins, we think the old peasant's story of his carrying arrows to "Flowden Field"—considering his social position and the improbability of his inventing such a story—one of the most remarkable pieces of evidence that could have been conceived. With regard, again, to old Parr, the question is simply whether old Parr's contemporaries are not better worthy of credence than Mr. Thoms' "reasonings;" especially as Mr. Thoms' facts at least prove that a hundred years is not the limit to human existence.

NEW BOOKS, WITH SHORT CRITIQUES.

Tablets of Anatomy and Physiology. By Thomas Cooke, F.R.C.S. Crown 8vo. Longmans.

*** These "Tablets" are intended to assist the student in revising what he has already learnt. They present in as few words as possible a co-ordinate analysis of all the important points, and show at a glance the general outline of the subjects they treat of. The Anatomy treats in thirteen tablets of the eye and the ear, the minute structures of the cochlea included. The Physiology treats in twenty-six tablets of circulation, respiration, and animal heat, and is the first of the three parts which are to complete this portion of the work.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

July 8.

The Public Health — Ventilation of Sewers — Fatal Practice by a Midwife.

Never, for many years past, has the health of Liverpool been so good as during the first half of 1873. Week after week the deaths are very many less—sometimes more than 100 less—than the average weekly number during the years 1861-70, estimated, of course, on the probable difference in the population. From an average of 30 and over per 1000 per annum, which was often reached last year, they had fallen during the twenty-first week of the present one to 21·2, thus giving to Liverpool the unexampled place of fourth on the health-list of eleven of the largest towns of the kingdom, London, Oldham, and Bradford alone excelling it.

Taking advantage of this breathing time, the Health Committee of the Town Council is seriously entertaining the question of the condition and ventilation of the sewers, and has received and adopted a report from the borough engineer on the matter, which, it is presumed, will be acted upon if not too costly. The following are among the recommendations, viz.:—"That, the system of drainage having been put into good condition, gratings be fixed on the man-holes in the streets, or, in the absence of man-holes, that ventilating shafts in the streets be constructed at distances not greater than 100 yards; that advantage be taken, where practicable, of any tall shafts, as upcast shafts; that in very confined spaces, where, owing to special difficulties in connexion with the condition of the sewer, mephitic air is expected to accumulate unduly, Archimedean screw ventilating shafts of the largest size or similar shafts, without the screw, be used if practicable. . . That immediate consideration be given to the practicability of requiring owners of existing property to ventilate their drains by pipes carried up to the tops of the houses; that the regulation with respect to compelling owners of property about to be built to wet-trap their drains, and thus cut off air communicating with the sewers, if they refuse to ventilate them, be added to the form of permission to drainage at present in use," etc. Dr. Trench, the Medical Officer of Health, objected, and, as it seems to me, very justly objected, to several of these recommendations. He informed the Committee that twenty years previously the plan of ventilating from gully-holes had been tried, but that so great a nuisance had been created thereby as to render it absolutely necessary that the holes should be thoroughly trapped, and he was unable to see why ventilating through one hole should prove a nuisance, while ventilating through another, which the report proposed should be made within a few feet of it, should not,—assuming that the sewers and sewer gas were not very different in the two cases. But it seems to me that these recommendations are somewhat contradictory among themselves. If tall upcast shafts are to be used wherever they can be found to hand, and if the owners of property are to be compelled to ventilate their drains by pipes carried up to the tops of the houses, then the superiority of one of the principles urged by the Medical Officer of Health—viz., that the diffusion of the sewer gas should commence above, and not immediately underneath the noses and lungs of the street traffickers—seems to be conceded; and there seems to be no valid reason, except it be that of cost, which is not mentioned, why it should not be adopted altogether. The Medical Officer further objects to having openings at a less distance than twenty feet from any house, for the very practical reason that at the present time he receives repeated complaints—and that, too, from inhabitants of the least crowded parts of the town—of the nuisance caused by the ventilation from gully-holes, which are on an average more than that distance from any house. Why, too, the alternative of compelling owners to wet-trap their drains should be recommended—when the much simpler and more efficacious one of demanding absolute disconnexion between

the house-drains and those of the street might be insisted on,—does not seem clear. Free ventilation of the sewers seems to us to be absolutely necessary, but then that ventilation should be rendered as innoxious and as little of a nuisance as possible; and scarcely less necessary seems to be the necessity for absolute disconnexion of all house-drains from the street sewer, where such disconnexion is practicable. For it has yet to be proved that sewer gas is quite insoluble in water, and that the very best wet-trap may not by first holding it in solution in its contents serve as a means of slowly conveying some little of it into the house; as also that in many confined places, especially where ventilation is not very free, there may not easily be produced such a difference in barometric pressure between the air of the sewer and that of the house as to enable the former to force its way easily through the water in many of the wet-traps most commonly in use. At any rate, it is not at all uncommon to hear people, who have sculleries with fireplaces and lighted fires in them, complain of bad smells emanating from sinks, the pipes from which have every appearance of being well trapped. The Town Council of Liverpool is a most enlightened and liberal body, and it is to be hoped that they will eventually adopt only such a system of sewer ventilation as shall tend to maintain the present healthfulness of the town.

An important inquest was held by the borough coroner on the 17th ult., which possibly reveals a practice more common than it is supposed to be. The newly born son of a Mrs. Humphreys being thought to be tongue-tied, a midwife named Charnock undertook, as it seems, *de proprio motu* to remedy the defect; for, on being asked what she had done, as blood was seen oozing from the child's mouth on the conclusion of her washing him, she replied, "The little rascal was tongue-tied, so I have cut it a bit with my scissors, but they must have slipped." Surgical aid was obtained, but the hæmorrhage continued for several days, when the infant died. The jury in their verdict strongly deprecated the performance of such an act by any but a qualified medical man.

Joseph Croslett, a butcher, residing in Paddington, Liverpool, was fined £20 on the 4th inst. for exposing bad meat for sale; and still more recently Edward Jones was sentenced to three months' imprisonment, without the option of a fine, by the Wrexham magistrates for a similar offence.

BIRMINGHAM.

July 1.

THE LADY-STUDENTS—THE GENERAL AND QUEEN'S HOSPITALS—THE LOCAL BRANCH OF THE BRITISH MEDICAL ASSOCIATION—THE UNIVERSITY OF LONDON MATRICULATION EXAMINATION.

THE persistency of the ladies in their masculine endeavours to obtain admission to the medical classes of Queen's College is not at all remarkable, considering that amongst the many delightful attributes which they possess that of pertinacity is not the least striking. In exemplification of this we have only to mention that, notwithstanding the strong opposition which has arisen to bar their entrance as medical students into Queen's College, they persist in dunning the authorities with applications for a re-hearing of their case; and at last it has been settled, but in a way which, we fear, fails to give them satisfaction, for the Council have wisely decided not to grant their request. Hence, if the ladies are still determined to dabble in physic, they had better build a college of their own.

The rivalry which used to exist between the Clinical Professors of the General and Queen's Hospitals has subsided, and resolved itself into a warm and close-fisted amity. The respective teachers have combined in their operations, and the result will be highly beneficial to both teachers and teachee. Students will now have the opportunity of attending the classes in either Hospital, and, the lecturers having all things in common, there will be more harmony and unity among them.

The members of the Branch of the British Medical Association dined together at the Great Western Hotel last week. There was a large company, and the event passed off with considerable *éclat*. Mr. Jordan favoured the company with a *résumé* of his surgical career, which met with an attentive hearing. The affairs of the Branch appear to be in a satisfactory condition.

The matriculation examination of the University of London is now going on at Queen's College; there are about thirty candidates. "Young Hopeful" tells us that the papers and examiners are unusually stiff and strict.

LEGAL INTELLIGENCE.

GUILDHALL SECOND COURT OF COMMON PLEAS.

(*Sittings at Nisi Prius, before Mr. Justice* HONYMAN *and a Common Jury.*)—*July* 8.

CLARIDGE *v.* RUMBOLL.

MR. HUDDLESTON, Q.C., and Mr. Roland Vaughan Williams appeared for the plaintiff; Mr. W. Grantham and Mr. R. G. Glenn for the defendant.

This was an action brought by a confectioner residing in George-street, Hoxton, against a surgeon residing at 91, Shepherdess-walk, for negligence as an accoucheur, whereby the plaintiff's wife died in her confinement. The real question in the case was whether a Mr. Westcott, the person who actually attended Mrs. Claridge, the plaintiff's wife, was the defendant's assistant. It appeared that Westcott was unqualified to practise in any way, and that he had at one time acted as assistant to the defendant, and that at the time he was called in he was living at 118, Kingsland-road, at a house where the defendant's name appeared on a brass plate on the door, and where the defendant had certainly recently practised, but where, in December, 1872, the name of Westcott had been painted over a shop window in which the drugs were exhibited. It was also proved that Mr. Rumboll was carrying on business at other places where he had for managers unqualified assistants.

It was not disputed that the death of Mrs. Claridge was caused by the negligence and unskilfulness of Mr. Westcott.

The jury found a verdict for the plaintiff for £100.

OBITUARY.

JOHN SOPER STREETER, F.R.C.S.,

WAS born in Drury-lane, where his father was in general practice for many years. He entered his medical studies at the united Hospitals of Guy's and St. Thomas's. Having passed his examinations at the Hall and College in 1823 and 1824, he joined his father in practice, and continued to carry on the business in the same house until a few years ago, when he removed to Harpur-street, Red Lion-square, where he died last week in his 71st year. Mr. Streeter was one of the pupils of Spurzheim, and attended his lectures on phrenology with great assiduity. He was a warm adherent and advocate of that science during the remainder of his life, both when it was flourishing and when it was under a cloud. He was a man above the ordinary standard, both in intellect and acquirements, and found time in a laborious practice to read and to write. He devoted himself chiefly to obstetrics, and translated "Icones Obstetricæ of Moreau." He also published "Practical Observations on Abortion," in which he recommended the free use of opium. He was author also of "A Folio Atlas of sixty plates, with Editorial Remarks and Obstetric Statistics." Mr. Streeter was much esteemed by his brethren, and for many years was a constant attendant at the Medical Societies of London and Westminster, at which he was a frequent speaker. His speeches were delivered in a clear and somewhat didactic style. It was evident that he seldom spoke off-hand, and he was one of the few who did not address an audience without careful preparation. He served the office of president in both these societies, and conducted himself in the chair with urbanity and dignity. Though fully impressed with a sense of his own importance, he was one of the kindest and most inoffensive of men. I recollect no instance, during a period of thirty years, of his having ever uttered an offensive word. During the last few years of his life, being in independent circumstances, he became what may be called somewhat of an idle man, devoting himself to reading, which was mainly confined to works on medical subjects. He was very fond of chat, and was apt to hold his hearer by "the button." No matter how urgent was the business of his friend, or whatever excuse he might make to be released, Streeter always managed to arrest him for a time in a manner which was really comical. I may safely affirm that he has left no enemy behind him. The circle of his friends was large, and they

will lament his loss. He was buried on Monday last in the family vault at Thornton's-heath. In addition to the works above specified, Mr. Streeter was the author of papers "On Small-pox and its Combination with Pregnancy," "On Hooping Cough," and "On Statistics of Cholera of 1832 at St. Giles's." In person he was above the middle height and of robust frame. He had a remarkedly intelligent face, and a head which, with some trifling exceptions, might have been moulded into a phrenological model. J. F. C.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, July 3:

Barrow, Frederick, King's College Hospital.
Gibbs, Robert, Redcliffe-road, Brompton.
Griffith, Alfred Vavassour, Fenton, Staffordshire.
McKay, Henry Kellock, Guy's Hospital.
Reid, Matthew, Free School-street, Horselydown.

The following gentlemen also on the same day passed their primary professional examination:—

Cory, Fredk. Wm., London Hospital.
Hardwick, Edward Arthur, Charing-cross Hospital.
Hind, Henry Joseph, Guy's Hospital.
Sargent, Arthur Francis, St. Mary's Hospital.
Sworder, Horace, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BROWN, GEORGE, L.S.A.,—House-Surgeon to the Charing-cross Hospital, *vice* Lewis J. Newnham, M.R.C.S. Eng., resigned.

BERKART, ISIDOR B., M.R.C.P. Lond.—Physician to the Training Hospital Tottenham, N.

HALL, JOHN, L.F.P.S. Glasg., L.S.A.—Medical Officer of Health for the Urban and Rural Sanitary Districts of the Leigh Union, Lancashire.

RAILTON, THOS. C., F.R.C.S.—Medical Officer of Health for Chorlton Rural Sanitary District.

ROECKEL, W. J., M.R.C.S.—House-Surgeon to the Royal United Hospital, Bath, *vice* Mr. H. C. Hopkins, M.R.C.S., L.R.C.P. Edin., resigned.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Dr. Henry C. Woods, Surgeon, to the *Enchantress;* George H. Madeley, Surgeon, to the *Duncan;* James Thomson, Staff Surgeon, 2nd class, to the *Amethyst;* H. Cox, Surgeon, to the *Amethyst;* Hayman Thornhill, Surgeon, to the *Duncan*.

WAR OFFICE.—MEDICAL DEPARTMENT.—Staff Assistant-Surgeon John George Thornley, M.D. (half-pay), resigns his commission.

ARMY HOSPITAL CORPS.—Apothecary to the Forces John Andrews, to be Captain of Orderlies; Apothecary to the Forces William Amphlett Moss, to be Lieutenant of Orderlies.

BREVET.—Surgeon-Major Charles Hamilton Fasson, retired upon half-pay, to have the honorary rank of Deputy Surgeon-General.

BIRTHS.

DEMPSTER.—On July 2, at Duncannon, co. Wexford, the wife of J. Carroll Dempster, M.D., Deputy Inspector-General Army Medical Department, of a son.

HANSON.—On July 2, at Presteign, Radnorshire, the wife of William Hanson, L.R.C.P. Edin., L.R.C.S., of a son.

MILSOME.—On July 3, at Addlestone, Surrey, the wife of John R. Milsome, M.D., L.R.C.P., M.R.C.S., of a son.

PRINGLE.—On July 2, at Northfield, Annan, N.B., the wife of Surgeon R. Pringle, M.D., H.M.'s Bengal Army, of a daughter.

SNOW.—On July 2, at Bournemouth, the wife of William V. Snow, M.D., of a daughter.

TICEHURST.—On July 1, at Silchester House, St. Leonard's-on-Sea, the wife of A. R. Ticehurst, M.R.C.S., of a son.

MARRIAGES.

ANDERSON—HALL.—On July 3, at St. Marylebone Church, William Anderson, F.R.C.S., to Mary Margaret, eldest daughter of Walter Hall, Esq., late of Gayton, Norfolk.

BEATSON—STONE.—On July 7, at Saint Bartholomew's, Coffinswell, South Devon, William Burns Beatson, M.D., Surgeon-Major to H.M. Indian Army, Civil Surgeon of Napore, Central India, to Anna Maria Louisa, second daughter of the Rev. Meade Nisbett Stone, M.A., retired Senior Chaplain, Madras Establishment.

KILNER—NEWPORT.—On July 3, at Ardmore, co. Waterford, W. J. Kilner, M.D., to Margaret Catherine, daughter of the late Rev. Francis Newport, of Kilboy, co. Cork.

MATHIAS—LLOYD.—On July 5, at Holy Trinity Church, Southport, John Edward Mathias, F.R.C.S., of Beaufort Villa, Lord-street, Southport, to Annie Maria, only daughter of Morgan Lloyd, Esq., of Aberystwith.

O'MEARA—SNOOK.—On July 2, at the parish church, Colyton, Devon, Frederick Augustus O'Meara, M.D., son of the Rev. Eugene O'Meara, rector of Newcastle, co. Dublin, to Hester Maria, youngest daughter of the late John S. Snook, M.R.C.S., Colyton.

POPHAM—BAGEHOT.—On July 3, at St. Andrew's Church, Carry Rivel, Somerset, John Francis Popham, Esq., of the Middle Temple, barrister-at-law, only son of John Popham, M.D., of Cork, to Florence Eveline, younger daughter of Watson Bagehot, Esq., of Heale, Curry Rivel.

SHRUBSALL—WELCH.—On July 3, at St. Michael's, Handsworth, W. C. Shrubsall, Esq., Peninsular and Oriental Company's Service, to Mary Maunder, daughter of Francis Welch, F.R.C.S.

SPICKERNELL—PASKETT.—On July 7, at St. Simon's Church, Southsea, George Eastcott Spickernell, M.A., Ph.D., Principal of Eastman's R.N. Academy, to Alice, widow of William Paskett, late Surgeon-Major of H.M.I.S.

SWAN—HARPER—On July 2, at the parish church, Holbeach, R. Jocelyn Swan, M.R.C.S. Eng., L.M., of Northlcach, Gloucestershire, to Ann Elizabeth, eldest daughter of R. Harper, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A,, of Littlebury House, Holbeach.

TOWNSEND—WALKER.—On July 1, at St. Mark's, Peterborough, Henry Milne Townsend, Esq., son of the Rev. T. J. M. Townsend, Vicar of Searby, Lincolnshire, to Helen Gertrude, youngest daughter of Dr. Walker, J.P., of Peterborough.

TURTLE—TAYLOR.—On June 8, at St. Jude's, East Brixton, S.W., Frederick Turtle, M.D., of Clifton Lodge, Woodford, Essex, to Sarah Jane, eldest daughter of John Taylor, Esq., of Brixton.

WATTS—BÖHN.—On July 2, at Frankfort-on-the-Maine, Henry, son of William Watts, M.D. Edin., M.R.C.S. Eng., L.S.A., of Vassal-road, Brixton, to Marie, daughter of the late Valentin Böhn, of Frankfort-on-the-Maine.

WHITEHEAD—MARTIN.—On June 26, at Holy Trinity Church, Ventnor John Livesey Whitehead, M.D., of St. Andrew's Villa, Ventnor, to Sophia Charlotte Jarvis, only daughter of the late George Anne Martin, M.D., of Belgrave House, Ventnor.

DEATHS.

BREMNER, JAMES, of the New Corn Exchange, son of the late John Bremner, Surgeon Royal Navy, at his residence, 107, Grosvenor-road, Highbury, on July 8, aged 52.

CARMICHAEL, WILLIAM SCOTT, F.R.C.S. Edin., of 22, Northumberland-street, Edinburgh, at Aberdour, Fife, suddenly, on July 2, aged 54.

FAGGE, CHARLES BRISCOE HILTON, only child of Charles Hilton Fagge, M.D., F.R.C.P., at 11, St. Thomas's-street, S.E., on June 30, aged 4 months.

HURD, JULIA MARY, wife of James Hurd, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., and daughter of the late Rev. Thomas Whalley, Wickham, rector of Horsington, Somerset, at West Lodge, Frome, on July 2.

KNIPE, CATHERINE, wife of John Copeland Knipe, M.R.C.S., Surgeon H.M.'s 36th Regiment, and eldest daughter of the late Captain Martin Hunter Hailes, 10th Bengal Cavalry, at Meean Meer, Punjab, India, on May 30, aged 31.

MASH, HARRIET, wife of James Mash, F.R.C.S. Eng., L.S.A., St. Giles's-square, Northampton, on June 30, aged 70.

MEADOWCROFT, MARGARET, wife of William Meadowcroft, M.R.C.S. Eng., L.S.A., and last surviving daughter of the Rev. John Robertson, late vicar of Great Bentley, Essex, at Great Bentley, on July 3.

MEISSNER, ELIZA M. A., only surviving daughter of the late A. F. Meissner, surgeon, late of Tottenham, at the house of her nephew, H. T. Fotherby, M.D., 3, Finsbury-square, E.C., on July 5, aged 74.

ORWIN, ADELINE MARY, youngest daughter of James Orwin, M.D., M.R.C.S., L.S.A., of Brixton, at Dovercourt, on June 7, aged 22.

PALIOLOGUS, WILLIAM THOMAS, M.R.C.S. Eng., Staff Surgeon, at Isleworth, on July 5, aged 44.

STREETER, JOHN SOPER, F.R.C.S. Eng., L.S.A., at 20, Harpur-street, Bloomsbury, W.C., on July 3, aged 71.

THEOBALDS, ENITH KATHLEEN, infant daughter of Surgeon-Major J. R. Theobalds, Madras Army, at Jubbulpore, Central India, on June 5.

TYRRELL, WALTER RAIKES, infant son of Staff Assistant-Surgeon W. J. Tyrrell, at Kamptee, on June 6.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BASFORD UNION.—Medical Officer of Health. Candidates must be duly qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to R. B. Spencer, Clerk to the Rural Sanitary Authority, Public Offices, Basford.

BIRMINGHAM, BOROUGH OF.—Surgeon to the Borough Prison. Applications, with testimonials, to Messrs. Gem and Hebbert, Magistrates' Clerk's Office, Moor-street, Birmingham, on or before July 21.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Candidates must be legally qualified. Applications, with testimonials, to the House Governor and Secretary, on or before July 26.

BRADFORD INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to W. C. Woodcock, Secretary, 65, Market-street, Bradford, on or before August 4.

CHARING-CROSS HOSPITAL.—Assistant-Physicians. Candidates must possess a degree from one of the Universities recognised by the General Medical Council, and be Fellows of the Royal College of Physicians of London. Applications, with testimonials, to Henry Woolcott, Esq., Secretary, on or before July 22.

CHESTER, TARPORLEY, &c.—Medical Officer of Health. Candidates must be legally qualified medical practitioners, and registered under the Medical Act of 1858. Applications, with testimonials, to Mr. Walker, Town Clerk, Chester, on or before July 24.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to John Binks, Esq., Hon. Sec., Wakefield, on or before July 21.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must possess at least one legal qualification. Applications, with testimonials, to Dr. Alexander, Halifax, on or before July 15.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Applications, with testimonials, to be sent in on or before July 12.

KING'S COLLEGE, LONDON.—Chair of Anatomy. Applications, with testimonials, to the Council.

LONDON TEMPERANCE HOSPITAL.—Visiting Physician and Visiting Surgeon. Candidates must be total abstainers. Applications, with testimonials, to Chairman of Managers, London Temperance Hospital, 112, Gower-street, W.C.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-UPON-TRENT.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before July 23.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM, MORPETH.—Assistant Medical Officer. Candidates must be unmarried, and be duly qualified and registered. Applications, with testimonials, to Mr. Wilson, Medical Superintendent, on or before July 15.

NORWICH DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Treasurer, R. Chambers, Esq., Catton House, Norwich.

PORT OF LONDON.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to the Town Clerk, Guildhall, E.C., on or before July 15.

ROYAL ISLE OF WIGHT INFIRMARY.—House-Surgeon and Secretary. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, on or before July 14.

ROYAL BERKS HOSPITAL, READING.—Assistant-Physician. Candidates must be medical graduates of one of the Universities of Great Britain and Ireland, and be registered. Applications, with testimonials, to the Secretary, on or before July 14.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, QUAY-STREET, MANCHESTER.—Medical Officer. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, on or before July 18.

SEAMEN'S HOSPITAL, GREENWICH.—Visiting Surgeon. Candidates must be F.R.C.S. Eng. Further particulars may be obtained from the House-Governor and Secretary.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon and Secretary. Candidates must be legally qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to the Chairman of the Committee, on or before July 14.

STOCKPORT INFIRMARY.—Assistant to the House-Surgeon. Candidates must possess some knowledge of surgical dressing. Applications, with testimonials, to the Honorary Secretary, on or before July 12.

STRATFORD-UPON-AVON, ALCESTER, AND EVESHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to J. C. Warden, Esq., 11, Guildford-street, Stratford-upon-Avon, on or before July 19.

WESTMINSTER GENERAL DISPENSARY.—Surgeon. Candidates must be Fellows or Members of a College of Surgeons. Applications, with testimonials, to the Secretary, on or before July 14.

WEST RIDING ASYLUM, WAKEFIELD.—Clinical Assistant. Applications, with testimonials, to Dr. Crichton Browne, on or before July 18.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. For particulars, apply to Mr. J. G. Buckton, Secretary, 9, High-street, Wrexham.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Christchurch Union.—Mr. J. S. Morrill has resigned the Eastern District; area 14,311; population 4,321; salary £70 per annum.

APPOINTMENTS.

Altrincham Union.—James G. Purcell, L.R.C.P. Edin., M.R.C.S. Eng., to the Knutsford District.

Bellingham Union.—Wm. Oliver, L.R.C.P. Edin., L.R.C.S. Edin., to the Fourth District.

Martley Union.—Louis G. Blyth, M.R.C.S. Eng., L.R.C.P. Edin., to the Martley Union.

ROYAL COLLEGE OF SURGEONS.—The annual election of President, Vice-Presidents, Professors, and other officials took place on the 10th inst., when Thomas Blizard Curling, F.R.S., of the London Hospital, was elected in the vacancy occasioned by the retirement of Mr. Henry Hancock; and Mr. Frederic Le Gros Clark, F.R.S., of St. Thomas's Hospital, and Sir James Paget, Bart., F.R.S., of St. Bartholomew's Hospital, were elected Vice-Presidents of the College for the ensuing year. The following re-elections took place:—Mr. Timothy Holmes, as Hunterian Professor of Surgery and Pathology; Mr. William Henry Flower, F.R.S., as Professor of Comparative Anatomy and Physiology; Mr. Erasmus Wilson, F.R.S., as Professor of Dermatology; and Mr. George William Callender, F.R.S., Surgeon and Lecturer on Surgery at St. Bartholomew's Hospital, was elected Lecturer on Anatomy and Physiology in the vacancy occasioned by the retirement of Professor Humphry, of Cambridge. Mr. Henry Hancock, late President of the College, was elected a member of the Dental Board in the vacancy occasioned by the decease of Mr. Partridge. At this meeting the recently elected Councillors—Sir James Paget, Mr. Haynes Walton, Mr. George Southam, and Mr. John Marshall—were sworn in, and took their seats. The following Members of the College having been elected Fellows at a recent meetings of the Council, were admitted as such, viz.:—Messrs. Thomas Stainthorpe, M.D. St. And., L.R.C.P. Edin., and L.S.A., Battle-hill, Hexham, Northumberland, diploma of Membership dated June 1, 1838; and James Armstrong McDonagh, L.S.A. Dub., Mornington Villa, Hampstead-road, diploma of Membership dated October 21, 1842.

DR. LANKESTER, in his report last week to the St. James's (Piccadilly) Vestry, stated that during the last fortnight the deaths were nineteen—the mortality having been lower than the average of the last twenty years.

NEWS from Bombay to the 13th ult. states that small-pox was reported to be prevalent in the villages in the neighbourhood of Murree.

THE Local Government Board have awarded to Mr. T. Torkington Blease, Public Vaccinator for the Altrincham district of the Altrincham Union, £22 7s. for satisfactory vaccination.

IN consequence of the appearance of cholera in Venice, the authorities of the city have determined to issue sanitary bulletins daily. Fifty-five cases, according to an official report, have occurred in the district of Dresden since June 25, twenty-nine of which were fatal. There have been no cases in Laskowitz since the 28th ult. Several fatal cases have occurred in the villages of Burgk and Lobtau.

THE Holmesdale Infirmary, Sevenoaks, has just been finished at a cost of £922, leaving £110 in hand towards the expense of furniture, surgical appliances, boundary fences, etc., estimated to require another £250, which the Committee hope will be subscribed before the opening.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting on Monday, July 7, Sir Henry Holland, Bart., M.D., D.C.L., F.R.S., President, in the chair, Colonel Charles K. Bushe, Matthew Greene, Esq., and Walter Raleigh Trevelyan, Esq., were elected Members of the Royal Institution.

THE ULVERSTON COTTAGE HOSPITAL.—This Hospital, which has been erected mainly through the exertions of Dr. H. Barber, was opened by Lord Muncaster, M.P., on July 4. The building is of stone, and provides accommodation for twelve patients.

SUPERANNUATION ALLOWANCE.—Mr. Henry Gent has been awarded a superannuation allowance of £40 per annum upon resigning the office of Medical Officer for the Knutsford District of the Altrincham Union, after nearly thirty years' service.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—The following prizes and certificates of honour were presented on Wednesday, July 2, 1873, by Sir D. J. Corrigan, Bart., M.D., M.P.:—*Scholarships:* 1872.—Open Scholarship in Natural Science, Mr. Alfred Tilly; Exhibition in Natural Science, Mr. W. H. Weddell; Scholarship in Pathology, Mr. B. Schlesinger. 1872-73.—Assistant Demonstrator of Anatomy, Mr. J. Jackson Gawith; Prosectors, Mr. Musgrave and Mr. Walsh. *Prizes:* Summer Session, 1872.—First year.—Botany and Materia Medica, Mr. G. M. J. Giles; Practical Chemistry, Mr. Alfred Tilly, Mr. Heübeck (extra prize). Second year.—Midwifery, Mr. Knowles. Winter Session, 1872-73: First year.—Anatomy and Histology, Mr. T. W. Watkiss; Chemistry, Mr. Garbutt. Second year.—Anatomy and Physiology, Mr. E. J. Edwardes. Third year.—Medicine, Mr. W. V. Lindsay; Surgery, Mr. F. Tyrrell. Third and fourth year.—Clinical Medicine, Mr. B. Schlesinger.

RAPID REVIEWING.—The *Deutsche Klinik*, June 17, contains a review from the pen of a well-known London physician of the first volume of Mr. Spencer Wells's "Diseases of the Ovaries," published in 1865. The reviewer gives a short analysis, reserving a more comprehensive appreciation of the whole work when the second volume appears. This, of course, it will never do, as the necessity for it has been superseded by the new work on the subject which appeared in 1872, the preliminary review of which will probably appear in the *Deutsche Klinik* some time in 1880.

KING'S COLLEGE.—The Principal and Professors of this institution gave a very interesting *soirée* on Tuesday evening. The halls and various rooms were handsomely decorated, and illuminated with the new magnesium light. Some charming paintings by Turner, Landseer, Stanfield, Holman Hunt, Ansdell, etc., were exhibited, as also specimens of glass and bronzes—Roman, Chinese, and Mediæval. In the Natural History Museum were a series of portraits, photographs, etc., and a curious collection of specimens of work done in our convict prisons. Among these were many fine models, especially one showing the works at Chatham. There

were also specimens of tesselated pavement, rugs (plain and coloured), clothing, stained glass, basket work, gabions and fascines, and boxes containing everything necessary for the *Kriegspiel*, or new German war game, contributed by Major Du Cane, the official head of the Convict Department. A collection of objects relating to John Howard, the great prison reformer, who was appointed Sheriff of Bedford just one hundred years ago, was also shown.

Sulphuretted Hydrogen in the Urine after Perforation of the Intestinal Canal.—Dr. H. Emminghaus, of Jena, calls attention (in the *Berliner Klin. Wochenschrift*, 1872, pp. 477, 491) to the presence of hydrogen sulphide in the recently passed urine in two cases of fatal perforation of the intestinal canal. One of the patients lived thirty-one days, the other seventeen days. In the first case the perforation was attributed to a copious meal of boiled rice, with sugar and melted butter, taken by a patient with a chronic ulcer of the stomach. This mixture, so rich in starch (82 per cent. in rice) by a partial conversion into grape-sugar, and the presence of decomposing albuminates, with cane-sugar also, no doubt generated large quantities of lactic acid; hence the perforation. The hydrogen sulphide is present only in very small quantities in normal intestinal gas, although traces of it can always be demonstrated. (Hoppe-Seyler, "Handbuch der Physiol. und Pathol. Chem. Analyse," p. 56; see also Planer's and Ruge's analyses.) But it is constantly present in considerable quantities in putrid abscesses. In the urine it occurs after decomposition has gone on for some time. (In one of Dr. Emminghaus' experiments he found that the urine of a patient suffering from gangrene gave no traces till the third or fourth day.) Dyspnœa (not merely mechanical), dilatation of the pupils, torpor, delirium and convulsions, faintness, slowing of the heart's action, diarrhœa, meteorism, and borborygmi, urgent desire to pass water, and cyanosis, with cold extremities, were the principal symptoms.

Improved Diet of French Soldiers.—Up to the present time the daily ration of meat has been fixed at 300 grammes in time of war and 250 grammes during peace. The meat has been bought by the respective regiments in the markets, and, in consequence of the rise in prices, good meat has been obtained with great difficulty for the sums assigned for its purchase. The Government has decided that from July 1, 1873, it will undertake the supply itself, and that every soldier in active service even during peace shall have 300 grammes of good meat daily. It has entered into large contracts, the first of these having been taken, it is said, at 1·23 fr. per kilogramme.—*Gaz. Heb.*, July 4.

Domestic Pepsin.—Dr. Folsom writes—"I am using what I call 'domestic pepsin,' consisting of the insides of the gizzards of chickens, turkeys, ducks, or geese, or the stomachs of calves or little pigs. Dry them in a stove on a plate and then bruise them, and give a third of a teaspoonful of the powder in syrup a few minutes before eating. Some country people dry the gizzard itself, and then grate it and give the powder in the same way for dyspepsia. I think this crude, inelegant, domestic pepsin far superior to that made from macerated pig's stomach, and it costs next to nothing. I direct the patient to obtain and dry these 'skins' and then bruise them."—*Boston Journal*, June 5.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Professor Vanzetti, Padua.—Enclosure received.

Associate, King's College.—Sir William Fergusson was created a baronet in 1866. He is a magistrate for Peeblesshire. His family consists of three daughters and two sons.

A Fellow, London.—Mr. Southam was one of the earliest ovariotomists; he contributed some interesting cases to the *Medical Gazette* so long ago as 1843.

An Old Member, Greenwich.—Although the Council of the College of Surgeons invite the members of the British Medical Association to the forthcoming *soirée*, members of the College *not* being members of the Association are also invited. The admission, we believe, will be by tickets not transferable, to be obtained by personal or written application.

O. N., Northampton.—There are fifteen general hospitals in London, and ninety special hospitals, surgical societies, etc. The united incomes of thirty-eight of the special hospitals amount to £137,000; the total income of all the hospitals of which returns have been obtained is £357,000 a year.

The International Exhibition.

to the editor of the medical times and gazette.

Sir,—Your reporter on "The Surgical Instruments at the International Exhibition," page 693 of your last week's journal, has inadvertently given to Mr. Thomas Wormald the credit of exhibiting "Some Ancient Instruments for Lithotomy used by a Native Surgeon of the North-west Provinces of Bengal," belonging to, and exhibited by Your obedient servant,

1, Bedford-square, July 2. Jabez Hogg.

F. H. D.—*Medical Times and Gazette*, March 11, 1871.

C. W. P.—The relative amount of medical care bestowed upon the poor by the Poor-law systems of England and Ireland respectively is roughly indicated as follows:—The cost of medical relief constitutes only the twenty-seventh part of the gross outlay on the poor in England, Wales, and Scotland, but it constitutes one-sixth part of the whole in Ireland.

A Provincial Student.—You are too late in your application; the written portion of the primary examination takes place this day (Saturday). Messrs. Holmes and Marshall are the new examiners. Your brother will receive an announcement of the result of the recent Arts examination in about three weeks.

A Metropolitan Fellow.—From inquiries made there is no doubt of the correctness with which the votes were recorded at the recent election of Fellows into the Council of the College; indeed, it is only due to Mr. Stone to state that his report has never been questioned until the present occasion. Several gentlemen who checked the votes gave the result as published last week in the *Medical Times and Gazette*. After the official declaration by the President there is no appeal; had the votes been equal he would probably have decided in favour of the senior candidate.

Greenslade's Fracture Apparatus.

to the editor of the medical times and gazette.

Sir,—At first I did not intend to reply to Mr. Greenway's remarks respecting his "limb suspender" in conjunction with my apparatus, but, on second thoughts, I think I must ask you to kindly allow me a small space in order to correct a few errors which Mr. Greenway is evidently labouring under respecting my instrument. He says:—"As regards the hinged side-splints (a very old idea), I consider them objectionable," etc. This "very old idea" was, I believe, first introduced by my brother-in-law, Mr. Walter, some twenty-five years ago, and my method is an improvement on this; and I beg to call Mr. Greenway's attention to the fact that the "space between the splints" *can* be altered to "suit the size of the limb." The longitudinal trucks and rail in conjunction with my suspending bar not only allow the patient to draw himself upwards in bed, but, having done so, also permit him to shift sideways to a large extent,—as has been intimated to me by many patients and medical men who have proved its usefulness. I also think that Mr. Greenway will agree with me that perforated metal splints are preferable to wood.

A few days ago I took an opportunity of going to the Exhibition to see Mr. Greenway's "limb suspender," which I certainly think is a useful one,—so much so, that I shall not think of making any uncalled for depreciatory remarks respecting it. I may add that my apparatus was introduced nearly four years ago, the *late* improvements being the facility with which it can be packed in such a very small space. Many medical men have expressed their high approval; one in particular, an eminent surgeon, whose letter I find is dated 1870, pronounces it to have "afforded the greatest relief in one of the worst cases," etc.

I shall not again, Sir, trouble you in this matter, as I think it hardly necessary to be continually "crying up" my own apparatus, but, not having yet taken a part, I trust you will excuse my thus intruding on your valuable space. I am, &c.,

Martock, Somerset, July 7. George Greenslade.

The Medical Officers of the Guards.—We have received a letter signed "Fides" from a medical officer of the Guards, in explanation of a communicated paragraph which appeared in our number of June 28, on the subject of promotion in the Brigade. "Fides" explains that—

"Before the Warrant of 1858 came into force the senior surgeon of each regiment occupied the position of principal medical officer to his regiment, and was styled 'Surgeon-Major.' He received a pay that accorded to his rank, together with 5s. a day as charge money; after thirty years' service he could retire on a pension of £1 1s. 1d. In 1858 a Warrant was issued giving increase of pay and other privileges to the army medical officers. The medical officers of the Brigade of Guards were never asked if they were willing to be placed under the terms of that Warrant—or, in other words, they had to accept it. Not so with the senior ranks—viz., the three regimental surgeons-major—they were occupying at the time a higher status than that accorded by the Warrant, and consequently could not be interfered with."

Two of these gentlemen have since retired, but one still remains to stop promotion—on the plea that he does not come under the terms of the Warrant of 1858. Hence the dissatisfaction amongst the medical officers of the Brigade.

A Death from Chloroform.

to the editor of the medical times and gazette.

Sir,—On the morning of June 28, 1873, Ann T., aged 45, wife of a gamekeeper, came to my surgery by appointment, to have her right arm, which she had fractured twenty-five days before, and which had received no treatment, put upon a bent splint.

Her account of the accident was that on Whit-Tuesday, June 3, whilst running up a hill, she fell, and struck her right elbow. She applied to a chemist, who gave her some "oils" to rub in, but had no further advice till, finding that she did not regain the use of her arm, she at length came to me. I found the arm fixed in a fully extended position, the elbow deformed in consequence of the external condyle of the humerus being broken off by a fracture running through the joint, and the head of the radius being separated from its articulation, and the joint moveable only to a very small extent. It was intended to place the limb on a bent splint in order that it might be of more use to her if anchylosis of the elbow-joint

should take place than it would be when quite straight, and as any movement of the joint caused great pain, chloroform was given. She sat in an arm-chair, her clothes were loosened about the neck, and the chloroform was given on a folded handkerchief by Dr. C. She at once began to struggle and to try to take the handkerchief away from her face, but her hands were held, and in about two minutes, the first portion of chloroform having evaporated, and the woman not being in the slightest degree insensible, a second portion, about one drachm, was poured on the handkerchief. When this was held to her face, she struggled more violently than before, kicking, and moving her head from side to side to escape from the handkerchief. In about two minutes from the time when the second portion of chloroform was poured out her struggles ceased, the pulse remaining good. The handkerchief was removed from her face, and the arm was taken hold of to examine it thoroughly, and to reduce the dislocation of the radius, two pulls were given; when I noticed the woman's face was livid, and her pupils widely dilated. No pulse could then be felt at the wrist, and the breathing had also ceased. She was laid on the floor, her tongue drawn out by forceps, galvanism was at once applied over the phrenic nerve and the diaphragm, a vein in the arm was opened, and artificial respiration—during which air entered and escaped from the chest freely—was kept up for half an hour, but there was not the slightest sign of life from the moment when the lividity of the face and the dilatation of the pupils were first noticed. The galvanism only caused a few muscular contractions in the neck. The bottle from which the chloroform was poured was graduated; it holds sixteen drachms when full, and fourteen drachms were found in it after the woman's death. The unfortunate woman was not noted for sobriety. An inquest has been held, and a verdict was returned that the death occurred from the administration of chloroform, to which the jury appended a rider to the effect that no blame was to be attached to either of the medical men concerned. I am, &c., Δ

COMMUNICATIONS have been received from—

Dr. Heginbothom; Dr. Dempster; Dr. Cheadle; Mr. J. W. Groves; Mr. J. Sampson; Mr. Blease; Mr. J. C. Renton; Dr. A. L. Mease; Dr. Whitmore; Dr. David Nelson; Dr. Burder; Dr. Macpherson; Mr. T. E. Amyot; Mr. C. S. Jeaffreson; Mr. J. Chatto.

BOOKS RECEIVED—

Bourgeois on the Passions in their relations to Health and Disease, translated by Damon—Dalby on Diseases of the Ear—Army Medical Report for the year 1871—Volckman on the Prevention of Poverty—Griffiths' Posological Tables, second edition—The Half-yearly Abstract of the Medical Sciences, vol. lvii.—Roth on the Mineral Springs of Wiesbaden, translated by Benson—Valentine on Medical Missions—Constable on Doctors, Vaccination, and Utilitarianism—Tyndall on Light—Annual Report on the Sanitary Condition of Birkenhead—Whitmore's Monthly Report on the Health and Meteorology of the Parish of St. Marylebone.

PERIODICALS AND NEWSPAPERS RECEIVED—

Allgemeine Wiener Medizinische Zeitung—L'Union Médicale—Manchester Guardian—Gazette des Hôpitaux—The Obstetrical Journal of Great Britain and Ireland, No. 4—The New York Sanitarian—Gazette Médicale—Gazette Hebdomadaire—Le Mouvement Médical—La France Médicale—Lincoln Journal—L'Union Médicale—Pharmaceutical Journal—La Tribune Médicale—Indian Medical Gazette—Philadelphia Medical Journal, June 14, 21—Cork Daily Herald—Ulverston Mirror—Westminster Review—Hancock on the Anatomy of the Foot and Ankle-Joint—Le Progrès Médical—Medical Press and Circular—London Medical Record.

APPOINTMENTS FOR THE WEEK.

July 12. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

14. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

16. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

18. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Microscopical Society, 8 p.m. Conversational Meeting, for the Exhibition of Specimens, etc.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 5, 1873.

BIRTHS.

Births of Boys, 1088; Girls, 1063; Total, 2151.
Average of 10 corresponding years 1863-72, 1992·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	631	567	1198
Average of the ten years 1863-72	684·6	625·2	1309·8
Average corrected to increased population	...	...	1441
Deaths of people aged 80 and upwards	...	...	30

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	7	...	1	8	...	2	3	9
North ...	751729	1	3	4	3	6	1	1	...	15
Central ...	334369	...	...	1	1	11	...	1	...	7
East	639111	...	6	3	1	10	1	4	...	23
South	967692	...	17	3	1	8	3	4	4	14
Total	3254260	1	33	11	7	43	5	12	7	68

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·715 in.
Mean temperature	61·6°
Highest point of thermometer	81·0°
Lowest point of thermometer	50·5°
Mean dew-point temperature	55·7°
General direction of wind	S.W.
Whole amount of rain in the week	0·98 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 5, 1873, in the following large Towns :—

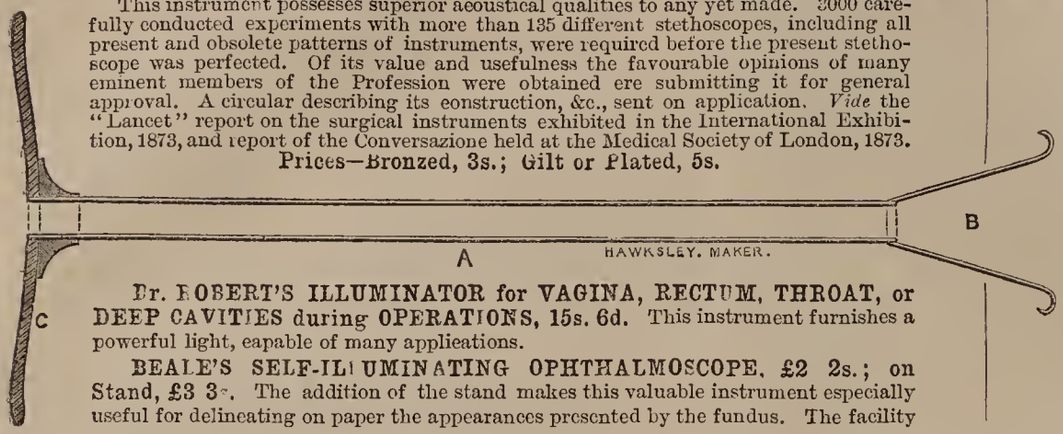
Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending July 5.	Deaths Registered during the week ending July 5.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2151	1198	81·0	50·5	61·6	16·44	0·98	2·49
Portsmouth ...	118280	12·4	66	30	78·0	49·1	60·2	15·66	...	...
Norwich	81677	10·9	44	35	76·8	46·0	59·3	15·16	1·36	3·45
Bristol	189648	40·4	114	76	72·6	50·4	58·5	14·72	0·51	1·30
Wolverhampton ...	70084	20·7	52	36	80·0	46·2	58·4	14·66	2·52	6·40
Birmingham ...	355540	45·4	246	149	76·5	46·9	58·4	14·66	3·48	8·84
Leicester	102694	32·0	69	41	79·5	45·5	60·6	15·89	2·23	5·66
Nottingham ...	89557	44·9	56	34	78·6	44·1	59·0	15·00	1·89	4·80
Liverpool	505274	98·9	329	207	78·1	46·9	58·5	14·72	1·34	3·40
Manchester ...	354057	78·9	227	158	80·6	47·0	60·4	15·78	1·95	4·95
Salford	130468	25·2	112	68	76·8	45·1	57·7	14·28	1·70	4·32
Oldham	85141	20·4	69	38	72·5	...	...	...	2·25	5·71
Bradford	156609	23·8	129	62	74·0	49·8	60·2	15·66	0·96	2·44
Leeds	272619	12·6	142	114	75·0	47·0	59·3	15·16	0·84	2·13
Sheffield	254352	11·1	187	101	78·0	45·1	58·8	14·89	1·35	3·43
Hull	128125	35·9	82	52	...	...	...	...	...	...
Sunderland ...	102450	31·0	86	32	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	136	80	72·0	48·0	57·1	13·94	0·41	1·04
Edinburgh	208553	47·1	159	96	70·4	46·3	57·0	13·89	0·14	0·36
Glasgow	498462	98·5	365	272	68·7	42·8	56·8	13·78	0·73	1·85
Dublin	314666	31·3	166	132	72·4	44·8	59·9	15·50	0·31	0·79
Total of 21 Towns in United Kingd'm	7507575	34·5	4987	3011	81·0	42·8	59·0	15·00	1·39	3·53

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·72 in. The highest was 29·88 in. on Wednesday morning, and the lowest 29·55 in. on Friday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

NEW INVENTIONS.

HAWKSLEY'S PATENT DURABLE STETHOSCOPE.



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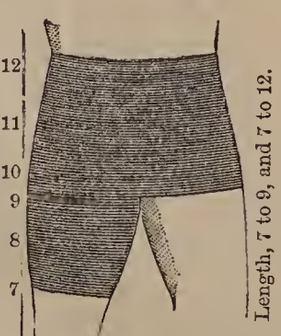

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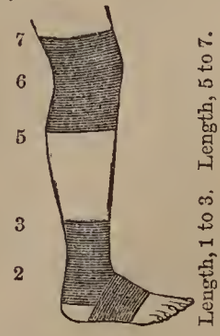
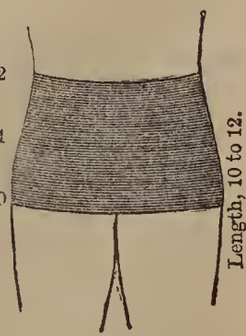
3, Round small of leg.
4, Round thickest part of calf.
5, Round leg just below knee.
6, Round knee-cap.
7, Round leg just above knee.
8, Round middle of thigh.
9, Round top of thigh.
10, Round body at hips.
11, Round body at umbilicus.
12, Round waist.

The Length should also be given.



Knee-cap & Ankle-sock.



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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture IV.—Injuries.

The heart is liable to be overstrained by long-continued hard work, or by sudden and violent efforts, and the foundations of disease may thus be laid, the cavities becoming dilated or the valves incompetent. Independently, also, of these conditions, the walls or valves of the heart may be torn during severe muscular exertion. Accidents of this kind have been known occasionally to occur since the time of Corvisart, though the number of recorded cases is very small. Dr. Quain at the first meeting of the Pathological Society exhibited a heart in which two of the aortic valves were torn from their attachments, and I have seen two similar cases in the hospital practice, of which the preparations are preserved in the Victoria-park Museum. The aortic valves are, indeed, as might be anticipated, those which are most frequently injured, though the tendinous cords and fleshy columns of the mitral and tricuspid valves may also be torn. Of seventeen cases which I collected some years ago, in ten the aortic valves were probably injured, in four the mitral, and in three the tricuspid. When the aortic valves are lacerated it may be that the angles of one or more of the segments are torn from their attachments, or the convex edge of the valve may be separated from the fibrous zone, or the curtain may be torn through. When this accident has happened the patients have generally been using great exertion. One of my own cases occurred in a sailor who was racing up the shrouds of a ship against another man; another patient was pulling at a heavy cask, when his hand slipped, and struck him a severe blow on the chest; a third person was endeavouring to force open a door; and a fourth was striking with a heavy sledge. When the accidents occur the patients experience a sense of something having suddenly given way in the chest, followed by a severe pain in the region of the heart, extending through to the back and shoulders and down the arms, and they become faint. Faintness is indeed a special symptom in cases of injury to the aortic valves, while sense of oppression at the chest and of suffocation occur when the mitral valve or its attachments are torn. In some instances spitting of blood has been occasioned, and in two cases of injury of the aortic valves the patients complained of hearing after the accident peculiar sounds in the chest, neck, and ears.

After injuries of the heart the patients may quickly die, or the symptoms may, after a time, partially subside, but usually all the effects of the corresponding valvular disease more or less rapidly ensue. In cases of aortic valvular injury the patients are recorded to have survived from three weeks to three years and a half, and two were living five months and five years after they had sustained the injury. Dr. Wilks has related a case in which the patient only lived three days, but in this instance there was also serious direct injury to other parts. When the mitral valve has been ruptured the patients have survived from nine days to two years. One of the cases of injury of the tricuspid valve occurred during a violent fit of coughing in a phthisical patient, who lived twenty-eight days. Another person in whom the tricuspid valves were torn during violent exertion only survived between four and five days. In cases of rupture of the aortic valves, if the patients live for any length of time, very rapid and great increase of size takes place in the left ventricle, and indeed it is only by such an occurrence that life can be much prolonged. The sailor whose case I have mentioned afforded a striking example of this, and he was able, after the occurrence of the accident, to perform a long voyage to the East, and during a portion of this time, though with the aortic valves very incompetent, he did the duty of an able seaman. In the class of cases which I have now mentioned, the heart is supposed to have been sound before the occurrence of the accident, or at least not to have been seriously defective. Were there is, however, any alteration in the structure of the valves or muscle from atrophy or fatty degeneration, the injury would doubtless be much more readily produced. Indeed, it is not uncommon in hearts previously diseased for those parts to be torn during some slight effort or exertion; and this is especially apt to occur with the cords or fleshy columns of the mitral valve. I met with a remarkable case of the kind some time ago at the Victoria-park Hospital, which is related in the *Pathological Transactions*.

In some cases the muscular walls of the heart have been found partially lacerated from accidents. Thus I have seen the lining membrane of the right ventricle and a portion of the subjacent muscle torn, though the pericardium was entire, in a case in which a man was crushed and several of his ribs fractured; the laceration of the muscle being thus evidently due to violent action at the time of the accident. Cases are also on record in which the valves were torn from direct injuries.

Carditis, including Peri-, Endo-, and Myo-Carditis.

Pericarditis is seldom, if ever, an idiopathic affection, but generally occurs during the progress of some other form of disease. Thus it is seen in by far the largest proportion of cases as a complication of rheumatic fever. It occurs also in cases of renal disease, and occasionally in scarlet fever, though it is then probably usually rather the secondary result of the renal complication than an attendant on the fever itself. Pericarditis may also occur in phlebitis and tuberculosis, and may be caused by the pressure of tumours, aneurismal or otherwise, on the heart, and it is sometimes the result of direct injury.

The late Dr. Taylor, at that time Physician to University College Hospital, published some years ago, in the *Medico-Chirurgical Transactions*, an exhaustive investigation into the causes of pericarditis. He states that in his own practice it occurred as a complication of rheumatic fever in 8 per cent., or 1 in 12·5 of the cases. We have already gone very fully into the complications of rheumatism when treating of that disease, but as I spoke rather of the prevalence of cardiac complications of all kinds than of pericarditis in particular, I may again occupy your time for a few minutes with the subject. Of the 146 cases of rheumatism upon which I reported in the first paper published in the Clinical Society's *Transactions*, there were 16 in which pericarditis either existed alone or in combination with endo-carditis; those complications therefore occurred in the proportion of 10·95 per cent., or 1 case in 9·1. In the second paper, published in our own Hospital Reports, there were the same affections in 20 out of 87 cases, or in 22·9 per cent., or 1 case in 4·35. Taking the two sets of cases together, of 233 cases of rheumatic fever, there existed pericarditis in some form in 36, or 15·45 per cent., or 1 case in 6·47. This, it will be seen, is a considerably larger proportion than is given by Dr. Taylor; but the differences between our observations are probably partly due to my having included in the calculation cases of rheumatism with old disease of the heart complicated by pericarditis (which does not appear to have been done by Dr. Taylor), and partly to the number of cases analysed by Dr. Taylor being much fewer (only 75) than my own collection, and consequently being more liable to accidental error. In the paper in the Reports I have shown that the proportion of cardiac complications varies very much at different periods, and that trustworthy results can therefore only be attained by analysis of a considerable number of cases extending over a prolonged period of time. I should, however, mention that though the proportion of pericarditis alone which obtained in my cases was greater than that deduced by Dr. Taylor, the total amount of cardiac complication was less. Dr. Taylor states that he met with some form of disease of the heart in 1 in every 2 cases. I found it only in 1 in 2·56 cases.

The circumstances conducing to the occurrence of pericarditis in rheumatism are, according to Dr. Taylor,—

1st. That the rheumatism shall be of the fibrous form.
2nd. That it is a first attack.
3rd. The early age of the subject.
4th. Probably the intensity of the disease.
And 5th. Probably the patient not being previously in a good state of health.

There is no doubt of the correctness of his first inference. Synovial rheumatism is a very passive form of affection, and is generally seen in young persons of the strumous diathesis. It is by no means so common as fibrous rheumatism, and in the

comparatively few cases which I have treated I do not recollect to have ever met with cardiac complication.

My own observations do not, however, confirm the supposed greater liability to pericarditis in first attacks of rheumatic fever. Thus, I find that of the cases included in the first report the proportion of previous attacks of rheumatic fever where there was cardiac complication was 47·1 per cent.; while in the other cases there had been previous attacks in only 34·2 per cent. In the second report this subject has been more carefully investigated, and it appears that, while in cases of first attack the proportion of recent cardiac complication was 11·3 per cent., or 1 case in 8·8, in the cases in which there had been one or more previous attacks of rheumatism the proportion was 45 per cent., or 1 case in 2·2.

I can, however, entirely confirm Dr. Taylor's inference of the greater liability to cardiac complication when rheumatic fever attacks young persons than when it arises in those of more advanced ages. Thus, of 112 cases in persons of 20 years of age and under, the number of cases in which recent cardiac complication occurred was 43, or 33·3 per cent.; of 109 cases between 20 and 40, 32, or 29·3 per cent., were so complicated; and of 12 between 41 and 53, 1 only, or 8·3 per cent., had cardiac affection. These calculations refer to all forms of cardiac complication, but I have no reason to doubt that they are equally applicable to pericarditis alone.

Dr. Taylor speaks doubtfully as to the effect of the intensity of the disease in conducing to pericarditis, though expressing the opinion that the complication is more dangerous when it occurs in severe cases of rheumatism. In the latter view he is doubtless correct, but it is very striking how frequently pericarditis occurs in slight cases of rheumatism. I have many times known it arise in cases of a very trivial character, and I might, indeed, say that it is comparatively rare that the pericardium becomes affected in severe rheumatic fever. Thus, of fifteen cases of pericarditis which are referred to in my last report, in only one was the rheumatic attack an intense one, and in several it was very slight. The liability to endocarditis differs in this respect from the susceptibility to pericarditis, that complication being apparently much more common in severe than in slight cases—its frequency being, indeed, apparently in direct relation to the severity of the attack.

On the influence of the previous state of health of the patient in predisposing to the occurrence of cardiac complications in cases of rheumatic fever, I have no specific facts to offer, but it certainly appears that a previously impaired condition of the general health adds to the severity of most acute diseases, and to their liability to complication, and makes the recovery more difficult and more prolonged, and I certainly think that it operates unfavourably, not only in encouraging the tendency to cardiac complications in rheumatic fever, but in adding to their danger.

To the remarks which have been made as to the causes conducing to the occurrence of cardiac affection in rheumatism, it should be added that probably men are more prone to the complication than women, although the difference in this respect is not very marked.

The occurrence of cardiac affection in rheumatism is, I suppose, due to the large amount of fibrous tissue in the pericardium and valves of the heart. The development of the disease cannot, however, be ascribed to metastasis, as was supposed by the older physicians. The heart generally becomes involved very shortly after the commencement of the affection of the joints, and the cardiac affection generally proceeds *pari passu* with it; but every medical man of much experience has met with cases in which carditis has been developed before the external parts have become affected, and others in which the heart disease has come on after the joints have become quite free.

It is probable that in the development of the cardiac affection the exposure to cold is influential, and that this is the reason why certain joints suffer more frequently than those which are better protected. I have known pericarditis to occur in a patient labouring under rheumatic fever, apparently from his having taken cold in being removed to the hospital.

As to the occurrence of pericarditis as a complication of renal disease, I have no personal observations to give you, but there is no doubt that it very often arises in the advanced stages of Bright's disease; Dr. Taylor found it in 10 per cent. of all the fatal cases. Of the other causes which I have named as conducing to pericarditis, I have several times seen the disease in cases of pyæmia, from uterine phlebitis and accidents and surgical operations. I have also two or three times known it occur in cases of tuberculosis; and in one instance that occurred at the old hospital, London-bridge, there was fatal pericarditis from the puncture of a needle. It has also been supposed that the pericardium may become the seat of inflammation extending from the pleura or lungs, but of this I do not know that any decided proof can be given. Pleurisy and pleuro-pneumonia are certainly very often met with in cases of rheumatic pericarditis, but I have always regarded them as coincident effects of the common cause; and I do not recollect to have seen pericarditis occur in any case of idiopathic pleurisy, even though, as often happens, the pleura covering the pericardium be affected.

The general symptoms which attend pericarditis are very indecisive. Pain especially is a very uncertain symptom. In a large proportion of cases no complaint is made of pain, though generally, especially when the inflammation is intense, there is a feeling of uneasiness or oppression in the region of the heart, and sometimes decided pain. Occasionally, also, when there is pain in the region of the heart in rheumatic fever, it is not from the existence of pericarditis, but from rheumatism of the intercostal muscles and integuments. Tenderness is an equally uncertain symptom: sometimes by pressure between the cartilages or beneath the false ribs some uneasiness is caused; but in other cases there is nothing of the kind. It has been thought that when pain is felt in pericarditis it is in consequence of co-existing pleurisy; but I do not think that the pain can be ascribed simply to the pleurisy. Pleurisy itself is very often latent, and attended with very little pain or uneasiness. The presence of pericarditis is also not necessarily indicated by the existence of dyspnœa. Often in the early stages the breathing is very little affected, though it generally becomes short and hurried when there is active inflammation or when any considerable amount of effusion has occurred; and not unfrequently under such circumstances it is so urgent as to compel the patient to sit upright in bed. With the commencement of the local affection the pulse is generally quickened, rising to 110 or 120, and with the advance of effusion it may be very rapid and irregular or intermittent. The only symptom which is, however, I believe, invariable, is that the temperature rises considerably with the occurrence of the pericarditic affection. This is often very striking in cases which had previously been of a slight character. Thus the temperature, which was before not more than 100° or 101°, with the occurrence of pericarditis will rise to 102°, or 103°, or 104°, or more. Sometimes also there are symptoms of cerebral disturbance during the progress of the disease—such as delirium, more or less active, choreic symptoms, etc.

The diagnosis of pericarditis can only, however, be effected by the physical signs. The first peculiarity which is observed in a case of rheumatic fever when the pericardium is becoming affected is often a modification of the systolic sound to which I have heard the term "tension-sound" applied, and I do not know that I can give a better name to it. It gives the impression that the muscular contraction of the heart is performed with undue energy. To this a slight rustling sound succeeds in some cases, or, in others, that sound occurs as the first sign. At first the rustle is only very slight, barely detectable, and is heard indistinctly, or is only, perhaps, audible when the patient distends the chest with air, and is so short as only to occupy a small portion of the cardiac action, and is not sufficient to mask the natural sounds of the heart. The rustle is often first heard at the sternum and towards the upper part of the præcordial space; but it increases in intensity, and gradually spreads over the whole region. At length there is a distinct double *bruit de frew-frew*—as it is termed by the French—which entirely masks all other sounds. The first rustle probably only indicates the dryness of the serous membrane; the decided friction, the occurrence of solid exudation. The friction murmurs are characterised by their peculiar superficiality. They give the impression of a sound produced quite at the end of the stethoscope, as if by the rubbing of the instrument upon the skin. They are also heard only in the præcordial space, or at least are equally extended from it in all directions. The characteristic friction-sound is as I have described it—double; but often towards the apex only a single sound, which accompanies the systole, is heard. The period during which these murmurs are heard varies very greatly. Sometimes the sound will never extend beyond the slight rustle, and will rapidly subside: it may be heard at night, and may be quite gone the following morning. In other cases it will be very persistent, continuing three or four days or longer; and I have known it continue for fifteen days.

When, however, the friction is very persistent it is often combined with some old disease and enlargement of the heart, the outpouring of liquid effusion being probably in such cases prevented by the pressure on the surface of the pericardium. In the same way in pleuro-pneumonia the friction-sound often continues for a long time, the effusion of fluid being apparently prevented by the solidified lung being incapable of compression.

When the friction-sound ceases, it may be by disappearance of all the signs of disease, but it is more frequently in consequence of the effusion of serum. The area of dulness is then extended, and especially in the vertical direction. The friction, however, generally ceases gradually, disappearing first below and last at the upper part and right side of the præcordial region. It may also sometimes, if the fluid effused be not in large quantity, be reproduced by making the patient draw a full breath or lean forward; or, in children, by making somewhat firm pressure in the præcordial region with the stethoscope. When the effusion is considerable, the heart's sounds are often much muffled or masked; but sometimes the sounds will be heard quite distinctly and naturally, even though there is a large quantity of fluid in the cavity. When also there is a large amount of effusion, the area of dulness is very greatly extended, rising above to the second or even to the first inter-cartilaginous space. It has also a peculiar pyriform shape, being wider below and narrower at the upper part; and often also there is very obvious prominence in the præcordial region. The duration of this stage is also variable—the rapidity or slowness of the absorption being probably much affected by the greater or less intensity of the inflammation and the larger or smaller proportion of fibrine which is contained in the effused fluid. The fluid may rapidly accumulate, and equally rapidly disappear, so that the whole may pass away in a few days, and the heart may entirely recover its natural condition. Most generally, however, the absorption is more gradual, the dulness diminishes from above downwards, and, as the fluid disappears, the friction-sound returns, being first heard at the upper part and right side of the dull space, and gradually falling to a lower level. The returning friction is, however, usually less general and of a harsher note than that which is first heard, though the term *bruit de frew-frew* still well represents it. At the apex also it is often a single systolic sound. After a time, a distinct creaking or stretching sound sometimes may be heard, the *bruit de cuir neuf* indicating that the effused lymph is becoming organised. Finally, after a longer time, all morbid sounds may disappear, though, when adhesions have formed between the two layers of pericardium, there may be a peculiar jogging or tumbling kind of movement of the heart, and at the apex the integuments may be retracted with the back-stroke. Generally, if not always, also, when there has been decided friction, and that has been of some duration, so that the surfaces of the pericardium become more or less adherent together, the area of dulness remains permanently larger than natural. Often also there is a systolic murmur at the apex still heard as long as the patient remains under treatment, but whether this is exocardial or endocardial is not easily decided. Certainly I have known this murmur go entirely away after a long time has elapsed; and this seems more likely to be the case with an exocardial than an endocardial murmur. The diagnosis of pericarditis is not generally attended with much difficulty. The superficial seat of the sound, its peculiar character, and its limitation to the region of the heart or equal diffusion in all directions from that space, distinguish it from an endocarditic murmur. Sometimes, however, the existence of cardiac friction-sound in cases of pleurisy may be liable to be mistaken for a friction-sound connected with pericarditis; but the pleural sound can only be heard on the left side of the præcordial region, whereas the pericarditic sound, if it be not heard over the whole præcordia, is more likely to be heard on the right side at or about the sternum. The pleuritic friction-sound will also be heard with the respiration, and there will be other obvious signs of pleurisy; and these peculiarities will readily distinguish the two sounds.

The Monkwearmouth and Southwick Dispensary has just been opened under very influential patronage, and is to be governed by an Executive Committee of twenty-five. The following have been appointed the medical officers—viz., Luke Blumer, M.D. St. And., James Smith, L.R.C.P. Edin., William H. Dixon, M.D. Edin., Robert Ayre Smith, M.D. Glasg., and George Bolton, L.R.C.P. Edin. The Rev. James H. Hancock, M.A., is Hon. Secretary.

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond.,

Physician to His Majesty the King of the Belgians,
Physician to the East London Hospital for Children,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest

IV.—Pleurisy.

(*Continued from page* 651, *vol.* i., 1873.)

Emma W., aged 5, a delicate-looking child, with small features, fair hair, and a thin transparent skin, had had a cough more or less for two years—ever since a severe attack of pertussis. There was a little dulness at the right supra-spinous fossa, and the breathing there was high-pitched and harsh, with prolonged expiration. She was still under treatment when (on May 30) she had an attack of measles. The disease ran its usual course, but the cough was very severe. On June 7 she began to complain of pain in the right side; she still coughed a great deal, seemed languid, had no appetite, and was very hot at night, perspiring freely. She was seen on June 14 looking pale and weakly, but could walk well (she had, indeed, come on foot to the Hospital), and was not at all prostrated by her illness.

On examination of the chest the front of the right side was found to be completely dull from apex to base, with greatly increased resistance. The dulness did not extend into the axillary region, but ceased laterally rather abruptly at a line drawn downwards from the anterior fold of the armpit. The breathing above and just below the clavicle was bronchial; over the lower two-thirds it was very loud and tubular, without any rhonchus. Over the area of dulness the resonance of the voice and cough was unnaturally strong. At the right back there was no dulness, with the exception of that at the supra-spinous fossa already referred to, but the respiration from apex to base was bronchial, with a fine subcrepitant rhonchus towards the end of inspiration. Temperature in axilla, 99·2°; pulse, 136, unequal; respiration, 50.

On June 21 the subcrepitant rhonchus had disappeared from the back, otherwise the signs remained the same as on the previous visit. The cough was very troublesome, the appetite poor, and she perspired very much at night. Temperature, 99·6°; pulse, 148; respiration, 42.

The child improved but slowly, and it was not until July 31 that any notable change was observed in the physical signs. By this date the child was fatter and looked pretty well, although pale, and she slept well at night, but was sometimes disturbed by her cough. The dulness was now less complete than before at the right front, and below the clavicle was rather tubular. The breathing was cavernous from apex to base, without rhonchus, and the vocal resonance bronchophonic. At the back the supra-spinous fossa alone was dull, and the breathing there cavernous, as in front; lower down the respiration was bronchial, and at the base merely harsh. No rhonchus was heard at the back, and the vocal resonance, except at the apex, was natural.

After this the patient was not seen again for six months. By this time she had become fat, and looked very well. There was a little flattening of the right mammary and infra-mammary regions; the right nipple was a little lower than left; and the spine was slightly curved, with concavity to right. The chest measured at the level of nipple on the right side ten inches and one-eighth, on the left ten inches and a half. There was no dulness anywhere about the right side; the supra-spinous fossa even was quite resonant, and the breathing everywhere healthy. About the right nipple a faint superficial crepitating sound was heard with the latter half of inspiration. This was no doubt pleuritic, and was the only indication left of the foregoing disease. The child was said to cough sometimes in the morning on first rising, but not afterwards in the day.

The treatment throughout consisted of quinine and cod-liver oil.

In this case the limitation of the principal physical signs to the front of the chest furnished a possible source of error, which it required a careful consideration of the general symptoms and of the whole aspect of the case to avoid. Dulness limited to the front on one side, combined with tubular breathing and increased resonance of the voice, suggested the presence of pneumonia, and this view was supported by the hurry of respiration, which on the first visit reached the number of fifty in the minute. The dead, flat

character of the dulness was, however, very different from the incomplete dulness of pneumonia; the resistance to the finger was also greater, and the area of dulness was rather abruptly marginated towards the axilla. The entire absence of rhonchus of any kind from the front of the chest was a phenomenon rarely to be met with in a case of inflammation of the lung, and itself suggested pleurisy. Such a condition is, however, occasionally found where the pneumonic consolidation is very complete, but it rapidly passes away, seldom persisting longer than two or three days. In the present case rhonchus was absent throughout. It is unfortunate that no mention is made in my notes of the presence or absence of vocal fremitus, nor of the position of the heart. These are two important omissions, which deprive us of what might have been of great assistance in the diagnosis.

Besides the physical signs, the general symptoms were very decidedly opposed to the pneumonic view of the case. The child, although pale and delicate-looking, had not the aspect of one seriously ill, and she had been able to walk without assistance to the hospital. This point is of very great importance, and tells very strongly not only against pneumonia, but also directly in favour of pleurisy. That a child with caseous deposit at the apex of one lung, who had but just passed through an attack of measles, and who presented *recent* physical signs such as those described, should be able to walk from her home to the hospital without apparent suffering, could only be possible in a case of pleurisy. Had the disease been pneumonia, consolidation of such extent, especially when succeeding to measles, would have been attended by a degree of prostration sufficient to put such an effort out of the question. Besides this, the temperature of the body was little higher than natural (99·2°), and at night she perspired freely.

There can be little doubt, therefore, that the case was one of circumscribed pleurisy. The subcrepitant rhonchus heard at the back was due to accompanying bronchitis, so common during and after an attack of measles; and the bronchial breathing heard posteriorly was no doubt conducted from the front of the chest. The hurry of respiration must be attributed to the exertion she had just undergone.

The diagnosis was confirmed by the after progress of the case. The long persistence of the physical signs without notable change, and especially without the appearance of rhonchi, was very significant; and the moderate retraction of the side found six months after the attack afforded a final proof that a correct estimate had been formed of the nature of the disease.

The removal of the small consolidation of the right apex is a point to be noted in passing. This was probably of some standing, and may have dated from any time subsequent to the attack of pertussis two years before, during all which time the child had remained pale and thin, with a frequent cough. The deposit, however, was undergoing no active change, and while thus indolent there is always in young subjects the possibility that absorption may take place. Its removal appears to have been complete, for at the last examination no signs were left to indicate that the apex of the lung had ever been the seat of disease.

The limitation of the liquid effusion is in most cases owing to the presence of old adhesions, the previous occurrence of a pleuritic attack having left the adjacent surfaces of the pleuræ adherent to one another in certain spots. In this case, however, there was no history of any previous attack, although such might have occurred and been overlooked.

The mode of termination of pleurisy is the same in the child as it is in the adult. Absorption of the fluid may take place with or without retraction, or the fluid may be purulent, and the case become one of empyema. In children, cases of empyema are very common, for the fluid becomes purulent at an earlier period with them than it does with the adult.

In the following case the fluid, although purulent, was being gradually absorbed, and some retraction of the side had taken place:—

John C., aged 3½ years, was admitted into the East London Children's Hospital on August 29. Has always been weakly and very subject to coughs. Five weeks ago the child was seized with a fit of convulsions. On recovery he complained of pain in the left side, and was very feverish and thirsty. He soon began to cough, and his breathing was very shallow and rapid. He was seen by a medical man, who treated him for "inflammation of the membranes of the brain." Since that time he has been very weak and low, and has been troubled with a frequent cough.

August 31.—Child pale and thin. Ends of long bones enlarged; ends of ribs nodular. Fingers distinctly clubbed; legs very small and thin. Can stand, but is barely able to walk without assistance. Skin not particularly harsh. Spleen much enlarged; liver normal in size. Left shoulder and scapula lower than right; and spine slightly curved, with concavity to left side. Heart's impulse felt at the left side of ensiform cartilage. Left side of chest moves very little with inspiration. There is dulness over the whole of the left half of the chest, both back and front, with greatly increased resistance; in the first and second interspaces the note is rather tubular. The respiration is loud and coarse in left front as far as the nipple, becoming at that point rather tubular in quality. In the left axilla the respiration is blowing, and becomes tubular in the infra-axillary region. At the back the breathing is tubular at the base; higher up it is diffused blowing, and remains so as far as the supra-spinous fossa. No friction or rhonchus can be heard, and the vocal resonance is only slightly increased, not at all ægophonic. Temperature yesterday evening, 100·4°; this morning at 9 a.m., 99·4°. The chest was punctured posteriorly on the left side, about two inches below, and in a line with, the angle of the scapula; and a small quantity of thick purulent fluid was withdrawn with the pneumatic aspirator. The temperature the same evening was 101·6°.

On September 3 five drops of tinct. ferri perchlor. were ordered three times a day, and one ounce of wine was added to the diet, which consisted of milk and bread, with meat and broth on alternate days.

September 10.—Sweats very much about the head and neck; skin of those parts covered with milliaria. The child is fretful when touched, but does not seem in pain; eats heartily; cough short and loose.

Percussion of the left half of the chest gives pretty much the same results as before. At the extreme base, both before, behind, and laterally, the note is tympanitic from transmission of the stomach note; elsewhere the percussion-sound is dull, except just below the clavicle and in the axilla, where it is tubular. The respiration at the back is now only bronchial, without any tubular or blowing quality. It is also bronchial in front, and in the axilla is cavernous. The vocal resonance is everywhere on the left side bronchophonic, and as heard at the angle of the scapula the quality of the voice is rather ægophonic. Temperature, 6 p.m., 100·2°; pulse, 154; respiration, 58. Since August 31 the temperature has seldom been over 99° in the morning; in the evening it has varied from 101° to 102°.

The physical signs remained very stationary from this date until the end of the month, although the heart was gradually drawn back to its natural position.

On October 1 the chest measurement at the level of the nipple was on the right side 9½ inches, on the left 9⅞ inches. Half a teaspoonful of ol. morrhuæ was ordered to be taken three times a day in addition to the iron mixture.

October 9.—Percussion is now natural in front of left side, and the left supra-spinous fossa is resonant. Over the scapular region the percussion-note is tubular, and at the posterior base it is dull. Respiration is bronchial at the base behind; superiorly it is harsh, with prolonged expiration. All over the upper half of left back is a peculiar clicking sound like very small bubbles, not at all superficial. In front the breathing is merely harsh; in the axillary and infra-axillary regions it is slightly bronchial and is accompanied by a faint crepitating friction.

From this date the physical signs became gradually more and more healthy, and on November 5 the least possible dulness remained at the left base behind, but the breathing there and everywhere else was perfectly natural, without friction or any other abnormal sound. The child became quite fat and strong on his legs. The spleen, however, did not diminish in size, but remained very large, reaching as low as the level of the umbilicus.

The history of the attack in this case was very characteristic, and the distortion of the left side of the chest (lowering of the shoulder and scapula, with slight lateral curvature of the spine), inconsiderable though it was, combined with the physical signs, rendered the diagnosis of pleurisy an easy matter. Absorption of the effused fluid was evidently far advanced, but the elevation of temperature seemed to imply that the presence of purulent matter in the pleura was injuriously affecting the system; and it was therefore thought advisable to remove what little there might be left without delay. The after progress of the case, although slow, was satisfactory, and the speedy improvement which followed the administration of cod-liver oil is to be noted. The oil might indeed have been given with advantage at an earlier period. The child was the subject of rickets, and in such cases the influence of this drug in

furthering nutrition and improving the general condition is very striking. The enlargement of the spleen, one of the consequences of the rickety state, did not appear to impede recovery, although the size of the organ remained unaltered. Such cases, indeed, generally do well.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

SLEEPING SICKNESS.

By JOHN W. OGLE, M.D., F.R.C.P.,
Physician to St. George's Hospital.

In a clinical lecture at St. George's Hospital, in which the results of pressure upon contiguous nerves and bloodvessels by tumours, aneurisms, etc., in the neck were alluded to, Dr. Ogle brought before his class the following communication, which in 1869 he had received from Dr. M'Carthy, Staff Assistant-Surgeon, at Accra in West Africa, and which, he observed, bore upon the various views as to the mechanism of sleep which had been entertained. Referring to a paper which appeared in the *Lancet*, March 20 of that year, containing the history of a case of ligature of the carotid artery, Dr. M'Carthy wrote as follows:—

"In a note to your clinical observations on the case you describe, you state that you intend preparing a paper containing the results of arrest of circulation in the vessels from pressure of tumours, etc., as regards cerebral symptoms produced by such conditions; and as the following facts of a very peculiar disease bear more or less on the subject you are about to write on, I send you the particulars, with a hope they may be of some little interest to you.

"The malady I write of is called by the natives of this country the 'sleeping sickness,' from the fact that by day as by night the patient shows an extraordinary tendency to drop off to sleep—in fact, cannot remain awake unless some particular cause keep him from sleep.

"The first case of this disease I happened to meet with was on the Island of Buluma, in 1867, and as those I have since seen and heard of correspond exactly in symptoms, cause, etc., with it, I think the subject not unworthy of your consideration. In the first place, I must tell you that I have seen but one patient suffering from the complaint, and as he refused to have an operation performed on him, and has since gone into 'the bush,' I know no more about that case. All the other cases I have seen were patients on whom the operation had been performed, and I give you the history, treatment, and result entirely from their accounts, and from the stories of many natives of the country to whom I have spoken on the subject.

"In every case of 'sleeping sickness' there is invariably a chronic thickening of the deep cervical glands of the neck—I mean those glands commonly called the 'glandula concatenata,' and which form a chain from the base of the skull to the clavicle. The treatment adopted by the native 'doctors' consists in removing those thickened glands. I have never seen the operation performed, but it is said to be always followed by cure. In one man I counted no less than thirteen cicatrices in the neck.

"The above disease is not uncommon at Buluma and on the banks of the neighbouring great rivers, and was supposed to be nearly confined to those places, but I have seen a few patients who had been operated on near this place—*i.e.*, the Gold Coast. I have spoken to many of the natives of Accra, but they appear never to have seen or heard of the disease; and the few cases I have met with here I found in what are called 'bushmen,' so that probably the disease exists in the interior and not on the coast of this part of the country.

"I am under the impression that the sleeping symptoms are caused by pressure on the vessels leading to the brain, and by consequent diminution of the supply of blood to that organ, causing a tendency to sleep. We know that those deep cervical glands are particularly numerous at the division of the common carotid artery, and the pressure on the internal carotid may account for the symptoms alluded to. How those so-called native 'doctors' extirpate the glands from such a site is more than I can account for. They are perfectly ignorant of anatomy, and yet I have never heard of a fatal case resulting from the operation."

CASE OF FATTY OR CHYLOUS(?) URINE, WITH OBSERVATIONS.

By THOMAS E. AMYOT, F.R.C.S.

The appearance in the *Medical Times and Gazette* of June 21 of Dr. Gopal's paper on the interesting subject of fatty or chylous urine, induces me to offer a few notes on a case which has occurred very lately in my practice, but which I might not otherwise have thought it advisable to publish at present, as I have as yet had but one single opportunity of examining the urine. No second chance, however, seems likely to present itself.

In several important particulars my case appears to resemble that related by Dr. Bramwell in the *Edinburgh Medical Journal* for 1858, but which Dr. Roberts, in his admirable book on "Urinary and Renal Diseases," puts aside as a case of possible imposition, on the ground that the urine did not coagulate spontaneously, nor with the aid of heat or nitric acid, and that it contained visible fat-globules. Now, in my own case the facts are precisely the same; but first, imposition was out of the question, as I saw the urine passed into a clean vessel, and took it away with me—my reason for doing so being that, according to the unasked statement of an intelligent nurse, the child's urine had very frequently been thick directly after passing, both during his present and previous illness. Secondly, the urine did not coagulate spontaneously. Thirdly, heat and nitric acid, both of which I tried before and after filtration, failed to cause coagulation. Fourthly, fat globules were visible in abundance.

Dr. Roberts states that "chylous urine is invariably coagulated by heat and nitric acid,"—and certainly one would suppose that it always must be so if true chyle be present; but Dr. Bence Jones, in the narration of a case in the thirty-sixth volume of the *Medico-Chirurgical Transactions*, notes on four occasions the presence of chyle without albumen, while Dr. Golding Bird speaks of the coagulation in such cases being often prevented by the existence of a "large proportion of fat." The occasional visibility of the fat globules is abundantly attested. I now proceed to give a few particulars of my case.

Master R. W., aged 6 years, a very intelligent child, of spare make and active disposition, had a sharp attack of bronchitis at the latter end of January and the beginning of February last, which pulled him down greatly, but from which he rallied with great rapidity, so as to be quite well and (for him) strong by the beginning of April. On the 9th of that month, however, after some exposure to cold and fatigue, he complained of pain in the left shoulder, chilliness, and great lassitude. I was not sent for till the 14th, when I found him suffering from pain in the left hypochondrium, great weakness, total loss of appetite, and difficult and hurried respiration. He had but little cough, but I was astonished to find the whole left side dull on percussion, a total absence of respiratory murmur over the lower and back parts of the lung, and but little, and that imperfect, in the subclavicular region. There was no râle or rhonchus anywhere. The symptoms arose, I suppose, from pleuritic effusion and pressure on the bronchi, though the intercostal spaces were clear. The tongue was clean and moist, the alvine secretions well coloured, there was no great pyrexia, and no heat of surface till the 20th, when the temperature in the axilla was 104° Fahr., and the pulse 136. He was very restless and impatient of being disturbed, but had still little or no cough, and the pain in the hypochondrium had been relieved by local applications. On inquiring about the urine, which was not preserved, the nurse told me that it was frequently milky-looking when passed, and that it had been so during his illness in January. She had also observed it so that very morning. I therefore got the child to pass about an ounce in my presence, and took it home with me. The following was the result of my examination:—Urine passed at 7.30 p.m.: Turbid and milky, but not throwing down any sediment; no urinous smell; acid reaction; not affected by heat or nitric acid either before or after filtration; not affected by acetic acid, ammonia, or liquor potassæ; not coagulating spontaneously, but yielding abundance of fat on agitation with ether, and showing fat globules in plenty under the microscope. They closely resembled milk globules in size and appearance. Besides these there were also present in the field a multitude of extremely minute and less regularly shaped bodies (which,

by the way, I am not sure I observed until the day after the first examination), well defined with a power of 800 linear, and possessing a power of motion not unlike the steady movements of some of the naviculæ, which they retained, even when mounted and cemented under a cover-glass on a slide, for several days. There were no casts or crystals of any kind. After standing the night the fat rose like a cream to the surface of the urine. I should also add that a drop of the secretion, placed on white paper, left after drying a transparent (greasy) ring at its circumference.

Under small doses of calomel with antimonial powder and continued counter-irritation by liniments, the boy improved. Respiration and resonance being slowly restored, the temperature fell to 99·7° by the 22nd, and the pulse to 120. The fatty condition of the urine has not returned, but urates are occasionally abundant, with a rather large amount of bladder (and kidney ?) epithelium.

At the present date the child is still improving, and is indeed as well and lively as usual. He is taking cod-liver oil and Hooper's pancreatic emulsion with much relish, and apparently with great benefit.

On April 22 Dr. Copeman, of Norwich, saw him with me by my request, as I doubted about perfect recovery, and as the life is a precious one. I ought to add that this paper is drawn up from full notes taken during the illness.

Diss, Norfolk.

ON THE USE OF RESIN-CLOTH, IN THE PLACE OF CERE-CLOTH, IN THE TREATMENT OF WOUNDS.

By EDWARD LUND, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

To those who practise the system of dressing wounds advocated by Professor Lister, the use of the carbolised gauze which he employs, as far merely as expense is concerned, is a matter for consideration. This perhaps is the case more in hospital than in private practice, because in the former, at the present time, the gauze is largely used to test the value of the antiseptic method, and economy should be observed as far as possible. Moreover, beyond the cost, there is a difficulty in the preparation of the gauze, for the mixture of paraffin and acid with which the fabric is saturated must be applied to it in a heated liquid state, and, unless a certain temperature be maintained during the whole process, the gauze will be of unequal thickness and imperfectly porous. I have tried to make the gauze myself according to Professor Lister's recipe, but I have often failed to do so in these particulars. In the paper in which he first described this dressing (in the *British Medical Journal* of January 14, 1871, p. 30), Professor Lister refers to a very curious property possessed by carbolic acid—namely, that it can be combined with resin, and resinous matters generally, with great facility, and when so blended nearly all its irritating acrid properties are neutralised, while the compound so formed retains the power of evolving an antiseptic vapour at the temperature of the body. It is well known that to touch the mucous membrane or even the skin of the lips with a fragment of pure carbolic acid occasions pain and excoriation, in some subjects more than in others. But when we experiment in the same way on a mixture of the acid with five parts of resin, we find all the acridity is destroyed; the acid is still present, but it is stored up and rendered harmless by this new combination.

Having verified this fact by numerous observations, I came to the conclusion that we have here a method of forming easily, without the aid of heat, an application for antiseptic purposes, in surgical practice, of great value. All that is required to carry out the idea is to saturate very thin calico gauze with such a mixture of resin and acid dissolved in methylated spirit, press it powerfully, spread it out to dry quickly so that it may become quite porous and absorbent, and it is ready for use. Yet the resin and acid thus left upon the threads of the calico after the complete evaporation of the spirit would be found too brittle and adhesive to the skin for a wound-cover and air-filter if something else were not added to impart flexibility. The substance which I employ for this purpose is castor oil, because it is the only fixed oil easily accessible which is quite miscible with spirits of wine. All samples of castor oil, by reason of adulteration, do not show this property of perfect solubility in alcohol, as stated by Pereira ("Materia Medica and Therapeutics," 1865, p. 251), and therefore I am content to use the oil if it will unite perfectly with twice its bulk of rectified spirit. The exact composition of the solution is as follows:—Carbolic acid crystals, melted, two fluid ounces; castor oil, two fluid ounces; purified resin, sixteen ounces by weight; methylated spirit, forty fluid ounces,—mix.

To dissolve these ingredients easily we must add them together in a certain order. To the resin, liquefied by heat and removed from the fire, add gradually one third part of the spirit; when these are well mixed, put in another third of the spirit, in which the oil has been previously dissolved; and lastly, the acid in the remaining portion of the spirit must be slowly added to complete the mixture. The whole must be agitated until all the constituents are thoroughly incorporated, and afterwards passed through a muslin filter to get rid of any extraneous matters. Unless this plan be adopted, the resin will concrete into a mass at the bottom of the vessel, and it will be extremely difficult afterwards to get it perfectly mixed. When thus prepared, the solution is of a dark colour, clean and free from any deposit, and it can be kept unchanged in a well-corked bottle for a long time. It is, in fact, a sort of thick varnish. To make the resin-cloth—as I term it, for the sake of distinguishing it from the cere-cloth dressing for wounds which I described in a paper read at the Leeds meeting of the British Medical Association in 1869,—it is needful to select a very thin, cheap, porous calico, or calico muslin, known in the trade as "mull," which costs at wholesale price about 4s. per piece of twenty yards. This divided into strips, each about nine inches wide and six yards long, is reduced to a convenient form for general use. The calico should be unbleached and free from stiffening; and each of the strips should be carefully folded up, so as just to lie flatly in the press, as I am about to explain. An ordinary square tincture-press may be used to press the cloth, or such a press as is sold for copying letters, to which a tin box has been adapted, so that the plates of the press can work in it; and in this box the folded calico is placed, the solution being poured over each successive layer so as to wet perfectly every part of it. There should be an aperture at the bottom of the box, with a tap by which the superfluous fluid can be removed, collected, and used a second time. The press being brought into action, the pile of calico should be squeezed as dry as possible, all the fluid drained off, the resin-cloth taken out, laid over a few lines of string in a warm room with good ventilation, and, in an hour or two, when all traces of smell of the methylated spirit have been dissipated, the cloth may be rolled up and kept in tin cases ready for use.

It is difficult for me to state the exact cost of resin-cloth made by this process, for I have not yet bought the materials for its preparation at such wholesale prices as could be paid if it were to be manufactured in large quantities; but, allowing for some slight reduction where six or eight twenty-yard pieces of calico are bought at a time, and the solution made by the gallon, I find it comes to a fraction less than 3d. per yard of average width of forty-four inches. In using it as a dressing for wounds, I deal with it precisely as I would do with Professor Lister's antiseptic gauze, for which it must be taken as a cheap and ready substitute. I generally apply ten folds of it over the face of a wound (as in an amputation), and perhaps six folds higher up the limb for some distance, and I cover it with the mackintosh hat-lining, so as to distribute the serous discharges through the breadth of the resin-cloth thus covered. I have never found it to irritate the skin in any degree beyond what the oil-silk protective, liberally used, could control, except once, when, in the hurry of preparing the resin-cloth, I had neglected to dry it thoroughly, and it was applied still moist with the methylated spirit; the naphtha in it seeming to be the chief cause of the skin irritation. But if this precaution be observed I believe this resin-cloth will be found a very useful addition to our means of treating wounds and abscesses on antiseptic principles.

MULTIPLE BIRTHS IN FRANCE.—According to some recent researches of M. Albert Puech, during a period of eight years (1858-65) there took place 8,292,226 simple births, 83,729 double births, 1005 triple births, and 4 quadruple births. If the map of France be divided into three transverse regions, it is found that twin births are most frequent in the northern of these regions and least frequent in the southern region.—*Lyon Médical*, June 22.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

REMARKS ON THE DOUBLE CONDITION OF LOSS OF CONSCIOUSNESS AND MENTAL AUTOMATISM FOLLOWING CERTAIN EPILEPTIC SEIZURES.

(By Dr. HUGHLINGS-JACKSON.)

REMARKS on Epileptic Mania and other post-epileptic phenomena (the whole of them being included under the general term Mental Automatism) were delivered by Dr. Hughlings-Jackson during a recent charge of the clinical wards *àpropos* of several cases of nervous disease. They are reported with additions. The principle here to be enunciated in some detail has already been sketched in this journal (Nov. 30, 1872, p. 597). It is—that in the cerebral part of the nervous system there are from different degrees of gravity of lesions (1) different degrees of involvement of nervous processes in the order of their speciality, and (2) correspondingly different depths of "reduction in automaticity." The expressions 1 and 2 are complementary; they are different faces of the same thing. So far as cases of different degrees of hemiplegia and of affections of speech show, the principle applies, Dr. Hughlings-Jackson believes, very closely. But it applies also to mental symptoms *par excellence*.

We shall illustrate the principle by a set of comparatively simple phenomena, before we speak of mental symptoms. In the ordinary specimen of Speechlessness there is loss of the most Special form of Language, with conservation of the more General—*i.e.*, loss of speech without loss of emotional manifestations. This is but a single illustration from one very important, but yet subordinate series. Now, let us pass to mental symptoms. When a patient in petit-mal *loses consciousness*—that being the first thing in his seizure—he has *lost the use of the most special of all nervous processes whatsoever. This is the definition of loss of consciousness.* He has undergone a loss in the series which is evolved out of all lower series strictly analogous to that loss illustrated by the case of the speechless man; the speechless man has lost the most special processes of a *subordinate* series—the language series. Putting the above in complementary expressions, the patient after petit-mal "is reduced to a more automatic condition of mind"; the speechless patient is "reduced to a more automatic condition of language."

"Reductions" occur, of course, in all degrees of depth, although for simplicity of illustration we have taken arbitrary degrees. There are no *abrupt* demarcations betwixt special and general processes, or, taking particular cases for illustration, betwixt involvement of intellectual and emotional language (every intellectual process casts a shadow of emotion), or betwixt loss of consciousness and coma.

Different degrees of depth of "reduction" will now be illustrated with regard to mental symptoms. If a patient loses the use of a few or the *most* special of all nervous processes only, he may, the speculation is, simply do odd things afterwards. His reduction in automaticity is to a slight depth; there is but a slight departure from healthy action; he will act dreamily. If the "reduction" be deeper his more animal disposition comes out; he may rave and act furiously. (These active "symptoms" are involuntary exhibitions of *himself*, or of the lower "strata" of himself.) The deepest reduction is beyond those processes which we arbitrarily segregate as mental. There is coma,—the most automatic of all processes of the body *are reached;* there are stertor, alterations of respiration, circulation, &c. From loss of some only of the most special of all processes (from slight limitation even of what may be called the "area" of consciousness) to involvement of the most automatic of all nervous processes there are (following petit-mal or haut-mal) all degrees. In both dreaming and drunkenness the state of things is closely analogous. The deeper the reduction the more does the natural disposition come out. People are said to be more immoral in their dreams: strictly, their immorality is not kept under; they are reduced in automaticity; only their lower processes are active.

As will be inferred, Dr. Hughlings-Jackson does not now believe, as he used to do (see this journal, December 14, 1867, p. 642), that the Mental Automatism of epileptics—epileptic mania, for example—is the result of the discharge of any part of the brain; that is to say, *not the direct result*. The duplex condition is found, he considers, when the discharge is *over*. The Mental Automatism is one of the *indirect* results of the discharge. It is true that in some cases of sudden mania a prior seizure (a fit) is not witnessed. Hence, some say that mania occasionally "replaces" an epileptic fit. (This is the very opposite of the view now being stated.) The patient in epileptic mania is by *some process* suddenly reduced to the double condition. There *is* loss of consciousness, and "under this" mental automatism goes on. The following explanation applies, at any rate, to the mode of production of this double condition in a considerable number of cases:—

As before said, the principle holds good both in "physical" and "mental" symptoms. We begin, then, by an illustration from a convulsion followed by temporary paralysis. Dr. Hughlings-Jackson believes that the double mental condition after a fit of, for example, petit-mal is strictly analogous to the condition of the patient who has epileptic hemiplegia after a severe attack of unilaterally-beginning convulsion. The patient after the convulsion is reduced to a more automatic condition, so far as certain physical processes go; the most special sensori-motor processes of a subordinate series are temporarily put *hors de combat* by a strong discharge; the more automatic processes are conserved;—he is, in short, in a double condition, physically. One element of this double condition is negative, the other positive. The negative element is the paralysis of the most voluntary or special parts of one side of the body (hemiplegia); the positive is the conservation of all movements more automatic. Similarly, in the series of series (those underlying consciousness) the discharge puts the most special of that most special series *hors de combat*, and leaves them so temporarily; it produces temporary loss of consciousness; under this automatic (mental) action goes.(a) The negative symptom, loss of consciousness, is analogous to the epileptic hemiplegia; the positive one, mental automatism, is analogous to the conservation of all movements more automatic than those of the face, arm, and leg.

We must, in recapitulation, bear in mind that there are many varying factors concerned in the production of the Mental Automatism of such cases—1. Depth of reduction (compare degrees of intoxication—*see* "The Anatomy of Drunkenness," Macnish). 2. The kind(b) of person *to whom the reduction comes* (consider the effects of drink on the sentimental, on the quarrelsome, and on the greedy—*see* Macnish especially on this matter). 3. The influence of external circumstances of the patient when he is reduced (consider here the accepted theory of dreams). External objects may give a turn to the patient's mental automatism, or possibly the aura (*e.g.*, of smell, sight, etc.) may do this, or even muscæ volitantes—for they are practically external. 4. Loss—especially, it is probable, sudden

(a) An epileptic discharge—that is to say, a sudden, rapid, and excessive discharge—of a part of the "organ of mind" would *not* rouse even incoherent successions of ideas (not rouse ideas at all) nor produce even caricatures of normal action; it would, if strong enough, produce that clotted mass of movement which we call spasm; it would develope strongly and in vast numbers those movements which are the anatomical substrata of ideas; it would produce, also, what, for want of a fit word, must be inaccurately expressed as volumes of "sensation."

(b) It is under this head that hereditariness may most methodically be spoken of. Dr. Hughlings-Jackson does not believe that nervous *diseases* (as epilepsy, chorea, etc.) are hereditary, nor that they "replace" one another, any more than that hemiplegia or apoplexy is hereditary. He takes the very different view—(1) that there is inherited a tendency to certain tissue-changes. Under this tendency there may occur a pseudo-transmission of symptoms or diseases (*e.g.*, hemiplegia from cerebral hæmorrhage occuring with bad arteries, Bright's disease, etc.). (2) That (this applies especially to the so-called inheritance of insanity) a small brain (not merely physically but functionally small) is inherited—a brain easily "reduced." This fails easily under very numerous circumstances of strain (mental or physical), and in diseases as epilepsy, chorea, etc. (compare failure of vision in those who inherit a functionally imperfect eye—hypermetropes). The *facts* of "transmission of disease" are not denied, but a very different *interpretation* of them is suggested. There is now attending the out-patient room a boy who is manifestly the subject of congenital syphilis, and whose mind has failed several months. One sign of mental failure has been a magpie-like hiding of tools. It would be, Dr. Hughlings-Jackson thinks, unmethodical to call this lad's mental condition "Syphilitic Insanity"—obviously grotesque if, going into details, we should say that hiding his fellow-workmen's tools was a syphilitic symptom. The boy's father died insane in Colney Hatch. This boy has received as his father's share in his development not only a syphilitic taint, but a nervous system the higher division of which is easily "reduced." It *so happens* that the reducing agent has been in all probability syphilitic disease. The inheritance was not of insanity, but of a brain ready to fail on comparatively slight provocation of any kind: one probably easily upset by drink or excitement (easily excited, rather). No doubt anything which involved even slight damage to the cerebrum would in such a brain have "caused" insanity—from so-called "alteration" of disposition up to insanity as the term is commonly used.

—or special processes leads to increased action of those processes just more automatic. After section of the spinal cord, reflex action is increased. Of this Bernard says ("Leçons de Pathologie Experimentale," 1872, p. 205)—I draw especial attention to the words I have italicised:—

"Nous trouvons, dans ce phénomène, un fait pathologique qui mérité d'être sérieusement étudié, *d'autant plus qu'il est applicable au système nerveux dans toute son étendue.* Tout nerf séparé du centre dont il émane acquiert des propriétés spéciales, qui ne diffèrent cependant de celles dont il jouit à l'état normal que par un excès d'intensité."

These several factors are, however, to be considered most especially in the investigation of cases of insanity, commonly so called. It is, indeed, as an instrument of investigation of mental diseases that the principle illustrated throughout these remarks is likely, Dr. Hughlings-Jackson believes, to be of most medical service. If the method is really correct, it will be a means both of investigation and of classification—classification as distinguished from mere arrangement. It will thus, he trusts, help to bridge over the chasm in our studies of the "mental" and "physical" diseases of the nervous system. There is no loss of consciousness in cases of insanity as the two terms are commonly used; but there is a limitation of the area of consciousness ("loss of judgment"). (Loss of consciousness is not coma; very few mental processes are excited at any one time.)

Many illustrations of the law above illustrated could be given. Very careful analysis is required before we can decide whether the principle does or does not apply to certain symptoms. Dr. Hughlings-Jackson believes it will be found to apply to the order of symptoms of locomotor ataxy; he believes this is really a paralysis as much as the so-called ataxy of articulation is. There is, he supposes, loss of the most special movements of the legs in walking. Of course there is here the prior difficulty of finding what the most special ("delicate," balancing) movements of walking are. One of these is probably that in which the peroneus longus is especially concerned. This muscle is concerned in giving the last impulse to propel the body forward over the other foot. (See Humphry, "Hand and Foot," p. 93.)

It will have been observed that the cerebellar series has not been spoken of in the above remarks. Probably the order of representation is not the same in this part of the encephalon as it is in the cerebrum. Dr. Hughlings-Jackson believes it to be just the opposite order, so far as the large movements go. The so-called disorder of co-ordination in disease of the cerebellum—the reeling gait—is, Dr. Hughlings-Jackson believes a veritable palsy first of the muscles of the spine; it is chiefly on account of this palsy above that the legs underneath act erratically. Again, in these two disorders of locomotion (locomotor ataxy and the cerebellar reel) there are doubtless *secondary effects* of the palsy—viz., (1) *over-action of associated non-paralysed parts* (analogous to the secondary deviation in ocular palsies), (2) *erroneous "projection"* (analogous to apparent displacement of objects in ocular palsies). These secondary effects hide the essential state of things, and render methodical investigation and classification difficult. The term "disorder of co-ordination" is, indeed, used very vaguely; it is sometimes even used as if there were a "faculty" of co-ordination. Chorea and the reeling gait of cerebellar disease are often spoken of as if they were fundamentally alike. They are utterly different things—different not only in being results of affections of different parts of the cerebro-nervous system, but in that the former is the result of *discharge* of nerve-tissue, and the latter of *loss of function* of nerve-tissue—one is a hyperkinesis, the other an akinesis (or result of one).

GUY'S HOSPITAL.

STRANGULATED UMBILICAL HERNIA—HERNIOTOMY—INTESTINES NOT EXPOSED—RECOVERY.

(Under the care of Mr. BRYANT.)
[Reported by Mr. BINGHAM.]

ELIZA B., aged 47, a married woman, the mother of seven children, was admitted into Guy's, under Mr. Bryant's care, on August 3, 1871, with a strangulated umbilical hernia. She had been ruptured for seven years, and had never worn a truss. A portion of the contents of the sac was always down. Three days before admission the tumour became larger, and vomiting appeared. One day before, taxis had been repeatedly applied with violence without effect.

Under chloroform Mr. Bryant employed the taxis, but with no good result. He then operated, opening the sac only at the upper border of its neck to allow of the introduction of the hernia director. He then divided the neck, and reduced the hernia, or rather the part that had redescended. The intestine was neither seen nor felt.

Pain left her after the operation, but some vomiting continued. The wound rapidly united, and the woman left the Hospital well a month after admission.

STRANGULATED SCROTAL HERNIA—HERNIOTOMY—FÆCAL ABSCESS AND FISTULA—RECOVERY.

(Under the care of Mr. BRYANT.)

George M., aged 46, a brickmaker, came into Guy's under Mr. Bryant's care on February 22, 1864, with strangulated right scrotal hernia. He had been ruptured for twenty years, and had worn a truss. He had been vomiting, and had had local pain for thirty-six hours.

When admitted the right side of the scrotum was much enlarged; it was red and œdematous. Forcible taxis had been previously applied to it for two hours.

Chloroform was given, and herniotomy performed. The sac having been opened, the intestine was found to be black from effused blood; omentum was also contained in the sac, and was of the same appearance. The intestine was returned into the abdominal cavity, and omentum ligatured and cut off. Opium was freely given, both by the mouth and anus. Much relief followed the operation, vomiting disappearing, and good sleep following.

On the 25th, or second day, however, vomiting reappeared, a brown fluid being brought up. Pulse 100; abdomen tender; bowels have not yet acted. Ordered brandy ℥vj.

On the 29th (sixth day) the bowels acted, and the vomiting became less. There was still, however, much fulness about the neck of the sac. The sac itself was contracting naturally.

On March 10 diarrhœa appeared, the wound at this time healing rapidly.

23rd.—Wound had nearly closed.

30th.—Pain reappeared in the right side of the abdomen, above the neck of the hernial sac (that is, thirty-seven days after the operation); some thickening was felt in this region, and constitutional disturbance. The bowels at this time were acting regularly.

The local swelling gradually increased, and an abscess formed above the seat of wound, and on April 29 it burst, discharging fetid air and pus. On the 30th fæces escaped through the wound made by the abscess and the operation.

Great relief followed the discharge of the abscess, all local pain disappearing on May 22. Three weeks later both wounds were closing. The discharge of fæces ceased. By May 30 the wounds had both nearly healed. On June 25 the man left the Hospital cured.

ST. MARY'S HOSPITAL.

ENTERIC FEVER ASSOCIATED WITH APHASIA.

(Under the care of Dr. C. HANDFIELD JONES.)

L. R. S., AGED 14, admitted April 5, 1873. Ill two or three weeks with violent cold and loss of appetite; has had diarrhœa. Is very weak; has some cough. Temperature on admission 103°, though hands and feet were cold; some time later 103·4°. Pulse very weak, 110. Several typhoid spots on abdomen. Tongue dry in median stripe. Very marked malar flush on right cheek. Abdomen not at all distended. Spoon diet;—beef-tea, milk, egg. Ammon. carb. gr. iij., tinct. cinchon. ℥j., dec. cinchon. ℥j., quaten die.

April 6.—Temperature 104·6°; pulse 108. Much diarrhœa about noon, quieted by opiate enema. During the eleven succeeding days there was nothing remarkable observed; his temperature varied from 103·8° to 100°—the difference depending partly, it may be, on the observations being made at different times of the day. His pulse was mostly about 108. Some slight delirium occurred, and some diarrhœa. Brandy ℥ij., was given on the 8th, and increased to ℥iv. on the 14th, when also nitric acid was substituted for the bark and ammonia. The urine at this date contained no albumen, but plenty of chlorides, and gave a notable precipitate with tinct. gallarum.

On the 17th his temperature was 102·2°, his pulse 108; his tongue was cleaning; the bowels were open, but there was no

diarrhœa. The second pulmonary sound was noted to be very loud—much louder than the aortic. The resonance in the fronts and backs was pretty good, but the breathing weak, with much obstructive mucous râle in both backs. The nurse now informed me that he had not spoken for more than a week; he made signs, and sounds like "ah," but could not utter a word.

18th.—Was noisy last night, calling out repeatedly for his father and mother. Cannot or will not speak to-day; when I ask him to show me where he has pain he puts his hand to his forehead. He puts out his tongue when asked; it is cleaning and moist. Temperature 99·7°; pulse 96.

21st.—Continues speechless, but conscious. Temperature 98·6°; pulse 90.

On the night of the 19th called out "Father" and "Mother."

22nd.—Pulse 84; temperature 97·8°. Pupils of medium size; contract well in light. No paralysis of limbs.

28th.—Urine palish, alkaline, with whity sediment of acicular phosphates; pulse more distinct. Begins to utter more articulate sounds, but his vocalisation is still very imperfect. A red patchy and papular rash has appeared on the sacral region.

29th.—Can speak much more intelligibly to-day; has a lichenous rash and patches of erythema all about him.

May 1.—Can talk well now. The eruption has increased, and is very extensive; it is most marked on the dorsum of the feet, where it somewhat resembles that of measles. A bed-sore is forming on right trochanter.

5th.—Is going on well. The eruption has disappeared

12th.—Is quite convalescent, but cannot stand yet.

He left the Hospital early in June.

Clinical Remarks.—So much "talkee-talkee" has been made about aphasia, that one is almost disposed to think that for the present the less is said about it the better. Cases as facts are, however, always of some value, and so I have related the history with the bare remark that, like other instances of the same following fever, the disorder seems to be generally, if not always, a *functional paralysis*, and so deserves to be carefully distinguished from that depending on manifest lesion of the brain-tissue or embolism, which, as a rule, is permanent and incurable. This, after all, is the most practically important thing to be said about aphasia. Trousseau's chapter on the subject occupies fifty-four pages, of which nine lines are given to treatment. The functional character of the paralysis is further evidenced by the circumstance that the patient could utter some words, and, as it would seem, pertinently, when delirious—*i.e.*, when his brain-cells were unusually, though morbidly stimulated.

Académie des Sciences.—At the meeting on July 7 the three vacancies among the corresponding members of the section of Zoology were filled up by the election of Drs. Steenstrup, Dana, and W. B. Carpenter.

The German Association of Naturalists and Physicians.—The forty-sixth meeting of this scientific body will be held this year at Wiesbaden, from September 18 to 24. Communications are to be addressed to Drs. Fresenius and Haas Senior.

Naval Medical Supplemental Fund.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 8th inst. (Sir Edward Hilditch, Inspector-General, in the chair), the sum of £94 was distributed among the various claimants.

Tetanus in Children.—In the *Gazette des Hôpitaux*, Nos. 46 and 47, M. Bouchut relates an interesting case of idiopathic tetanus occurring in a child twelve years of age. So rare is the disease in France that M. Bouchut, during his large and long practice, has only met with four cases of its occurrence in children as distinguished from young infants. One remarkable fact is that the temperature constantly oscillated between 38·1° and 38·9°, while, as is well known from the observations of Wunderlich and others, tetanus is the disease in which abnormal temperature usually reaches its highest limits, rising to 42°, 43°, or even 44°. In this case it had not reached beyond 38·3° twelve hours prior to death, but mounted up to 40·3° after death. With respect to the use of chloral in tetanus, he observes that the evidence is too contradictory at present to allow of any conclusion being drawn, and that most of the cases in which it has succeeded have been examples of the subacute and chronic forms.

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Medical Times and Gazette.

SATURDAY, JULY 19, 1873.

MEDICAL ACT AMENDMENT (UNIVERSITY OF LONDON) BILL.

It may be remembered that in April last we announced the intention of the supporters of the Conjoint Examination Scheme to entrust Sir John Lubbock with the task of conducting a Bill through the House of Commons to enable the University of London, the Apothecaries' Society, and all other of the examining bodies which might require such aid, to join in the Conjoint Examination movement, all existing charters and Acts of Parliament notwithstanding. We said at that time that the Bill could not be passed without the aid of Government; and it was soon made evident that the Government aid was not to be obtained under a certain price, and that price was the submission of the plans and details of examination and of the scale of fees to be paid by candidates to the control of the Privy Council, or at least of some Governmental or Parliamentary power. A moment's consideration will show that, in asking this, the Government acted on intelligible principles. At present a man can be registered as a medical practitioner in England with a diploma which costs £6, and the diploma in question is known to be a guarantee of no small amount of medical knowledge. The proposed scheme would close all avenues to the profession in England except one, and the entrance-fee to that must necessarily be a considerable one. It was not to be expected that a Government having a due regard to the medical service of the country would sanction the formation of a monopoly of medical examination and licence without at least stipulating that it or Parliament should have some control over both the character of examinations and the fees demanded. From the Governmental standpoint such a demand seems perfectly reasonable. On the other hand, it cannot be denied that such Governmental supervision would be an interference with the internal constitution of the medical profession such as that profession has never heretofore permitted, and on that account the proposal of the Government has met with no favour from many who were, nevertheless, most anxious that an enabling Bill should be obtained. As neither party would

give way, this state of affairs has led to the abandonment of the original proposal, and instead of an enabling Bill, which would have opened the way for the union of all the examining bodies, we are presented with a compromise—a dwarfed and almost useless measure—which during the past week has been hastily smuggled through the House of Commons. The Bill only refers to the University of London, and leaves the other bodies in the same legal position as heretofore. It gives the University the necessary powers to join other bodies in forming a conjoint examination, but subjects the scheme to the sanction, not of the Privy Council, but of one of her Majesty's principal Secretaries of State; that Minister having already, according to the existing charter of the University, the right of approving or disapproving its regulations for examination. Our readers will find the Bill reprinted in another column; at the time of our writing it has passed through Committee in the Lower House.

We regret that we cannot see in this measure, which bears the names of Sir John Lubbock, the Chancellor of the Exchequer, Sir Philip Egerton, and Mr. R. Fowler, any substantial benefit. It cannot for one moment be supposed that the examinations of the University of London will be improved by it; neither does it seem to us a measure calculated to help forward the scheme of uniformity of examinations even in England. The establishment of a Conjoint Board, including the two Royal Colleges and all the universities with a high fee on the one side, and its competition with the Apothecaries' Society, demanding a much lower fee, and the Scottish bodies on the other, is not, we think, a desirable prospect. The distinctions between medical men possessing the different diplomas will be productive of infinite harm, and it may reasonably be expected that the English medical educational institutions will suffer, whilst the Scottish will gain. If a Conjoint Board in each division of the kingdom can be established, by all means let it be done. But these piecemeal attempts at legislation are only calculated to increase existing evils. They will divide the profession more distinctly than it has been hitherto divided, and draw more clearly the lines of demarcation between professional classes. Behind all there is the certainty of prolonged litigation, should the Royal College of Surgeons persist in its determination to refuse to examine Licentiates of the Society of Apothecaries independently for its Membership.

THE ASHANTEE WAR.

The intelligence which has reached us from the West Coast of Africa by the last mails is not of a reassuring character—indeed, if officially confirmed, it would seem more nearly to approach the disastrous. The total loss of the mail-packet *Nigritia* is announced, having on board war *matériel*, provisions, and medical stores, shipped under great pressure in this country for the force appointed to oppose the Ashantees. These stores, if saved (as the Government statement in the House of Commons on Monday would lead us to believe), will be long delayed in reaching their destination, and must moreover have suffered considerably by immersion and hasty removal. The mail-packet appears to have steamed full on to a dangerous reef of rocks one hour and a half after leaving Sierra Leone, and only a quarter of an hour after the pilot had left her. The existence of this reef would seem to be perfectly well known, and the occurrence (so far as the particulars have reached us) appears to be totally inexplicable. The same account further chronicles the loss of a second and preceding mail-packet, the *Yoruba*, which is stated to have had on board the stores of all descriptions intended for Cape Coast Castle which had been previously despatched from England. If this latter circumstance be true, the importance attaching to the news can scarcely be over-rated; but, as the stores in question were not sent off from Liverpool in the *Yoruba*—unless they were transhipped into that vessel from the mail-packet in which they left this country,—the report cannot refer to the supplies prepared and despatched in the mail-packet which left the Mersey on May 24 last.

No lives appear to have been lost by the stranding of the *Nigritia*; and as Deputy Surgeon-General Home, V.C., C.B., is reported to have been on board the vessel at the time, on his way to the seat of war, there is every reason to hope that the earliest information to facilitate the replacement of the medical stores thus lost will be forwarded to the authorities at home, who will doubtless take instant steps in the matter.

The guns and ammunition lost or rendered useless are not in our eyes of so much importance as the medical stores: these latter will, if the accounts now sent home are to be relied on, prove of the utmost importance. The town of Cape Coast is said to be inundated with Fantee fugitives, over 30,000 people having sought refuge there. Great distress is reported to exist amongst them from the scarcity of food and water. The rains are unusually late, being nearly three weeks behindhand. The only drinking-water safe to use on the Coast is the rain-water, which is stored in large tanks; these have now run so low that only a few inches remain for consumption, while the water procured from the wells has a reputation for producing dysentery, the most deadly of all diseases on the Gold Coast and to Europeans. The sanitary condition of the place is described as dreadful, from the sudden and unexpected influx of such a large number of strangers, and, in addition to much sickness, there were, when the report left, over 140 cases of small-pox in the Civil Hospital, with dysentery of a very malignant type showing itself.

This latter news alone would show the absolute necessity of replacing with the utmost rapidity any medical stores which may have been lost, as the reinforcements which must by this time have reached the Coast will be plunged into a hot-bed of disease; and it is of vital importance that nothing for the treatment of sickness should be wanting with a batch of unacclimatised troops suddenly subjected to malarious and other pernicious influences.

It is no secret that the Ashantees now hold the entire country right up to Elmina and Cape Coast, and have recently burnt a village about a mile from Cape Coast Castle itself. They have again defeated the Fantees in a battle which is said to have lasted two whole days, and up to the present time would seem to have carried on their incursion almost without a check. It is sincerely to be hoped that the Government has not under-estimated the extent of their resources, and that the reinforcements ordered to the scene of action are sufficient to establish our *prestige* on the Coast by administering a severe lesson to these daring savages. The Administrator of the Government on the Coast is spoken of as a person possessing great skill and experience, but his position in this emergency must be a difficult one, and the most sanguine believers in his resources are said to be looking for the assistance which is to be sent with the most anxious anticipation. We shall ourselves be glad to hear to what extent the medical requirements prepared for the war have suffered, although we have no doubt that the head of the Medical Department will lose no time in meeting the unexpected emergency which has so unfortunately occurred.

Since writing the above, intelligence has arrived of the bombardment of Elmina and an engagement between the British forces and the Ashantees on June 13, in which the latter were repulsed with a loss of 300 men killed and many hundreds wounded, and when the mail-packet left the Coast on the 23rd ult. the arrival of the *Himalaya* with the West India Regiment on board was eagerly anticipated. Deserters from the Ashantee camp aver that Cape Coast Castle itself was to be assaulted on the 28th ult., 30,000 blacks being encamped in close proximity. The *Himalaya* was not even

due until the 5th inst. It is in no alarmist spirit, therefore, that we ask, What news will the next mail bring us? The small handful of seamen and marines have potent weapons, and will fight as Englishmen always do fight, but the odds are fearful to contemplate, and, should any disaster occur, the indignation will be loud and general at the mismanagement which will have permitted a catastrophe to happen, involving at one and the same time a reckless expenditure of human life and a humiliating reverse to the British flag.

THE PHYSIOLOGY OF THE SECRETION OF BILE.

A VERY extensive series of investigations upon the physiology of the secretion of bile has recently been conducted by Dr. Röhrig, of Kreuznach, in the Pathological Institute at Vienna. Our knowledge of this subject has been hitherto very limited, and probably inaccurate, and had reference rather to the functions of bile, and especially to its digestive properties, than to its secretion and the influence of the blood and nervous system upon it. Whatever may be the use of the bile in the alimentary tract, practical therapeutists are generally agreed that the liver can be "unloaded," and the amount of bile secreted artificially increased, and that there are certain drugs which so far possess this power as to deserve the name of cholagogues. Röhrig's investigations were made solely upon the discharge of bile,—in respect of the amount of the secretion in narcotised animals; the effect upon it of alterations in the vascular supply within the liver; irritation of the different parts of the alimentary tract; the presence of fluid in the intestines; the administration of certain drugs, especially purgatives; as well as the influence of various conditions of the nervous system. The results obtained by Röhrig, after experiments upon hundreds of animals, are detailed in Stricker's *Jahrbuch*, 1873, part ii. We will here notice the most important of them.

The mode of experimenting was simple:—A dog or rabbit was narcotised with curare, and an incision made in the abdominal wall from the ensiform cartilage to near the umbilicus; the under surface of the liver was then brought to the opening by the hand, and a glass tube with a pointed vertical arm tied into the bile-duct, while the cystic duct was mechanically closed. The bile as secreted escaped drop by drop from the capillary end of the tube, and the rate of secretion was estimated by the number of drops per minute. It was first determined that after the operation, and under circumstances otherwise normal, the flow of bile steadily diminishes.

There could be little doubt *à priori* that the secretion would be affected in amount by alteration of the blood-supply to the liver, and such was found to be the case. Compression of the trunk of the vena portæ markedly diminished the secretion, but did not completely suppress it; obstruction of the hepatic artery alone diminished the rate of flow slightly; while complete arrest of the hepatic circulation by ligature of both these vessels was followed by entire cessation of the biliary secretion and speedy death. Diminution of the rate of flow was likewise the result of ligature of the ascending cava near the heart, and of ligature of the aorta above the diaphragm; while ligature of the latter vessel below the cœliac axis caused a slight increase in the amount of bile discharged. These last two results are very significant when studied together. Since ligature of the ascending cava in the thorax, and of the aorta below the origin of the hepatic artery have an exactly opposite effect upon the amount of bile secreted, and an exactly similar effect upon the hepatic capillaries,—namely, a rise of the pressure within them,—it follows that the amount of bile does not depend alone on the height of the blood-pressure in the liver. The influence of the amount of blood upon the secretion is further seen after section of the splanchnics and after section of the cervical portion of the spinal cord—both operations being followed by increased flow of bile. On the contrary, irritation of the cervical cord (reflexly through a sensory nerve) diminishes the flow. No noteworthy effect was observed by Röhrig of irritation or section of the vagi sympathici. Anæmia induced by phlebotomy and injection of warm water into the circulation reduced the secretion in amount until it finally ceased.

More interesting to the practical physician are the results observed by Röhrig of the introduction of different substances into the alimentary canal. Chyme injected into the gut markedly increased the amount of discharge—a result exactly in agreement with those of former experiments on the condition of the liver during digestion. Similar injections of tepid water and bile caused a temporary increase of the discharge. The most striking results were obtained after the administration of several of the so-called purgatives, and are worthy of our careful attention, even should the action of the various drugs be different in man. The substances employed were croton oil, colocynth, jalap, aloes, rhubarb, senna, sulphate of magnesia, calomel, and castor oil; and the cholagogic power of these was found to diminish very much in the order in which they have been enumerated. Croton oil decidedly induced the most abundant flow of bile; castor oil had the least action of all. In all the cases the increased biliary flow was preceded by hyperæmia of the intestine, and followed—never preceded—by diarrhœa. Röhrig concludes that "these substances undoubtedly excite the production of bile." Less is said of the effects of mercury upon the secretion than might have been desired. It was found that large doses of calomel (twenty grains for a dog) are seldom able to excite the flow of bile if it is quite stopped previously; but if the secretion is simply diminished it may be increased by the administration of the drug. The greatest action was observed about three hours after administration; it then speedily ceases. There is almost no doubt that the effect of purgatives upon the liver is not to be referred to their immediate action upon the intestine, but to their absorption into the circulation. This is almost proved by two experiments of Röhrig. On the one hand, he found that irritation of any portion of the alimentary canal from the mouth to the anus (including the duodenum), or of the peritoneum, either by mechanical, electrical, or chemical stimuli, had apparently no certain effect upon the secretion of bile. Even when the electrodes were sunk deeply into the substance of the liver no effect of galvanism was observed. On the other hand, the injection of infusions of senna and rhubarb into the veins immediately and greatly increased the amount of bile secreted.

A more difficult investigation was that of the effect upon the secretion of bile of interference with respiration, and the results obtained were somewhat variable. In many instances there was at first a decided diminution of the quantity of bile, and this was found to correspond with a fall of the general blood-pressure, and was believed to be probably due to it. These phenomena were soon replaced by an increase of the quantity of bile secreted and diminution of the blood-pressure, to which it is probably to be referred. And, finally, there supervened a decline of the discharge and a venous condition of the blood in the body, which also probably stand to each other in the relation of effect and cause.

Röhrig investigated the action of four other drugs upon the liver as far as it is a bile-secreting gland—namely, strychnia, acetate of lead, carbonate of soda, and opium. Strychnia was found to diminish the secretion—a result which was to be expected in view of the last-mentioned experiment, for strychnia is known to raise the blood-pressure. Acetate of lead was tried on account of its recognised action on the blood-vessels; when injected either into the intestine or into the

veins it diminished the secretion. A similar result was observed after the administration of a solution of carbonate of soda in the same way. Opium increases the secretion of bile; it would appear, therefore, that opium constipates not by arresting the alimentary secretions, but by its action upon the muscular coat of the intestines. Finally, the experimenter confirms Schmulewitsch's observation—that defibrinated blood injected into the portal vein immediately after the complete separation of the liver from the body, causes the secretion of some drops of bile, while a similar injection of salt solution has no effect. The conclusions at which Röhrig arrived are thus briefly stated by himself:—"From all the experiments which I have described it appears to result that the quantity of fluid which escapes from the biliary vessels of curarised dogs and rabbits is dependent on (1) the vascularity of the abdominal viscera, and (2) the quality of the blood."

THE WEEK.

TOPICS OF THE DAY.

After the opposition which his Public Health Bill has met in Committee, it is not a matter of surprise that it should have been withdrawn by Sir Charles Adderley on Friday last week. The real cause of the opposition has no doubt been a fear that it would lead to an increase of local taxation, although, in the opinion of the promoters of the measure, it would have had the effect of diminishing the rates. Mr. Peel attributed the opposition to the Bill to the new powers it would have conferred on the medical officers of health. We have often remarked that sanitary reform requires the stimulus of panic. Of such objections we should have heard less had the cholera broken out in a few of our filthy villages and manufacturing towns. However, little or nothing more in the direction of legislation for health can now be accomplished until the opening of next session, when Sir Charles Adderley will reintroduce the Bill, excepting Clause 8; and he indulges the hope that the consolidation of the existing sanitary laws will be effected in the same year.

The despatches from Lieutenant-Colonel Festing and Captain Fremantle, giving an account of the bombardment of Elmina and the action with the Ashantees, which were published in Tuesday's *Gazette*, record the distinguished conduct of the medical officers serving with the marines and sailors. Lieutenant-Colonel Festing writes—"Surgeon-Major Rowe, who acted in more capacities than those of his own profession, rendered valuable assistance on all occasions. Surgeon M'Dermott, R.N., was most indefatigable in giving help to those in need." Captain Fremantle says—"I had appointed Dr. Francis H. Moore, Staff Surgeon Second Class of this ship, to be in medical charge of the expedition, and his suggestions to me proved most valuable, while, although technically a non-combatant, he did not shrink from being well to the front and under fire, ready to attend to those who were wounded." Certainly if ever promotion was fairly earned it is earned by such services on the West Coast of Africa. With regard to the health of the marines and sailors, Captain Fremantle writes—"Every precaution that could suggest itself to Dr. Moore or myself was taken to preserve the health of the men engaged. They had quinine served out going and returning; and the sick-list of the squadron has not been increased in consequence of the expedition."

Our correspondent at Wimbledon writes—"This has been hitherto the healthiest meeting of all. The hospital has been empty for some days."

THE SANITARY STATE OF WAKEFIELD.

"The hour has now arrived (says the *Wakefield and West Riding Herald* of the 12th inst.) when we must open our eyes to the 'incontrovertible logic of facts,' and emphatically demand that the attention of the officers of our Local Board of Health be directed to a matter of the most vital importance to us in a sanitary point of view. Complaints have reached us from various quarters of the borough relative to nuisances existing by reason of large fever-engendering accumulations; and to our own knowledge this is but one of many similar instances which might be given. No less than three persons have been prostrated by fever owing to the unsanitary condition of the adjacent middens, ashpits, and pigstyes. Two months since the inspector complained, and threatened to take action; but day after day and week after week has since brought larger accumulations, with viler odours than ever; and the question is very pertinently asked, 'Where has he been and what doing during the interval?' There are scores of such plague-spots in the borough; therefore we urge the powers that be to immediate precautionary measures."

TESTIMONIAL TO SIR WILLIAM FERGUSSON, BART.

We are sure that the following circular now being sent to the numerous friends and admirers of this distinguished and most popular surgeon will receive the response it unquestionably deserves. The portrait will be presented to the Royal College of Surgeons:—

"It has been proposed by numerous friends and admirers of Sir William Fergusson to open a subscription-list, with the view of having his portrait painted by an artist of eminence. The portrait will, with Sir William's sanction, be offered to the Council of the Royal College of Surgeons, in the hope that it may be retained in that institution as a permanent record of one whose valuable contributions to surgical science and whose social character render him peculiarly worthy of so distinguished an honour. Subscriptions will be received by Surgeon-Major Logie, of the Royal Horse Guards, Regent's-park Barracks, and Charles Moss, Esq., of 6, New Cavendish-street."

DIFFERENCES IN MEDICAL OPINION AND THEIR RESULTS.

A serious mortality having occurred from an outbreak of measles, which appeared in May last among the pauper children at the Workhouse at Walton-on-the-Hill, Derbyshire, the guardians determined that an investigation should be held for the purpose, if possible, of ascertaining the cause. The following evidence was given before the visiting committee of inquiry into the subject, and offers an instance of the awkward position in which medical practitioners are sometimes placed. We are unacquainted with the reasons which led Dr. Macrae to adopt his line of conduct; but it seems to us a matter of regret that any apparent difference of opinion between himself and his colleague was not avoided.

"Dr. Hughes was the only medical witness examined, it being stated that Dr. Macrae, although asked to attend, had refused to do so unless he was paid two guineas, which was declined. Dr. Hughes explained the mode of treatment he had adopted, which was to direct the children to be kept warm, with, however, thorough ventilation in the ward; and he insisted upon the use of cold water as a beverage for the children. Being asked by the Committee whether this method was approved and pursued by his deputy, he said he had every reason to believe that it was, because he did not find that Dr. Macrae had made any alteration on the 'page' of any of the patients. It was ascertained, however, from the nurse who had charge of the ward, and from several of the mothers who were in attendance on their own children, that, although Dr. Macrae did not absolutely change the mode of treatment adopted by Dr. Hughes, he had been heard to state that he would not prescribe cold drinks for the children. The mothers of the children in the ward had a great objection to the use of cold water, and they admitted that they did not follow that part of the instructions given by Dr. Hughes. As to the ventilation of the ward, the statements of the nurses showed that the windows were sometimes ordered to be closed by Dr. Macrae, and that Dr. Hughes generally directed them to be opened; so that the treatment of one came to be spoken of as

'cold' and the other as 'warm.' The Committee recorded their opinion as follows:—'That, after a most careful inquiry into the prevalence of measles, and the deaths arising therefrom, at the Walton Workhouse, Dr. Hughes, Mr. Goode, and several of the nurses having been examined in reference thereto, the Committee have come to the conclusion that the treatment as prescribed by Dr. Hughes was, in his opinion, the best under the circumstances; that Dr. Hughes be requested to nominate another duly qualified medical practitioner in the stead of Dr. Macrae, he having objected to attend this meeting unless a fee of two guineas was paid to him; and that nurse Pickering has been very remiss in not seeing the orders of the medical officer properly carried out. The Committee also find that the treatment for measles, as pursued by Dr. Hughes and Dr. Macrae, is entirely opposite in its nature, and that it would have been well had they consulted each other previous to adopting the methods they did.'"

SELF-SUPPORTING DISPENSARIES.

A MEETING of the medical practitioners of Salford was held on the 7th inst. in the board-room of the Salford and Pendleton Hospital, to discuss the provident system of medical relief. There were present Mr. John Boutflower, F.R.C.S., Messrs. Stocks, Ingle, Haywood, Andrew Boutflower, Somers, White, Orchard, Bradbury, Pinder, Davies, Hamilton, and Nathaniel Shelmerdine. Dr. Crompton, Honorary Physician to the Hospital, presided. A paper was read advocating the establishment of provident dispensaries as the simplest, and on the whole most successful, system of remedying the present wholesale abuse of hospital charity, preserving the independence of the working classes, and affording them, their wives and children, prompt and sufficient medical assistance in time of sickness. An animated discussion followed the reading of the paper, in which the widely divergent views entertained by the profession on this subject were exhibited. Finally, the following resolution was put to the meeting:—

"That, in the opinion of this meeting, it is desirable to call into existence some such institution as is supposed by a provident dispensary, whereby hospital abuse may be remedied and the independence of the working classes supported; and that if in any way such an institution could be combined with the existing out and home patient department of the hospital it would be likely to be more successful."

This was negatived by a majority of six to four, the chairman and a few others abstaining from voting. A cordial vote of thanks was passed for the valuable paper just read, and the meeting separated, after a discussion of over two hours.

INSANITY IN ENGLAND AND WALES.

THE Twenty-seventh Annual Report of the Commissioners in Lunacy, just issued, shows that the total number of lunatics, idiots, and persons of unsound mind in England and Wales registered on January 1 last was 60,296, being an increase of 1856 upon that of January 1, 1872. These numbers do not include 188 lunatics so found by inquisition residing in charge of their committees elsewhere than in asylums, hospitals, and licensed houses. The total of 60,296 registered on January 1 last consists of 7023 private patients and 53,273 paupers—the increase during the year having been among the former 381, and among the latter 1275, total 1656. The increase of the year 1871 upon that of 1870 was 1885, represented by 188 additional private patients and 1697 paupers.

A NEGLIGENT SANITARY OFFICER.

THE Hackney District Board of Works last week resolved, on the report of their Sanitary Committee, to dismiss one of their sanitary inspectors for neglect of duty in failing to see certain orders issued by the Board carried out on several sanitary improvements. The inspector had reported nuisances abated without visiting the premises; and the Medical Officer of Health subsequently discovered that the necessary works for that purpose had not in some instances even been commenced. The result of such a dereliction of duty on the part of a sanitary officer might be of a very serious nature, especially if an outbreak of epidemic disease occurred in the district. We commend the Board for their promptitude in adopting the recommendation of the Sanitary Committee to discharge the officer capable of such neglect of duty.

DUBLIN SANITARY ASSOCIATION.—THE THREATENED APPROACH OF CHOLERA.

WE understand that on Thursday, the 10th inst., an influential deputation, composed of members of the Association, and including some of the leading medical men of Dublin, waited upon the Local Government Board for Ireland, to press their views with regard to the preventive measures likely to arrest the progress of an epidemic of cholera, and to bring under the notice of the Board the present unsatisfactory state of Dublin as regards sanitary arrangements. The deputation was most courteously received, and a distinct pledge was given that their representations would meet with the earliest and most attentive consideration. That the Local Government Board is fully aware of the exigency of the crisis, and is anxious to carry out the powers entrusted to them, appears from an order published in last week's *Dublin Gazette* relative to the preventive measures to be put in force by the boards of guardians, and in seaports threatened with the disease from the navigation.

MR. ERASMUS WILSON, F.R.S.

THE friends of Mr. Erasmus Wilson propose to place his portrait in the library of Epsom College on the occasion of opening the new master's house in September next. This new house is the gift of Mr. Wilson. Dr. Jonson, of South Eaton-place, S.W., and Dr. Carr, of Blackheath, S.E., are the joint treasurers to the fund now being raised, subscriptions to which, not exceeding £1 1s., may be sent to them.

HEALTH OF THE PUNJAUB.

THE Sanitary Commissioner's return of deaths in the Punjaub for the week ending May 17 last states that the small-pox pestilence at Delhi continues to extend its ravages. The total number of deaths has risen from 152 to 191, and the deaths registered under the head of small-pox from thirty-six to fifty-four. The small-pox mortality is almost entirely confined to children; only one adult died from the disease. The adult population, being protected by a previous attack, which has for the most part left them scarred, disfigured, and partially or in many cases totally blind, are very rarely attacked a second time. The Delhi Municipality keep up a large staff of vaccinators, but the native members afford them no assistance in overcoming the prejudices of the native population against vaccination, and the result is that the great mass of the children population are unprotected. Rewári, Bhewáni, Firozpúr, Jalándhar suburbs, Amritsar, Kusúr, Síálkot, Pasrúr, and Jelálpúr are also suffering severely from the pestilence. The total small-pox deaths registered in the districts from which returns have been received were 1520, as compared with 1395 in the previous week. There were only three deaths registered from cholera—two in Lahore and one in Firozpúr.

HEALTH OF SCOTLAND.

DURING the month of June, 1873, there were registered in the eight principal towns of Scotland the deaths of 2448 persons, of whom 1201 were males and 1427 females. Allowing for increase of population, this number is 36 under the average June mortality of the last ten years. A comparison of the deaths registered in the eight towns shows that during June the annual rate of mortality was 22 per 1000

persons in Aberdeen and in Leith, 23 in Edinburgh and in Dundee, 24 in Perth, 27 in Greenock, 29 in Glasgow, and 30 in Paisley. Of the 2448 deaths, 1064, or 43 per cent., were of children under five years of age. In Perth 26 per cent. of the persons who died were under 5 years of age; in Paisley, 28; in Aberdeen, 32; in Leith, 34; in Edinburgh and in Dundee, 38; in Greenock, 46; and in Glasgow, 51 per cent. The zymotic (epidemic and contagious) class of diseases proved fatal to 483 persons, thus constituting 19·7 per cent. of the mortality of the eight towns. This rate was exceeded in Glasgow from the prevalence of measles; while in Perth the only deaths tabulated in this class of diseases were 2 from diarrhœa.

HEALTH IN HALIFAX.

The death-rate in Halifax is at the present time much lower than it has been for several years, and the Borough Hospital at Stony Royal is quite empty.

FROM ABROAD.—OSSIFICATION OF MUSCLES—SUPPURATION OF MUSCLES—MEDICINE AND PHARMACY IN THE FRENCH ARMY.

At a recent meeting of the Vienna Medical Society, Professor Podratsky related a remarkable case of "Myositis Ossificans" which had come under his care. It occurred in the person of a soldier, in whom, in consequence of violent gymnastic exercises, an ossification of the lowest portion of the brachialis muscle was produced. The ossification took place with great rapidity, having been preceded by myositis. After about eight days' gymnastic exercises (consisting of those termed *Armwelle*) there was observed at the insertion of the brachialis internus of the right arm a very hard and somewhat painful tumour. The case was closely observed by the reporter from its commencement. At first the swelling was very elastic, and, although decidedly belonging to the brachialis, it was adherent to the humerus. The tendon of the biceps ran clearly over the muscle, and the elbow was contracted to a right angle, extension being impossible. A large needle could at first be by some force thrust into the tumour, giving the feeling of passing through cartilage, but without causing any pain to the patient. The swelling remained in this condition for about three weeks, at the end of which time forcible extension was made under chloroform. The resistance was considerable, but gave way with a plainly audible crushing sound. The tendon had apparently separated from the muscle, and the arm was kept for some days upon a splint in the extended position. The movements of the elbow-joint were thenceforward more free, but the brachialis muscle became harder, and at last bony in the proper sense of the word. At the time of the report even the strongest needle, under the employment of very great force, would not enter the tumour, which was about the size of an egg, and presented all the characters of complete ossification.

Cases similar to this have been observed in soldiers as a consequence of their exercises; and in 1864 Professor Pitha brought before the Society an exactly similar case affecting the same muscle, and also brought on by gymnastic exercises. Professor Volkmann also, in his article on "The Diseases of the Organs of Locomotion," in Pitha and Billroth's "Handbuch der Chirurgie," relates an analogous case, which is illustrated by a woodcut.

While upon the subject of affections of the muscles we may refer to an interesting paper by M. Poncet, relating (*Gazette des Hôpitaux*, Nos. 53 and 54) two cases of suppuration of muscle occurring in the practice of M. Ollier at the Hôtel-Dieu de Lyon. He observes that the cases of rupture of muscles, whether of the abdomen or of the thigh, which are brought to the hospital generally soon do very well when they are complete or considerable, as the patient is at once compelled to remain in a state of complete repose. When, however, only more or less of the fibres are ruptured, so that movement, although painful, is still possible, inflammatory action may be readily set up, and a lesion, insignificant in itself at first, may be followed by even fatal consequences. An example of this occurred in M. Ollier's service in the person of a patient who entered the hospital long after the occurrence of a partial rupture of the rectus femoris. An acute abscess extended from the iliac spine to the middle of the thigh, the patient only having ceased working a few days before. The abscess was opened, and, hospital gangrene prevailing in the hospital at the time, the man was carried off in a few days.

Although rupture of muscular fibre is the common cause of suppurating myositis, M. Ollier admits that this may occasionally arise from cold, and especially in rheumatism. Ordinarily any inflammatory action that may exist in the cellular tissue surrounding the muscular fibres terminates in rapid resolution. Occasionally, however, suppuration is produced; and a distinction is to be observed as to the manner in which this occurs. Thus, the superficial muscular fibres may alone be affected (peri-myositis or peri-muscular phlegmon), and the pus forming, not at the expense of the envelope of each muscular fibre, but at that of their common sheath, the muscle does not undergo any deep-seated alterations. But the muscle may in other cases become infiltrated with pus throughout its entire substance. At the bedside it is not always easy to separate these two forms of myositis. It is, in fact, rare for the inflammatory action to be limited to the muscle or to the cellular sheath, although the one or the other of these is more especially affected.

These remarks are illustrated by two cases. The first was an example of suppurative inflammation of the sub-aponeurotic cellular tissue of the sterno-cleido-mastoideus, attended by some symptoms resembling those of a true myositis. In less than two months after discharge of pus by means of the aspirator, however, the muscle had reacquired all its normal suppleness, and the movements of the head and neck were as well performed as before. The second case was an example of suppuration supervening upon rupture of the biceps. The abscess was opened, and cicatrisation ensued. Six years after the accident the biceps was found still diminished in size, and only capable of imperfect contraction. In the first case the abscess had been formed at the expense of the cellular sheath and of the cellulo-adipose tissue which separates the two portions of the sterno-mastoideus; while in the second case the loss of muscular substance produced at the seat of rupture was replaced by fibroid tissue, and the contractile power of the organ proportionately enfeebled.

Last week Professor Broca read a report to the Académie de Médecine which is of considerable interest. It seems that in the French army, besides the doctors, there are the pharmaciens, who occupy posts of much the same dignity and emolument; and as both doctors and pharmaciens are immediately under the control of the sub-intendants of the army, and independent of each other, they sometimes come into collision. However, it has been repeatedly represented to successive governments that great advantage would be derived from the subordination of the pharmacien to the medical element, as is the case in other Continental armies. The present War Minister, in view of the reorganisation of the army, which is imminent, resolved to elicit the opinions of the Academy of Medicine upon this knotty point; and accordingly the Academy appointed a committee to consider and report upon it. This consisted of three surgeons, MM. Larrey, Legouest, and Broca, two of whom have been Directors-General of the Army in time of war; three physicians, MM. Depaul, Devergie, and Gubler; and three pharma-

ciens, M.M. Poggiale, Gobley, and Bussy. During the first four meetings of the Committee the present condition of the respective services in the Medical Department were minutely inquired into, both oral and documentary evidence having been received in abundance; but on the fifth the three pharmacien members withdrew, declaring that from the questions put and explanations elicited by the other members they foresaw that an impartial decision would not be come to. This policy of withdrawing from contests when they fear to be left in the minority, which seems such a favourite with Continental politicians, and is so inexplicable to ourselves, was persisted in, and the remaining six members held the other two meetings without their colleagues, and the resolutions they arrived at were unanimous. Professor Broca, in his report, enters into the history of the present organisation of the medical and pharmaceutical services, which, it seems, dates from a dictatorial decree in 1852, replacing the system by which these two services were united in 1836. One of the questions now submitted to the Committee was whether such union or "fusion" should be revived; but to this they opposed a decided negative, under the belief that the practice of military pharmacy would then fall into the hands of doctors very imperfectly informed on the subject, and who had probably failed in other branches of the profession; while pharmacy, ceasing to be pursued as an independent subject of attention, the series of distinguished pharmaciens who have issued from the central pharmacies and the laboratories of the great military hospitals would be brought to a close. Here M. Dumas, the celebrated chemist, demanded to be heard before the Committee, and, with that forcible eloquence of which he is an acknowledged master, dwelt upon the necessity of maintaining an institution in the army that had furnished so many remarkable men to French chemistry, and the utility of which has become even greater than heretofore, in consequence of civil chemistry being led away more and more by specialities, to the abandonment of purely scientific research. The military pharmacien has not only to concern himself with mere pharmacy and the dispensing of medicines, but is constantly engaged with chemical examinations of substances submitted to him, requiring extended and deep chemical knowledge. Anyone, indeed, who is acquainted with the official publication, "Recueil de Chirurgie, Médecine et Pharmacie Militaires," must be well aware of the value of the contributions by the pharmaciens on all subjects relating to the health of the army.

Having disposed of this point, the Committee had to consider whether they would recommend a subordination of the pharmaciens to the doctors, or leave matters as they are. Here the Committee, and especially the military members, perceived that the question really merges into that vital one of emancipating the French medical service from the control of the Intendance, which has hitherto been, and is still, its curse. The interests of the public and of the soldiers, they observe, should dominate over questions of mere professional rivalry; and as long as the Intendance has the power of playing one of these services against the other, no united action will be possible. The independence of the two services is now complete, and each has the same grades of rank—the only difference being that the number of doctors is about eight times larger than that of the pharmaciens. The pharmacien executes the medical prescriptions of the doctor, but receives no orders from him, nor is the signature of the doctor, however high in rank, of any worth, unless countersigned by the Intendance. Bad enough this in time of peace; and during war, even, when the Intendants cannot be found doctors have no power of action without them! The Committee insists that this state of things calls for instant reform, and that the medical service should be at once rendered autonomic under the responsibility of a director chosen from its own body, and accountable only to the commanding officer, and it regards the subordination of the pharmaceutical and administrative elements as a necessary consequence. It can see no degradation in such subordination, but only a necessary step for rendering the medical service at all times operative. France is well-nigh the only country in which the administrative element (often aided by the pharmaceutical) is allowed to ride rough-shod over the medical. The Committee, therefore, in reply to the Minister of War, proposes—1. That the system of fusion of military medicine and of pharmacy should be rejected as prejudicial to the interests of the army. 2. The present organisation of the medical service does not respond to the wants and interests of the army. It is necessary that this service should be placed under the direction of a competent head taken from its own ranks. 3. The autonomy of the medical service implies, as a logical consequence, the subordination of pharmacy to medicine in the army.

PARLIAMENTARY.—MEDICAL OFFICERS IN THE ARMY.

In the House of Lords,

Earl De la Warr rose to move that a humble address be presented to her Majesty directing her attention to the present position of the medical officers of the army who served on the West Coast of Africa between 1859 and 1867 as regards rank and pay. According to a Royal Warrant, dated October, 1858, the medical regulations of the army with respect to service on the East Coast of Africa were shown to contain the following proviso:—"Each medical officer volunteering for the West Coast of Africa will be required to serve there continuously for a period of twelve months; every such year of service on the Coast to count as two years for promotion and retirement." The noble earl said that on the faith of this Warrant many medical officers volunteered for service in this unhealthy climate, believing, as one of them wrote, "that the double service would count towards the rank of Surgeon-Major." After some time, however, another Warrant was issued, stating, as before, that each year of such service should be allowed to reckon double for promotion and retirement, adding, however, these words, "but shall not so reckon towards increased pay"; and another later Warrant added, "or qualify for the rank of Surgeon-Major." Neither of these qualifications appeared in the first Warrant, under which seventy-six medical officers had volunteered their services upon the West Coast. Of those gentlemen a large number had died, others were invalided, others had retired from the service, and there now remained about thirty, whose case was, as he submitted, a hard one. It might be objected on the part of men of older standing that these thirty medical officers should not be promoted over their heads. It was still harder, however, that the thirty should have served for seven years under the impression that their service would count as double, and should then be told that it would count neither for pay nor promotion. The noble Earl was quite content to leave this subject in the hands of her Majesty's Government with the assurance that it would receive a fair consideration. The Marquis of Lansdowne replied that promotion was transfer from one grade to another. A Surgeon becoming a Surgeon-Major was not so transferred. He contended that the officers referred to had no real grievance, but that they had received all to which they were entitled. The motion was withdrawn.

MEDICAL ACT AMENDMENT (UNIVERSITY OF LONDON) BILL.

A Bill to Amend the Medical Act so far as relates to the University of London.

Whereas by the Medical Act (hereinafter called the principal Act), and Acts amending the same, every person becoming possessed of any one or more of the qualifications mentioned in the said Acts is to be entitled to be registered under the principal Act, and one of such qualifications is that of Doctor, or Bachelor, or Licentiate of Medicine, or Master of Surgery in any university of the United Kingdom.

And whereas by the principal Act it is further provided, that any two or more of the colleges and bodies in the Medical Acts in that behalf mentioned may, with the sanction and

under the directions of the General Council, unite and co-operate in conducting the examinations required for qualifications to be registered under the principal Act.

And whereas the University of London is one of such bodies, but doubts are entertained whether it is able to take advantage of the hereinbefore recited provisions of the principal Act unless it receives further powers from Parliament; and accordingly it is expedient to amend the Medical Acts so far as relates to the said University.

Be it enacted by the Queen's most excellent majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same, as follows:

1. If, in pursuance of the principal Act, the University of London unites or co-operates with any of the colleges or bodies in that behalf mentioned in the Medical Acts in conducting the examinations required for qualifications to be registered under the principal Act, then, notwithstanding anything in any statute or charter contained, it shall be lawful for the chancellor, vice-chancellor, and fellows for the time being of the said University to prescribe, by a by-law under the common seal of the said University, that no person shall become a Doctor, or Bachelor, or Licentiate of Medicine, or Master in Surgery of the said University unless (in addition to passing such examination, if any, and complying with such other conditions, if any, as may be prescribed by any by-laws in force for the time being made in pursuance of any charter of the said University) he shall have passed such examination for qualification to be registered under the Medical Act, and complied with such conditions relating thereto as may be agreed upon between the said University and the college or body, colleges or bodies with whom the said University may be united or co-operating as aforesaid.

Provided, that no by-law made in pursuance of this Act shall be of any force unless it has the assent of one of her Majesty's Principal Secretaries of State, and that it shall be lawful for one of such Secretaries of State at any subsequent time, if he shall think fit, to revoke such assent.

2. This Act may be cited for all purposes as the Medical Act (University of London), 1873, and shall be construed as one with the Medical Acts.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following is the report from the Court of Examiners of the number of candidates who have presented themselves for the primary and pass examinations for the diploma of Member of the College during the collegiate year 1872-73, showing the numbers who have passed and who have been rejected from each medical school during that period, and will be read with considerable interest by both metropolitan and provincial teachers:—

Primary Examinations.

Medical Schools.	Totals.	Number passed.	Number rejected.	Percentage of rejections.
Guy's	103·50	80	23·50	22·7
University College	98·50	68	30·50	30·9
St. Bartholomew's	89·50	64	25·50	28·4
St. Thomas's	58·50	44·50	14	23·9
King's College	35	26·50	8·50	24·2
London	30·50	21·50	9	29·5
St. Mary's	25	20·50	4·50	18
St. George's	24·50	18·50	6	24·4
Charing-cross	19·50	10	9·50	48·7
Middlesex	14·33	10·83	3·50	24·4
Westminster	10·50	8	2·50	23·8
Manchester	32	19	13	40·6
Liverpool	20·83	14·33	6·50	31·2
Leeds	25	15	10	40
Birmingham	20·50	14·50	6	29·2
Bristol	20	12·50	7·50	37·5
Newcastle	8·50	7·50	1	11·7
Cambridge	3	3	0	0
Sheffield	1·50	1·50	0	0
Hull	·50	·50	0	0
Dublin	10·50	5	5·50	52·3
Belfast	2	2	0	0
Cork	1	0	1	100
Galway	·33	·33	0	0
Edinburgh	22	18·50	3·50	15·9
Glasgow	12·50	8	4·50	36
Aberdeen	4·50	2·50	2	44·4
Calcutta	1·50	0	1·50	100
Bombay	1	1	0	0
Montreal	3	3	0	0
Toronto	1	1	0	0
New York	1	1	0	0
Paris	·50	·50	0	0
Totals	702	503	199	28·3

Pass Examinations.

Guy's	76·50	60·50	16	20·9
St. Bartholomew's	62·83	53·33	9·50	15·1
University College	53·50	46·50	7	13·0
King's College	31·83	25·83	6	18·8
St. Thomas's	31·33	27·33	4	12·7
St. George's	23·50	17·50	6	25·5
London	22·33	18·33	4	17·9
Charing-cross	18	12	6	33·3
St. Mary's	14	11·50	2·50	17·8
Middlesex	13	11·50	1·50	11·5
Westminster	4	4	0	0
Birmingham	19	18	1	5·2
Manchester	17·50	13	4·50	25·7
Leeds	14·50	13·50	1	6·8
Liverpool	8·50	5·50	3	35·2
Bristol	5·50	4·50	1	18·1
Newcastle	5	3	2	40
Sheffield	4	3	1	25
Cambridge	2	1·50	·50	25
Hull	2	·50	1·50	75
Dublin	7·50	4·50	3	40
Belfast	3	3	0	0
Edinburgh	10·66	8·66	2	18·7
Glasgow	4	3	1	25
Aberdeen	1	1	0	0
Bombay	·50	·50	0	0
Montreal	2·50	2	·50	20
Toronto	·50	·50	0	0
New York	1·50	1·50	0	0
Philadelphia	·50	·50	0	0
Paris	·50	0	·50	100
Totals	461	376	85	18·4

At the written portion of the primary or Anatomical and Physiological examination on Saturday last, 113 candidates offered themselves, to whom the following questions were submitted. They were required, as usual, to answer four out of the six:—1. Describe the course and relations of the right subclavian artery; and state the difference which exists between it and the left. 2. Describe the relations of the stomach when empty and when distended, its bloodvessels, its nerves, and the structure of its mucous membrane. 3. Describe the dissection necessary to display a side view of the muscles of the tongue, and the structures cut through in carrying it out. 4. Describe the ciliary body of the human eye, its situation, connexions, and structure, and the dissection necessary to expose it. 5. Describe the ligaments of the knee-joint; their several attachments, together with the inter-articular cartilages, and their uses. 6. Describe the structure of a mature Graafian vesicle, the mode in which the ovum enters the Fallopian tube, and how it finally becomes attached to the uterus.

At the primary examination, which was brought to a close on the 17th inst., out of the 113 candidates examined 56 were referred to their anatomical and physiological studies for three months. There were 22 rejected on the first day out of 38

examined, 23 out of 39 examined on the second day, and 11 out of 36 examined on the third and last day.

For the pass or Surgical and Pathological examination, which commenced this day (Friday), there were 176 candidates.

NOTES ON MADRAS AS A WINTER RESIDENCE.

No. III.

Opium-eating: Districts of England in which it Prevails; Moral Character of the English Opium-eater; Enormous Consumption of Opium in the East; the Revenue therefrom; Opium-smoking in Madras; How it is Done: A Chinaman's Defence of Opium *versus* Grog.

Amongst the sights which I have been able to see here, is opium-smoking in the genuine Oriental fashion. By way of introduction, may I say a few words on opium-eating in England?

To begin with, one must make a distinction between the use of opium as a medicine, and as a luxury or food. The line is not a very level one always, and there are many cases difficult to allot to one side or the other, but we may say broadly that whoever uses opium for the relief of pain, or to procure sleep, uses it as a medicine, even though it be used habitually. On the other hand, whoever uses it merely for exhilaration of mind, or for the enhancement of bodily comfort, uses it as a luxury. The lines between food, stimulants, or luxuries, and medicines, are often purely arbitrary, but still there are cases which can be clearly referred to one of these classes, though others are of a mixed kind. The great English opium-eater—De Quincey—began the use of it as a remedy for neuralgia; just so, women who are incautiously recommended to take wine or brandy as a medicine for debility, may continue it as a luxury; and the use and misuse have generally some meeting-point.

Now, opium-eating is practised—as a luxury—in England; and I believe that this, if carefully studied, will be found to give the key to the whole question in the East. In England opium-eating is a trifle; in the East it is a matter of imperial policy,—but the conditions which give rise to it in one place and the other are alike.

Opium-eating is not to be found in London. Of course amongst the three millions and three-quarters there are to be found some persons here and there who take it as a luxury, though by far the greater number of those who take it in anything like quantity do so for some old neuralgia or rheumatic malady, and began under medical advice. Neither is it to be found over the agricultural or manufacturing districts, save in the most scattered and casual way. The genuine opium-eating districts are the ague and fen districts of Norfolk and Lincolnshire. There it is not casual, accidental, or rare, but popular, habitual, and common. Anyone who visits such a town as Louth or Wisbeach, and strolls about the streets on a Saturday evening, watching the country people as they do their marketing, may soon satisfy himself that the crowds in the chemists' shops come for opium; and they have a peculiar way of getting it. They go in, lay down their money, and receive the opium pills in exchange without saying a word. For instance, I was at Wisbeach one evening in August, 1871; went into a chemist's shop; laid a penny on the counter. The chemist said—"The best?" I nodded. He gave me a pill-box and took up the penny; and so the purchase was completed without my having uttered a syllable. You offer money, and get opium as a matter of course. This may show how familiar the custom is. By-the-bye, there is an excellent museum at Wisbeach, well worthy of a visit.

In these districts it is taken by people of all classes, but especially by the poor and miserable, and by those who in other districts would seek comfort from gin or beer. But there is this remarkable characteristic about the opium-eaters. They are probably dirty, slovenly, and lazy, lying and sanctimonious, begging of the clergy and district visitors, but they are not uproarious, and don't swear. There are none of the deeds of brutal violence that are inspired by beer, and none of the foul language. Where others say "damn," they say "bless;" and, in fact, you may almost know an opium-eater by his use of the word "blessed." "Law, mum," said an old woman, "what a beautiful dog of yourn, and what a blessed tail he've got!" "Our Tom have been stealing, and deserve to be hanged, he dew, bless him!" Such are the moral effects of opium when used as a luxury in England: a state of dreamy comfort and a forgetfulness of aches and pains of mind and body—a state in which people dream of virtue, and goodness, and piety, and do nothing. The districts in which it is popular show the cause: the agueish, chilly, neuralgic maladies of the district, for which opium is a remedy, and which create a kind of constitutional peculiarity that tolerates opium. So that some persons who begin to take it as a medicine continue it as a comfort, and others follow their example, and take it without the original excuse. Question an opium-eater, and he or she will most likely deny the habit point-blank: if they confess it, they plead the *comfort* it gives.

Now let me turn the terrestrial globe one-fourth of its circumference, and come to tropical India, where I am at present domiciled. The newspapers are full of jubilation at the remission of various taxes and at the prosperous state of the revenue.

There is a surplus of one million and a half of receipts over expenditure for the year ending March, 1873; but, says Sir Richard Temple, the "surplus of the year is mainly attributable to gain in opium." For, in truth, the manufacture and sale of opium is a gigantic and most profitable monopoly in the hands of Government. People who sell their own opium deserve to pay a heavy tax, which amounted in this year to £2,614,700, whilst there was an extraordinary rise in the selling price and decrease in quantity, and consequently in the sums paid for Bengal opium. One remarkable feature is the steady increase of the opium revenue, and the way in which it overtops the estimate formed of it. The Minister had calculated on receiving seven millions and three-quarters—the actual receipts were eight millions and two-thirds. "Within four years," says Sir R. Temple, "we have received from this source net £3,894,140 in excess of the Budget estimates. Year by year the opium estimate has received the approval of the Secretary of State, as being prudent and in accordance with the known facts of the time; the actual receipts, however, have proved larger than the anticipation. This, too, happened during a period when some authorities seem to consider the Indian opium trade as threatened with serious competition from the increasing culture of the indigenous drug in China, and even from the produce of other countries; when the Indian opium harvests have been considerably below the average, and when the area under poppy cultivation has not materially increased. Indeed, the fiscal facts point to the conclusion that the demand in China for the Indian drug is firmly sustained. Doubtless the ability of China to pay a good price for the opium is maintained by the growing wealth and rising trade of that country."

From these remarks may be gathered the enormous and increasing use of opium in these tropical regions of the East. In Madras, whence I date my letter, we are on the mere outskirts of the opium-consuming districts, which, I am told, begin at Masulipatam and stretch northwards along the coast to Calcutta. Still, Madras gives some opportunities for witnessing the use of it, and I gladly availed myself of an invitation to accompany Inspector-General B—— (a man of truly encyclopædic knowledge and experience in all that concerns the languages, customs, and ethnology of India) on a visit to one of the establishments where opium-smoking is carried on.

Opium-smoking is generally carried on at public shops, because people have no convenience at home, and are generally of the humbler classes; so one need not wonder that the shop we visit is of a humble character. Moreover, wives do not allow smoking at home. In one of the second-rate streets of Black Town, Madras, we stop at the house of Mr. J. Hussam, livery-stable-keeper, whose card announces that he has "neat coaches and fleet horses for hire either by the day or month"; "also boots and shoes"; for the fact is that Mr. Hussam is a practical man, and carries on the business of shoemaker in the "pyal" or verandah in front of his house. He seems to use part of his premises for carriages and horses, and devotes two rooms on the principal floor to the accommodation of opium-smokers. Mine host and his family are Chinamen; quiet, plain-spoken, practical people, who showed us all the paraphernalia of their trade without any hesitation. They buy the crude opium in mass; then dissolve, and strain, and evaporate until they have reduced it to the consistence of a thick syrup, of a rather fragrant smell, and free from the rankness of crude opium. I suppose they do what the Pharmacopœia

orders in the preparation of "extractum opii purificatum." This is weighed out into portions, which are put into little cardboard trays, and are sold to the customers at a half-anna a piece, equal to three farthings of our money. Our host, a hale old fellow of sixty-five, told us that he had been a smoker for thirty-five years; his daughter's husband had also smoked many years; and these two gave us an exhibition of the way in which the thing is carried on. Let me say that the house and its belongings were, *mutatis mutandis*, like those of a respectable English tradesman. The people were well dressed, like English people, were it not for the men's earrings and hair plaited and coiled round the head; they are Roman Catholic Christians, but keep a corner for a tablet containing certain sacred precepts in Chinese, before which a stick of incense is burned every day.

Well, the person who smokes opium must, first of all, have a comfortable place to lie down in. This is a *sine quâ non*. Next, he must be provided with a small lamp. Possibly three or four people lie around one lamp, their heads towards it and their legs outside. The pipe is a thing difficult to explain,—it is generally of bamboo, the size of a flute, and at its further end it has a projecting piece of metal, like a pegtop, with a hole in its middle leading into the cavity of the bamboo. Besides these the smoker must be provided with a thing like an iron probe or packing needle. Then he begins operations by scraping up the opium on the end of the probe, holding it in the flame of the lamp, where it frizzles and hardens; then he moulds the hardened opium around the little hole in the metal pegtop projection of the pipe, and lastly sets the opium for an instant on fire in the lamp, and inhales some of the smoke. After one or two whiffs (if he is a poor man smoking with a party from a pipe in common) he passes it on, and so it goes round until all the opium is consumed. Considering the dilution of the opium, and the frizzling it undergoes in the lamp, and the quantity of smoke that escapes, I am quite unable to form any idea of the quantity actually inhaled. Our host and his son-in-law each took a pipe before us; the effect of which was a little suffusion and glistening of the eyes, but no acceleration of pulse. We were now refreshed with genuine Chinese tea, and next conducted into the public smoking-room, which was crowded, because many of the smokers from the other shops, hearing that a visit was to be paid by the Inspector-General, came to this one in the hope of being treated by the visitors, and in this respect they were not disappointed. The room was full of men, lying on slightly raised sofas by twos and threes round each lamp. They seemed simply sleepy and quiet, with heavy eyes; just like people of the same rank of life—carters, cabmen, labourers, and mechanics—in an English tap-room, but without the *tapage*, and riot, and bad language.

When we had satisfied our curiosity, we entered with our intelligent host into the moral and political side of the question. Surely these people, we said, are pursuing a very dangerous pleasure; they will go on and lose their health and faculties, and become idiots and spectres. "Sir," said our host, "if people choose to do without anything of an intoxicating sort, why not? But we know they all do take something: the Englishman, he takes his rum and beer and tobacco; the Chinaman and Mussulman, they smoke opium. Why do they choose opium? Why, a young man goes into hospital sick with fever, and comes out very bad and weak, not able to eat; then a friend says, 'Why do you not smoke?' So he takes a pipe, and feels better and stronger directly. Opium does not take away the appetite—on the contrary, it makes a man wish to eat plenty of rice, and especially plantains. A man has cold and rheumatism, and cannot do his work, and smoking cures him; or he is very tired, and fit for nothing, until a few whiffs make him feel quite strong and happy. Then he goes on and uses it as a comfort, and advises all his friends to do so too; and so the practice is a growing one. There is a Chinese opium shop in the East-end of London. You may say what you please against it, and no doubt many people use too much. But here I have smoked for thirty-five years, and my son-in-law for fifteen; and do we look like sots or intemperates? I like my pipe in the morning after breakfast, and again in the evening after business, and it gives me strength and spirits; I take enough, and have no wish to take more. 'Tis with opium as with cigars: a prudent man will spend a half-anna or more, as he can afford it, and as his habit leads him. But even if the habit be a bad one, it is better than drinking grog, for many reasons. First of all, women never smoke opium. Then, people who smoke don't smell of it, as they do after grog. Then see the difference—a man takes opium, and remains his own master; but grog *takes him!* and masters him, and makes him talk nonsense and fight uproariously; whilst the very essence of opium-smoking is quietness. The smoker must lie down, and can't talk, and does not want to fight,—he is fit for his work or to go home to his wife and family; and you can't always say this for the grog-drinker."

So far my Chinese philosopher. Being a mere student of human nature in a strange place, I do not venture to add any comment, save that however much opium-smoking, when once introduced, may spread by example and moral contagion, I believe, from all I hear, that the hot-beds of the habit are to be found in the swampy, marshy, fever-stricken districts, where a broiling sun by day is succeeded by chill dews at night, and ague and lassitude infest the population. So that whoever wants to put down the use of opium as a luxury must drain land, improve the diet of the people, and make quinine cheap. The cinchona plantations will give the antidote if any antidote there be. I was talking the other day with a most intelligent native servant, who had been some time ago up the coast in a very opium-smoking district. I asked him if there was fever there. "O lord yes, master; there is a burning sun, and when it rains the drops are as big as your fist; the country is all jungle; and European gentlemen soon get to be like frogs—all head, and swelled belly, and no limbs."

PROFESSOR HOLMES'S LECTURES AT THE COLLEGE OF SURGEONS.

Abstract of Lecture III.

The occurrence of spontaneous aneurism of the vertebral artery in the neck has not as yet been noticed, but traumatic aneurisms of this artery are not so very infrequent, and there are already records of eleven cases in which the carotid artery has been tied,—in four for wound and in seven for traumatic aneurism of the vertebral.

It is worth while to see what were the leading features of these cases, and how such an error could in future be avoided. For undoubtedly the ligation of the carotid in a case of vertebral aneurism must be fraught with double mischief: in the first place it aggravates the disease by throwing the strain of the anastomosing circulation on the vertebral; and in the second place, if the circulation in the wounded vertebral artery is interrupted before the operation of the ligature of the carotid, the stoppage of the blood supply to the brain through the carotid is rendered doubly perilous to the nutrition of that organ.

The Professor referred to a table of the cases of wounds and of traumatic aneurisms of the vertebral artery in which the carotid had been tied by mistake; and he made special reference to the one most fully reported, and which best illustrates the diagnosis. It is a case of traumatic aneurism of the vertebral artery recorded by Lücke in the eighth volume of Langenbeck's *Archives*, in which compression on the carotid diminished, but did not quite stop, the pulsation. As the symptoms persisted after the ligature of the carotid, the aneurism was injected with perchloride of iron. It burst and was laid open, and the bleeding vessel commanded by pressure. The patient died, and it was found that the vertebral artery was wounded between the atlas and occipital bone.

In commenting on this case, Lücke remarks on the error into which he was led by the fact that compression on the carotid checked the aneurismal pulsation. He explains this by supposing that compression on the carotid acted simultaneously on the vertebral, and he points out that this may easily happen if the vertebral enters the foramen of a higher vertebra than usual. Other writers have, however, observed the possibility of checking the pulsation of vertebral aneurism by pressure applied in the same way as for aneurism of the carotid, even in the normal relations of the vertebral artery. Chassaignac, writing on digital compression of the vertebral artery in the "Des Opérations Chirurgicales," says:—"As the vertebral near its origin lies immediately behind the common carotid, between it and the spinal column, the simultaneous closure of both arteries is inevitable when the pressure is made on the carotid low down, and it is an error to think that very powerful compression is required for this

purpose." He then refers to an experiment devised by M. Fraeys, of Ghent, which illustrates the fact that water injected into the aorta will cease to flow from the vertebral if light pressure be made upon the common carotid of the same side in the space extending between two and three inches above the clavicle; and he says—"If pressure is made with the same force on the common carotid above the 'carotid tubercle'—*i.e.*, the anterior tubercle of the transverse process of the sixth cervical vertebra—the space below that tubercle being left free, the jet from the vertebral artery will continue, while that from the internal carotid wholly ceases." He proceeds to show that the tubercle in question is much higher than is generally supposed, being always from two to three inches above the upper border of the clavicle. The bearing of this fact on the diagnosis between carotid and vertebral aneurism is obvious. The surgeon must, therefore, not conclude that the aneurism affects one of the carotids or some branch of the external carotid until he has seen that pressure stops the pulsation when applied at a higher level than the carotid tubercle, or when applied to the carotid in such a way as to isolate it from the other structures, as M. Rouge did. A traumatic aneurism whose pulsations are unaffected by compression so applied must be regarded and treated as vertebral.

The ligature of the carotid for a wound of the vertebral not followed by aneurism in which the injury was assumed to be of the carotid or one of its branches, is a course still more to be regretted. There are in all regions grave objections to the ligature of a trunk vessel for the wound of a branch if any other course be open; but to tie the carotid artery for a wound of the vertebral has a direct effect in promoting bleeding from the wounded vessel, and the operation is certainly unjustifiable when any doubt exists on this point. However dangerous and difficult the operation may be which is necessary to expose the wounded artery, it is the only one admissible, and if the surgeon thinks it undesirable to hazard its performance he should at any rate not complicate the case further by tying the carotid.

Lücke comments at great length on the treatment which should be adopted, allowing that the diagnosis of vertebral aneurism has been established. The ligature of the vertebral artery at the root of the neck is a difficult and formidable operation, nor is there any probability that it would check the circulation through the upper portion of the vessel so near its inosculation with its fellow. He argues, therefore, conclusively against any such attempt; and still more is the attempt to tie the subclavian above the origin of the vertebral to be reprobated. But the course which he followed—viz., of repeated injections of perchloride of iron—is not at all to be recommended; for in order that this mode of cure should have any chance of success, it seems necessary that the artery should be commanded both above and below the tumour.

The only case which can be referred to of alleged cure of an aneurism of the vertebral artery is one reported by a surgeon named Möbius, in 1827. The swelling, which increased to the size of four and a half inches by three and a quarter inches, was found suddenly to have become cold, quite hard, and pulseless, after the prolonged application of ice and snow, —the patient having obstinately refused to submit to any operation. The tumour, which was of traumatic origin, and caused by a stab over the lower right half of the occipital bone, finally disappeared, and the patient was alive at the time of the report of his case two years afterwards. The cure was produced in all probability by the mouth of the sac becoming obliterated by the accidental detachment of a portion of the clot. Bearing this case in mind, we ought to hesitate before proceeding to any extreme measures in traumatic aneurism of the vertebral artery. Professor Holmes does not see what operation can be practised on such a tumour with any hope of success, except that modification of the method of Antylus proposed by Mr. Syme. The effect of compression applied over the lower part of the carotid ought to be carefully noticed, and if this stops or greatly reduces the pulsation of the tumour, there seems no reason why it should not produce a cure, if the patient can tolerate it.

The conclusions, then, to which present experience points on this subject of vertebral aneurism may be thus summed up:—

1. A traumatic aneurism may be taken to be vertebral when it is situated in the course of that vessel, and when its pulsations are not commanded by compression of the lower part of the common carotid.

2. When a traumatic aneurism is situated as above, and its pulsations are commanded, however completely, by pressure on the common carotid low in the neck, it ought not to be treated as carotid or as affecting a branch of the carotid unless it is clearly proved that its pulsations are stopped by pressure applied above the level at which the vertebral ceases to be compressible—*i.e.*, above Chassaignac's "carotid tubercle."

3. An aneurism diagnosed as vertebral may be treated by compression (gradual or rapid, as the case demands) of the root of the vertebral artery in the neck if this is found feasible.

4. If indirect compression will not stop the pulsation, or if it cannot be borne, the tumour should be subjected to direct compression and refrigeration, to which internal remedies may be added, and possibly the subcutaneous injection of ergotine may be of use.

5. If these means fail and the tumour appears likely to burst, or if it have burst, the sac should be opened with all due precaution and an attempt made to tie or plug the wounded artery.

6. A wound known or suspected to be of the vertebral artery should be treated either by direct pressure or by ligature of the vessel in the wound.

In order to complete the subject of aneurisms of the head and neck, it remains to speak of intracranial aneurism (by which is here meant aneurisms not within the cranium, but within the membranes of the brain) and aneurism of the intracarotid or its branches in the orbit or cavernous sinus.

With regard to intracranial aneurism, we know nothing at present of its diagnosis, so that no treatment can as yet be directed especially to it. And looking at the very free intercommunication of the four large cranial trunks, it would seem unlikely that surgical measures directed to any one of them would do much towards the consolidation of an aneurism. Nor would the consolidation render the patient secure from cerebral symptoms. Yet the question occurs whether the trial may not be worth making, even allowing the prospect of success to be but small, if only the diagnosis could be established. Professor Holmes then referred in detail to two cases—one by Mr. Coe, of Bristol; the other by Professor R. W. Smith—and then went on to observe that, although there is some possibility that a few cases of intracranial aneurism (meaning, thereby, not "within the skullcap," but "within the membranes of the brain") may become subjects of surgical treatment, our information on the subject is at present very limited, and surgical treatment is almost untried.

Of orbital aneurism, on the contrary, we have ample experience, and the surgical treatment of the disease has certainly not been wanting in activity. The most various opinions have been expressed with regard to the real nature of these aneurisms—or rather of these pulsating tumours, since some of them have not proved to be aneurismal. It is well known that Mr. Travers, who was the first to treat the disease successfully, described it without hesitation as aneurism by anastomosis; and that in this opinion he was followed by all succeeding writers, until Mr. Busk took occasion to expose the numerous points of difference which exist between intra-orbital aneurisms and the undoubted instances of aneurism by anastomosis. He regarded these tumours as true aneurisms of the ophthalmic artery, in which view he was followed by Mr. Curling and Mr. Nunneley. Yet this explanation cannot universally be maintained in the face of the well-known case under Mr. Bowman's care, in which, after death, no disease whatever was found in the arterial system, although the cavernous sinus was filled with coagula extending into the neighbouring sinus and the ophthalmic vein. Accordingly, Mr. Nunneley, in his second paper, states his opinion that "in several of these cases there has not existed any aneurism at all, and in the great majority where there has been aneurism, it has been within the cranium and not in the orbit." And he explained the protrusion of the eye and the pulsation to pressure exercised on the veins of the orbit by an intracranial aneurism, the pulsation of which was transmitted to the fluid in the enlarged veins and so to the eyeball. Mr. Erichsen goes further, and suggests that in some cases there may be no vascular disease at all, but that "some derangement of the vaso-motive influence of the sympathetic may really occasion the symptoms of increased vascular activity that are so characteristic of this singular disease."

Cases of the spontaneous subsidence of this disease as recorded by Erichsen, Collard, and France were mentioned. In all of these there was complete recovery from the symptoms of the disease. Other cases of so-called orbital aneurism, in which the symptoms have been proved to depend on arterio-venous communication in the cavernous sinus, were described, especially four cases by Dr. Delens.

ABSTRACT OF LECTURES ON THE

VARIETIES IN THE MUSCLES OF MAN.

By Prof. HUMPHRY, M.D., F.R.S., of Cambridge.

Lecture III.(a)

In the lower limb the muscular irregularities are fewer than in the upper limb, owing partly to the less complex disposition of muscles in the limb, and to the absence, in consequence of the fixity of the pelvic girdle, of muscles, the homologues of which in the upper limb are the seat of many varieties. The sartorius is the most erratic of those passing from the pelvis, and it is the most variable in lower animals. The biceps by its occasional connexions with the gluteus and extension to the sacrum and the crista of the ilium, harks back, as it were, to its primitive relations with these parts.(b) The adductors may be variously segmented. The semitendinosus, semimembranosus, and popliteus do not vary much.

The irregularities in the calf muscle are on the side of excess rather than of deficiency; although that muscle is in man more complicated than in any other animal. They consist chiefly in the presence of additional heads to the gastrocnemius, or in extensions of the origin of that muscle and of the solcus. The plantaris is sometimes absent or abnormally connected with adjacent parts above or below.

In the deep flexor muscles the most interesting varieties are in connexion with the accessorius, which is a remnant of the primitive wide attachment of the simple unsegmented flexor mass in the Urodelans to the bones of the leg, the tarsus, and the metatarsus. Accordingly, extensions of it, or derivatives from or adjuncts to it, are often found spreading up the leg along the fibula or widely connected with the tarsus. Below, it is sometimes more largely united with the flexor digitorum than usual, or it joins the flexor hallucis or the lumbricales, or it gives off one of the flexor tendons of the toes. The varieties in the flexors of the toes consist chiefly in the closer union of the flexor digitorum and the flexor hallucis, as is the case in lower animals, and in the partial absence of the flexor brevis, or the blending of it with the flexor longus, which more particularly happens with regard to the division to the little toe.

On the dorsal aspect of the limb the quadriceps is but little liable to varieties. The portion of the tibialis anticus attached to the metatarsal bone is sometimes separate, and, further, is sometimes subdivided, one portion passing to the first phalanx, thus resembling the disposition of the extensor tendons to the pollex. Sometimes the tibialis anticus extends to the plantar fascia; or it ranges upon the dorsum of the foot, as in the hippopotamus. The peroneus longus seldom varies; though sometimes attached to other metatarsals in addition to the first, it rarely or never fails to reach the first. The other peronei often show their imperfect segmentation from the extensor digitorum by spreading upon the toes. Particularly is this the case with the peroneus tertius, the complete separation of which and its devotion exclusively to the tarsus is a human feature and is related to the mode in which the forepart of the sole is planted fully upon the ground in man. The extensor digitorum sometimes shows a persistence of connexion with the metatarsal bones, with the extensor hallucis, and with the extensor brevis, which are reminders of the primitive oneness of the extensor mass, and which are evidences of imperfect segmentation of it. No instance had presented itself, however, of that extension to the forepart of the femur which is so frequent in other Mammals.

The varieties in the small muscles of the foot and hand were also discussed.

In indicating the relation between utility and variability, and showing that that which is the most useful has on the whole the greatest stability, the Professor did not express any view as to the connexion between the two, or wish to prejudge the great questions associated with this subject and with the allied problem—how that which is most fitted for its purpose in each animal and each part comes to be present. Other questions were alluded to: whether, for instance, the variety in muscles which are of least importance, on the one hand, and in those which are peculiar to man, on the other, is an indication that those muscles are in process of being fixed in, or expunged from, the economy; also whether varieties are more or less frequent in the more advanced and more civilised members of the human family than in others. At present there is not sufficient evidence to furnish an affirmative answer to any of these questions, or to establish the hereditary transmission of muscular varieties which must be regarded as probable. The nerve-supply to the supernumerary muscles, in the few instances in which it has been described, seems to corroborate the view "that nerve-course is somewhat too arbitrary or too much regulated by convenience in each instance for us to be able to rely upon the disposition of the nerves as sure guides to the discernment, in difficult cases, of the homological relations of muscles and other structures."(c)

(a) Delivered at the Royal College of Surgeons, June 6, 1873.

(b) See *British Medical Journal*, *Journal of Anatomy*, vi., 355; "Observations in Myology," p. 167.

(c) *Journal of Anatomy*, vi., 56,; "Observations in Myology," p. 56.

MR. MUNDELLA'S FACTORY BILL.

(*Communicated.*)

In June last we brought under notice the main provisions of the Bill introduced by Mr. Mundella to shorten the hours of labour in factories, and also presented an abstract of the report of the Commissioners (Dr. Bridges and Mr. Holmes) charged to inquire into the health of the workers in textile factories, and the influence of their occupation upon it. Now, it has happened that Mr. Mundella's propositions have not received the suffrages of a large proportion of those individuals—both masters and workpeople—in whose behalf they were professedly put forward, and the Bill, which has reached a second reading in the House of Commons, may be reckoned among the failures of the session. Unluckily for its success, the Government give it no help, but rather oppose it as an uncalled for attempt at legislation.

The Home Secretary has signified his opinion that the necessity for the measure has not been demonstrated; and we have now in our hands a reply to the Commissioners' report by the Association of Employers of Factory Labour in the Textile Districts, in which it must be admitted that many of the arguments to be advanced in favour of Mr. Mundella's scheme are disposed of as erroneous and inconclusive. At the same time great credit must be given to Messrs. Bridges and Holmes for collecting much valuable information, and for indicating some direction in which amelioration of the conditions of factory labour may be effected. The manufacturers indeed recognise, in their critical report on the Commissioners' statements, that two important facts are established—viz., "That disadvantages attend the employment of married women in factories, and that one of the consequences of such employment is an excess of infant mortality over that in districts where married women are not employed." It is impossible to over-estimate the importance of such an acknowledgment, which at least admits the imperative necessity for some remedy. But Messrs. Bridges and Holmes lacked time for a thorough and efficient inquiry, and may be reasonably supposed to have no special knowledge relative to the processes and conditions of factory work. The result is that their inferences and conclusions generally, when tested by the evidence they themselves adduce, and also by the special or technical knowledge of the manufacturers, cannot be sustained. To quote the words of their critics, their "summaries do not flow naturally from their allegations;" their statistics are faulty and inefficient; their statistical comparisons are for the most part foreign to the inquiry; and their conclusions, even were the facts as alleged, are illogical and inconsequent, and, "if accepted, the legislation they suggest would provide no remedy, nor scarcely even an alleviation of the evils of which they complain."

The "Observations of the Employers" are replete with particulars in support of these general charges against the value and accuracy of the opinions and representations advanced by the Commissioners. Such particulars cannot be reproduced here, but we may present in abstract some of the defects and errors as pointed out.

The conclusions as to the increased strain upon operatives by modern machinery as compared with that of some years since, are asserted to be erroneous, and the mistake to be owing chiefly to the want of special knowledge of the matter on the part of Messrs. Bridges and Holmes. On the contrary, the improvements effected in machinery are represented to be in favour of the workers. As to the alleged unhealthiness of

certain processes, it is shown that of 450,000 persons 300,000 are employed in departments of manufacture pronounced by the Commissioners themselves to have no debilitating tendency; and also that with regard to the branches of labour alleged to be debilitating, these are, according to the showing of the Commissioners, not so much so in themselves as in consequence of aggravation by imperfect sanitary arrangements. "And further, we inquire (write the manufacturers), if the high temperature and the dust are (as represented) the causes of the debilitating tendency, which would be more efficacious in promoting the health of the workers—working one hour less daily in such an atmosphere, or its purification?"

The high rate of mortality in the textile districts is another matter commented on in the report as if unquestionable, but the manufacturers have been at considerable pains to show, by an appeal to the returns of the Registrar-General (which are assumed to establish the fact adverted to), that the death-rate of textile towns is really less than that of other large towns where no like manufacturing processes are carried on. In this statistical conflict we would not entirely endorse the figures quoted on either side, so delusive are crude statistics without a complete acquaintance with all the circumstances affecting populations; but we hold that the employers sufficiently make out that their towns are not so black as they are painted in regard to their bills of mortality.

The deterioration of the factory children in physique is a point the Commissioners endeavoured to establish, but the plan of measurement adopted, particularly in connexion with the girls, is fraught with error, and the results arrived at almost unimportant. The smaller development of the children is not demonstrated to be connected with their labour as a direct result. With reference to the general recommendation of the Commissioners, that it is desirable to mitigate the evils of manufacture, especially of a bad atmosphere so often involved in it, by working one hour less per day in it, the manufacturers justly urge that, were the reduction to nine hours a day sanctioned, every argument now advanced by Messrs. Bridges and Holmes would still be of the same force as at present in advocating further reduction of working time to eight or to seven, or to any other number of hours desired, inasmuch as the shortening of working time leaves untouched the sanitary evils complained of.

Hence the Commissioners are much more on the right tack when observing that "some of the evils admit of entire removal, and *all* probably of mitigation, were sanitary inspection of factories rendered more efficient than in the present state of the law it is;" and, in commenting on this sensible reflection, the manufacturers prudently suggest "that the proper course is *at once* to make sanitary inspection efficient . . . . and not in the *meantime* to pass a law which, if passed, will be permanent, and will operate as a heavy export duty upon productions supplying £120,000,000 out of the £220,000,000 of our exports."

We must not fail to remark that the medical testimony called for by the Commissioners in the districts visited does not seem entirely to bear out their views respecting the unhealthiness of factory labour, and that there is no demand on the part of the majority of the working population for a reduction of the hours of work. The impression will obtrude itself that the honourable member who has made this Nine Hour Bill his pet object is the victim of an enthusiastic sentimental philanthropy, and of specious representations, or rather misrepresentations, hatched by the self-constituted protectors of the working classes who prefer the part of paid agitators to their lawful calling. These men have met with too much encouragement and countenance from those in power, and have been allowed to sap to no mean extent the foundations of this country's prosperity, and it now behoves all who wish well to their country to resist such further efforts as may be made to cripple the manufacturing industry of the nation.

AT a meeting of the President and Council of the Royal College of Surgeons in Ireland held on the 3rd inst., the following resolution was adopted unanimously:—"That the Honorary Fellowship of the College be conferred on the Rev. Samuel Haughton, Fellow of Trinity College, Dublin, in acknowledgment of his contributions to various branches of scientific knowledge, more especially to that of scientific anatomy."

REVIEWS.

On the Operative Surgery of the Foot and Ankle-joint. By HENRY HANCOCK, President of the Royal College of Surgeons of England; Consulting Surgeon to Charing-cross Hospital. London: J. and A. Churchill. Pp. 476.

WHEN in 1865 Mr. Hancock was made Professor of Surgery to the Royal College of Surgeons, he undertook a course of lectures on the anatomy and surgery of the foot, part of which were at the time published in a somewhat incomplete form. These he now publishes, carefully revised and perfected. Mr. Hancock has long been held an authority on this subject, and undoubtedly the present publication only tends to confirm that opinion. The lectures are ten in number. The first merely deals with the anatomy of the foot as far as bones and ligaments are concerned. The second begins the operative surgery of the foot, and deals with perforating ulcer of the foot, and what Mr. Hancock calls tubercular disease of the foot,—not, however, tubercular in the ordinary sense of the word, but rather, we fancy, the disease now called fungus-foot. Lecture three treats of Syme's amputation, an operation much to the mind of Mr. Hancock; whilst that which succeeds deals with the various modifications of that operation, including Pirogoff's. The fifth lecture is devoted to the subastragaloid amputation of the foot, also known as Lignerolles' operation. Lecture six is on excision of the astragalus; seven on excision of the ankle-joint; eight also dealing with the same and compound dislocation of the ankle-joint. The ninth lecture deals with Chopart's operation; and the tenth with resection of the os calcis. After this comes a valuable appendix and a useful index. It will thus be seen that the subject is not a limited one; and Mr. Hancock does full justice to it.

The first chapter, as already said, is purely anatomical; but Mr. Hancock takes care to make this the basis of the later portions of his work. In the second chapter the part relating to perforating ulcer is exceedingly interesting, and to Mr. Hancock is mainly due the merit of making this curious malady known to the British medical profession. Some interesting cases of it are here recorded.

If there is one thing more than another which distinguishes Mr. Hancock's surgery, it is conservatism in the highest sense of the term. He is never tired of reiterating the sound maxim, "Save all you can," and in so doing he is careful to insist on the practicability of safely cutting through bones which many have dreaded to touch, and of opening joints which many have considered dangerous in the extreme to meddle with. He is also jealous for the honour of British surgeons, and rebukes the attempts which have been made to wrest their well-merited honours from them; though in this respect he is eminently fair, and strives to do equal justice to all.

The labour of collecting the statistics of the results of various operations must have been exceedingly great; but they will be duly valued by those who want to estimate aright the risks of various operations. Some of the operations here recorded are extremely ingenious, but none more so than that proposed by Mr. Hancock himself, which is well illustrated on page 213—it is, in fact, a kind of combination of the beauties of Pirogoff's and Lignerolles' operations. Equally ingenious is his modification of Chopart's operation.

Perhaps one of the most interesting chapters in the book is that relating to excision of the astragalus, and it is illustrated by an excellent drawing of a section of a foot from which the astragalus had been removed some time before death (which resulted from totally different causes) by Mr. Canton. This drawing, like the others in the book, is by Mr. Bellamy, and is exceedingly well done.

We should say that the volume is enriched by a great variety of cases, most of them original, and contributed by various gentlemen throughout the country. These are of course of very various degrees of merit, but they at all events serve to show the general esteem shown by the profession for the late President of the College. It would be invidious to select any as better than their neighbours, but we may refer to some by Mr. Samuel Hey, of Leeds, partly on account of the eminence of that gentleman as a surgeon, and partly because so little of his doings have been published. It would be quite impossible in this short notice to do full justice to such a volume; indeed, this would be hard to do in any notice, for it is chiefly as a book of reference that Mr. Hancock's

book will be used. The facts are too numerous to be grasped, but the spirit is excellent: that we have already tried to express, and, it is needless to say, with the highest approbation.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 27.

Dr. C. J. B. WILLIAMS, F.R.S., President, in the Chair.

Dr. EDWARD HEADLAM GREENHOW related the particulars of a case of Abdominal Aneurism successfully treated by Proximal Pressure of the Aorta. In the year 1864 Dr. William Murray, of Newcastle-on-Tyne, communicated to the Royal Medical and Chirurgical Society a "Case of Abdominal Aneurism cured by Proximal Pressure upon the Abdominal Aorta." The patient remained well for six years, and then died of a second aneurism. It was found that the remains of the original aneurism consisted merely of a fibrous mass, and that complete collateral circulation had been established by the enlargement of vessels both on the outside and inside of the abdominal cavity. Last year a similar case, cured by the same means, was communicated to the Society by Dr. Moxon and Mr. Durham, of Guy's Hospital. These are the only two such cases which have as yet been fully recorded; and the author trusted that the report of a third case would not be considered superfluous, more especially as in this latter some of the results of the compression of the aorta appeared to have an interest apart from that belonging to the cure of the aneurism. Christopher F., aged 28, warder in the House of Correction at Kendal, was admitted into the Middlesex Hospital, under Dr. Greenhow's care, on May 20, 1872. He was a strong-looking man, and his health had been good until December, 1868, when he was on board H.M.S. *Princess Charlotte* as an able-bodied seaman. Whilst drawing water from alongside he suddenly felt something give way in his abdomen. Was soon after invalided, and on his return home he obtained employment as warder. In December, 1871, he again began to suffer and lose strength. On admission, he complained of pain in the abdomen and loins, shooting downwards to the groins and thighs. A somewhat globular pulsating tumour, about the size of a large orange, was found in the abdomen, immediately above the umbilicus. It extended more to the right than to the left of the median line, and beat forcibly with an expanding lateral as well as with a forward impulse. Firm pressure over the aorta above the tumour, when the patient was sitting up, stopped the pulsation for the time being. The medical staff of the hospital having agreed with the author as to the nature of the tumour and the means to be attempted for its cure, Mr. Hulke undertook to apply the tourniquet. May 25: Chloroform having been administered, Lister's tourniquet was screwed down between the tumour and the xiphoid cartilage until pulsation ceased both in the tumour itself and in the femoral arteries. On account of vomiting the pressure was withdrawn after three-quarters of an hour. The impulse remained as before, but the tumour felt rather more solid. 27th: When the patient was thoroughly under the influence of chloroform, Mr. Hulke applied the tourniquet with the same effect as before, and with two brief intermissions the pressure was maintained during four hours. After some time there appeared marked lividity of the lower extremities, which, as well as the lower half of the abdomen became quite cold. Temperature taken between the toes was 90°. Sphygmographic tracings of the radial pulse showed increased arterial tension. The breathing became very shallow and gasping. Pulse from 100 to 120, respiration from 44 to 56 per minute. The removal of the pressure was immediately followed by the subsidence of all these symytoms. The pulsation in the tumour was decreased, the forward impulse being much less forcible and the lateral expansion omly slight. For several days the patient suffered much from vomiting, the vomit containing altered blood, and from pain, numbness and coldness in the lower extremities, more particularly in the right limb, which gradually disappeared as the circulation became re-established. The impulse in the aneurism very greatly decreased, until on June 10 it could scarcely be felt, and the patient was allowed to sit up for a short time. June 25: The pulsation in the tumour having decidedly increased again in force during the previous week, the tourniquet was once more applied, so as thoroughly to compress the aorta, and the pressure was maintained for three hours almost continuously. The pulse and breathing showed the same characters as during the former operation, and there was the same coldness of the lower extremities and of the right more than the left foot. When the tourniquet was removed there was forward pulsation of the tumour, but no lateral expansion, and the tumour felt firmer and more solid. During several days the vomiting and coldness of the extremities continued as before. The urine was albuminous for two days. The impulse in the aneurism continued to diminish until July 1, when it could not be seen, and scarcely felt. On July 14 the patient was well enough to be discharged home to Kendal. September 20: In accordance with Dr. Greenhow's request, the man returned to show himself. No pulsation was found in the seat of the aneurism, nor was there any distinct tumour remaining; but above the umbilicus, to the right of the median line, was an undefined somewhat movable hardness. No pulsation could be detected in the aorta from an inch above the umbilicus downwards, nor in the femoral, popliteal, or anterior tibial arteries. Mr. Noble, of Kendal, who sent the patient to the hospital, wrote to Dr. Greenhow quite recently to say that the man was in perfect health. It would appear certain from this case, taken in conjunction with Dr. Moxon's and Mr. Durham's, that the process of cure by coagulation of blood in the sac of the aneurism is not necessarily a rapid process, as it was in Dr. Murray's case, but may last during many days, and sometimes even for weeks. The direct effects of the pressure upon the pulse and respiration were very remarkable, and not less so the secondary effects of the disturbed circulation on the stomach and kidneys, producing the hæmatemesis and albuminuria which followed the operations. The occurrence of such symptoms would seem to suggest that the intense arterial distension caused by the treatment might be attended by serious danger to persons suffering from any kind of organic disease, especially degenerative disease of the arteries.

Dr. MURRAY (of Newcastle) said that the plan pursued by Dr. Greenhow and Dr. Moxon was in accordance with his views, and confirmed them. In the cases he had seen when coagulation once set in it proceeded very rapidly, and was complete. He referred as an example to a case of iliac aneurism under Dr. Heath, of Newcastle. The case had not yet been fully reported, but pressure was maintained for ten hours with no result; the pulsation was as free as before; the tourniquet was re-applied for twenty minutes, and at the end of that time the tumour was quite solid, and never pulsated again. In other cases (about six) the coagulation was within an hour; in his own case after three hours. He felt convinced that the coagulation occurred rapidly in those cases, and a long period, as fourteen days, was not needed to complete the operation.

The PRESIDENT thought that the rapidity of coagulation would differ in different individuals; also, that the tendency of chloroform to produce liquidity of the blood should be considered. It was probable that some other anæsthetic might be employed with greater advantage.

Mr. HOLMES did not think that the operation was free from danger; in some cases it had been followed by death. Mechanical lesions of the gravest kind were often produced. He did not think the treatment should be employed in all cases. If an aneurism was rapidly enlarging it might be resorted to; but it was beyond justifiable surgery to do so if milder means would do. There was distinct evidence of injury from the violent pressure on veins. In three cases death had occurred. Then the prolonged application of chloroform was in itself a source of great danger. He thought a surgeon ought to consider if abdominal aneurism could not be cured by milder means. Low diet and rest often ameliorated. In other cases it was amenable to slow pressure, as by a pad or finger for a portion of the day, and without the danger attending more forcible pressure. The latter was more efficient as well as more dangerous. Though the three successful cases had been reported, yet there were others which had been unsuccessful. As to the coagulation of the blood, he thought there were two ways in which it might occur—firstly, gradually, as shown in Mr. Durham's and Dr. Moxon's case, in one month; secondly, by the impaction of a clot in the artery, as in Dr. Murray's case.

Mr. HENRY LEE said that it was stated in the paper that the urine was albuminous, and it was explained as due to increased pressure on the vessels of the kidney. This he could not understand, as the pressure was not applied below the origin of the renal arteries.

Dr. Greenhow said that, with regard to Dr. Murray's remark on slow coagulation, he could not see where there had been any failure in the management of the case tending to produce this. The pulse was quite stopped in the femorals on the application of the tourniquet, and continued so as long as the pressure was maintained. He was not aware of unsuccessful cases treated in this way; as he had stated in the paper, he thought such treatment would be very dangerous in persons suffering from organic disease. He thought the danger in treating abdominal or any aneurism below the aorta by means of Lister's tourniquet arose from shutting off the flow of blood to the lower half of the body. The tension in the arteries of the upper half of the body was extreme. He thought the hæmatemesis was due to the hyperæmia or over-tension of the arteries, not the veins, of the stomach; and that the albumen in the urine was due to the same cause. The man recovered from these in a few days.

Dr. George Johnson read a paper "On the Etiology of Albuminuria as deduced from an Analysis of 200 consecutive Cases." About ten years since the author had made a tabular analysis of nearly 300 cases of albuminuria. In each case special inquiry had been made as to the probable exciting cause of the malady, and in the tabular statement of the main points in the history of these cases one column is set apart for the etiology of the disease. Some recent discussion on the influence of alcohol in exciting diseases of the kidney had led him to refer to his analysis of cases for evidence bearing upon this question; nine-tenths of the cases analysed belonging to the class of hospital or dispensary patients. Taking 200 consecutive cases, it is shown that the various etiological influences, single and in combination, come under no fewer than thirty-three heads. It is also shown that scarlet fever, intemperance, cold, wet, and gout—these influences, either single or combined, account for 120 cases out of 200, or 60 per cent. Thus, albuminuria was probably the result of scarlet fever in 24 out of 200 cases, or 12 per cent.; of intemperance in 28, or 14 per cent.; of intemperance and gout in 12, or 6 per cent.; of intemperance and cold in 12, or 6 per cent.; of gout in 8, or 4 per cent.; of cold and wet in 23, or 11·5 per cent.; of cold in 13, or 6·5 per cent. It is shown that intemperance, either alone or combined with other influences, was the probable cause of albuminuria in 58 out of 200 cases, or 29 per cent. Of these 58 cases, in 28 intemperance was believed to be the sole cause; in 12 intemperance with gout, in 12 with cold, in 4 with syphilis, and in two with lead. Cold, either alone or combined with other influences, was the exciting cause of albuminuria in 25 per cent. of the cases. In 6·5 per cent. cold alone is believed to have been the cause of albuminuria, in 11·5 per cent. cold and wet, in 6 per cent. cold and intemperance, and in 1 per cent. cold and fatigue. It appears, then, that albuminuria was associated with scarlet fever in 12 per cent. out of 200 cases, with exposure to cold and wet in 25 per cent., and with intemperance in 29 per cent. The following table shows the proportion per cent. of deaths, recoveries, and of persistent albuminuria in cases resulting from—(1) scarlet fever, (2) exposure to cold and wet, (3) habits of intemperance.

	Scarlet Fever.	Cold and Wet.	Intemperance.
Deaths..	45·83	.. 27·5	.. 67·23
Recoveries	50·	.. 38·88	.. 10·36
Persistent albuminuria	4·16	.. 33·33	.. 22·41

Of the 58 intemperate patients, 11 were women, and 47 were men. In 5 cases out of the 47 men the occupation had not been recorded. Of the 42 men whose occupations had been noted, 5 were waiters. The remaining 37 intemperate men had no fewer than thirty different occupations, not one of them connected with the manufacture, sale, or distribution of alcoholic liquors. Evidently, then, it is not right to assume that men in the class of hospital patients who are not engaged in the liquor trade, and not notorious drunkards, may be placed in a "non-alcoholic" class. The excess of Bright's disease amongst males, as compared with females, is explained by the fact that as a rule men are more intemperate and more exposed to cold and wet than women. Amongst the cases analysed, 76 per cent. were males, and 24 per cent. females. Out of the 58 cases associated with intemperance, 83 per cent. were males; and of the 36 resulting from cold and wet, 77 per cent. were males. In addition to the causes of albuminuria before referred to, the following influences appear to have been causative, the figures showing the proportion per cent. in a total of 200 cases:—Typhus fever, 4; typhoid fever, 1; erysipelas, 1; pyæmia, 1; measles, 1; rheumatic fever, 1; purpura, ·1; cholera, ·5; hooping-cough, ·5; diabetes, ·5; syphilis, 3; phthisis, 2; venereal excesses, 5; poverty and hard work, 2·5; emphysema and bronchitis, 3·5; morbus cordis, 3·5; scrofulous disease of bones or joints, 2·5; scrofulous abscess, ·5; pneumonia, ·5; lead, 1; tropical climate, ·5; hydrophobia, ·5; mental anxiety, 1·5; pregnancy, 2·5. The result of the author's later experience would be to add to this long list of causes of albuminuria, particular reference being made to diphtheria, relapsing fever, malarious fevers, yellow fever, and to certain forms of dyspepsia, either with or without an excessive consumption of alcohol or of tobacco, as causative of albuminuria and degeneration of the kidney.

Dr. Dickinson said much caution was necessary in tracing albuminuria to drink. Both albuminuria and the use of alcohol were so common in this country, that it was inevitable that a considerable proportion of those so suffering might be, unless drink was a sure preventive, charged with intemperance. This would happen with any disease which affected adults; with a parasitic affection, for instance, like scabies, a large number of the sufferers could undoubtedly be convicted of alcoholic excess. Any such tabulations as those just given, compiled with the object of tracing renal disease to drink, must be received with much hesitation. The figures implied no more than that of a certain number of persons so many could be accused of the liberal use of alcohol. Looking at the statistical details, it would be seen that intemperance was assigned as a cause in 29 per cent. (more than one-fourth of all the cases)—an incredible proportion, considering how many women and children must belong to the number. According to that, intemperance was a more common cause of albuminuria than scarlatina, cold, or any other cause. Other causes had obviously been underrated; phthisis was credited with only 2 per cent., syphilis with 3 per cent. The cases of lardaceous disease, so common in hospital practice, amounted altogether, so far as could be judged by the statement, to only 8 per cent. Diseases of the heart, frequently as such disturbances made the urine albuminous (and the paper dealt only with alteration of the secretion), caused albuminuria only in 3 per cent. Lead was credited with only 1 per cent.—a startling conclusion, for lead was the most injurious of all foreign bodies as a cause of renal disease. It was the most common cause of granular degeneration of the kidneys. Of forty-five men, hospital patients, taken without selection save that they all died with granular degeneration, ten were workers with lead. Then, on the reverse side, of workers with lead dying of all causes, accident or disease, during seven years, more than a half had granular kidneys. This connexion was well known to those who had to do with hospital patients, and yet was represented by only 1 per cent. in the tables. Thus other causes appeared to have been dwarfed so as to give greater prominence to alcohol. Then Dr. Johnson had examined 200 cases, and had found the cause in every instance. A great number of these must have been granular degeneration, the result of hereditary, climatic, senile, or other obscure influences. He had examined cases, and could come to no conclusion as to the cause in more than a half. Again, if alcohol had this overbearing influence, then all over the world renal disease ought to be more or less common; but this was not found to be so; it varied according to climatic influences. From the army returns we could tell the amount of renal disease in our garrisons throughout the world; and albuminuria did not depend so much on alcohol as on climate. It was a disease of temperate climates, and those chiefly where the temperature was most variable. Not temperance but temperature gave immunity. Again, renal disease should preponderate in those cases where there was a peculiar access to alcohol; but it was not found to do so. In a paper he had read before the Society he had endeavoured to prove this. Dr. Johnson had taken exception to his headings of alcoholic and non-alcoholic with reference to the two classes, as though he had inferred that the use of liquor was all on one side. He had only wished to show that there was a sufficient excess of liquor on one side to influence the pathology. If this were denied, he would like to ask why potmen, draymen, etc., died in great numbers between thirty and forty years of age? why they suffered as they did from disease of the nervous system? why their serous inflammations suppurated? why their wounds refused to heal? and, above all, why they had cirrhosis of the liver nearly three times as often as the class with which they were compared? The fact must be evident to everyone that those persons who drank more than others suffered more from it, and might be fairly used to supply some information as to its consequences. The comparison was not so neat as one between drunkards and teetotalers. He did not use that, not

being able to get at it. In conclusion, he thought it clear that alcoholic drinks caused a red enlargement of the kidney, and had a certain effect in bringing on granular degeneration—a change analogous to cirrhosis of the liver; but the effect of drink in this respect was more marked upon the liver. Alcohol sometimes, but rarely, set up acute tubal nephritis. It had no power to cause lardaceous disease. The effect of alcohol upon the kidneys had been very much exaggerated, and never on more insufficient evidence than in the paper just read.

Mr. Henry Lee did not think the discussion should be altogether on the side of the physicians. Surgeons also saw something of albuminuria, and that independently of disease of the kidney, as from congestion of the urinary organs albumen in urine resulted. He remembered a case some years ago of a patient who was supposed to have disease of the kidney. A consultation was held, and the man was sent to India to die of chronic albuminuria. He returned after a time, and died of apoplexy. There was no disease of the kidney, but an intussusception of the ureter; the albumen was persistent. Then albumen was often met with from inflammation of organs. With regard to alcohol, he thought many things might do quite as much harm as the balsams, turpentine, and such ingredients which are found in gin, etc.

Mr. Callender said he would like to ask Dr. Johnson about the prevalence of albuminuria among Mussulmans. It was said to be exceedingly rare. He thought this might have some bearing on the question, as they were by practice teetotalers.

Sir William Gull said he was astonished that the Society should be discussing the causes of albuminuria; he looked upon it as a sign of retrogression. He was quite surprised to hear albuminuria talked about as though it could be settled by statistics. Dr. Johnson said he had ascertained the cause in 200 cases. What Dr. Dickinson had said was fully the case; in two cases out of five the cause could not be found. It was frequent in boys above puberty, but it was not found out because it was not looked for. But in weak, delicate patients the urine might be loaded with albumen; what was the cause he could not say. Then, again, in men over fifty-five, in the disease he had brought forward, "arterio-capillary fibrosis," the causes could not be made out; he believed it was due to changes in the vessels quite apart from the kidney, and not from alcohol, cold, etc. Then cold was said to be a cause; but who had not had a cold? And because a man got a cold did he get albuminuria? He thought such statements too vague. We ought to consider the forms of the kidney disease, the state of the urine, and such-like; for although albumen was present in the urine, yet, as long as the salts of the urine were secreted, health was maintained. This must be thought of; the causes were not known, and were often very remote.

Dr. George Johnson, in reply, said that Dr. Dickinson thought the greater part of the paper was directed against him; it was against what he thought was the necessary conclusion from Dr. Dickinson's paper. Briefly, Dr. Dickinson did this: he took the post-mortem records for thirty years, and divided them into those who had traded in, or had to do with liquor, and those who had not. These were not general patients, but those who had died in hospital. Intemperance was said to be more among the first than the latter, who were not in the liquor trade. But among hospital patients intemperance was very common; nearly three-fourths were intemperate, and their diseases were dependent upon that. So he did not think it was sufficient to take the post-mortem examination, but the habits of each patient should be inquired into, and not assumed that men not in the liquor trade had not had access to alcohol. Then Dr. Dickinson was astonished at the small number of cases from heart disase. The two were often associated, but heart disease was more often the consequence than the cause of Bright's disease; the renal disease the primary, and the heart disease the secondary. So with regard to lead: many men had been exposed to it; but painters were often drinkers, so he attributed to alcohol what Dr. Dickinson said was due to lead. It was hasty to assume that every plumber who got kidney disease got it through lead, and not through alcohol. Sir William Gull was astonished that albuminuria should be discussed there to-night; he had only brought forward the exciting causes, so as to afford trustworthy results. Then he was surprised that the cause had been discovered in so many cases; he had only taken 200 cases in which a cause could be found, and had omitted the others. As to the cause of albuminuria in the young subjects of whom Sir William Gull spoke, it could be often traced back to scarlet fever or measles. Sir William Gull thought cold could not be a cause of albuminuria. But why not, if it caused pneumonia? On this point Dr. Dickinson and Sir William Gull were opposed to each other; for Dr. Dickinson maintained that cold had much more to do with the causation of the disease than alcohol.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, June 4.

E. J. Tilt, M.D., President, in the Chair.

Thomas E. Jones, M.R.C.S., Wrexham, and James Stewart, M.D., Whitby, were elected fellows of the Society.

The President said: It is my painful duty, gentlemen, to inform you of the sudden death of Dr. Tyler Smith, which occurred last Monday. You are all of you well acquainted with his earnest devotion to the interests of this Society, and you will fully realise the loss it has sustained. Some time hence I shall have to tell you what he did for science and for us; I have only now to add that your Council has decided that we should at once give expression to our heartfelt sympathy for the widow and the relatives of our deceased founder, and I therefore call on Dr. Barnes to read the resolution he has been asked to move.

Dr. Barnes said the Society would be anxious to record in the most emphatic manner possible its sense of the loss they and obstetric science have sustained by the death of Dr. Tyler Smith. He would not obtrude any reflections upon his conspicuous merit as an author and practitioner; he would simply refer to the deep debt which the Society owed to him for its foundation, for his constant work in scientific memoirs, in debate, and in the administration of its affairs. His conduct towards the Society had throughout been directed by the single object of promoting its welfare. Thus, at its foundation he had postponed his own pre-eminent claim to be the first president, in order to secure for it at starting the prestige of Dr. Rigby's popularity and reputation. Not only had he done this, but he had strenuously promoted the re-election of Dr. Rigby for a third year. He concluded by moving the following resolution:—"That the Obstetrical Society of London having learned with deep regret the death of Dr. Tyler Smith, its founder, hereby records its sense of the loss this event has occasioned to this Society, to science and to humanity, and respectfully expresses its heartfelt sympathy with his widow and family in their affliction."

Dr. Madge seconded the resolution, and after speaking in very high terms of Dr. Tyler Smith's abilities and attainments, he mentioned some personal experiences and recollections as instances of the tact and firmness, combined with much kindness and consideration for the feelings of others, with which Dr. Tyler Smith when president was accustomed to preside over the meetings of this Society.

After passing this resolution, the Society, desirous to show in the most emphatic manner its respect for the memory of its founder, postponed its ordinary business and adjourned.

OBITUARY.

JAMES MILL, L.R.C.S. Edin.

By the death of Mr. James Mill, of Thurso, Caithness, we have lost one of our most devoted practitioners of Medicine. He studied at the University of Edinburgh, and when only nineteen became a Licentiate of the Royal College of Surgeons of that city. During his period of study he was apprenticed to Dr. Goodsir, of Anstruther (father of the late Professor Goodsir, of Edinburgh), who always regarded the late Mr. Mill as a brother. In 1827 he went to Wick, where for twenty years he practised his profession with great success. In 1848 he received a requisition from the inhabitants of Thurso to become their medical man, with which he complied; and for the last twenty-five years he has worked among them with an ardour and zeal seldom equalled and rarely excelled. He was Surgeon to the Halkirk Poorhouse, as also to three neighbouring parishes. His district extended over upwards of seventy miles, and whether by day or night, whatever the distance, he was always ready to go at the call of the suffering, and thus rendered himself, in every sense of the words, "the beloved physician." Not only did he devote himself to his practice, but his spare time was given to advance the interests of the town in which

he lived. He was elected chief magistrate in 1852. He retired from this office in 1860, but in 1865 he was re-elected, and for some years he acted as Sheriff-depute, which duty he always discharged with a liberal spirit and a desire for the good of his fellow-men. Last year the public showed their appreciation of his services by presenting him with a handsome carriage, timepiece, and silver tea-service. For the last six months his health has been failing; serious gastric symptoms evidenced themselves, and in spite of all the kind endeavours of his brother-practitioners both in Edinburgh and Thurso, he sank on the 27th ult., deeply regretted by everyone who had the honour of his acquaintance, and mourned as a friend and brother by those who had the privilege of his medical services. He was honoured by receiving a public funeral, the largest ever seen in Caithness, the coffin being borne shoulder-high by the rifle volunteers of Thurso, to whom the deceased was Surgeon.

MORITZ HEINRICH ROMBERG.

This distinguished Berlin professor was born at Meiningen in 1795, but at his father's death (in early childhood) came with his mother to Berlin, and received his education in the Gymnasia and University of that city. He received his doctor's degree in 1817, and in 1820 received an appointment as physician to the poor, which he held during twenty-five years. In 1830 he first commenced, as *privat-docens*, the academical career which proved so beneficial to the university. He was made extraordinary professor in 1838, and in 1840 became the director of the University Polyclinic, which he raised to so universal a reputation. He received an ordinary professorship in 1845, and continued to fulfil its duties with pride and honour until his death, except when impeded by gout, to which he became subject after his sixtieth year. The jubilee of the fiftieth year of his doctorate, held in 1867, was a most memorable event, calling forth as it did manifestations of honour and affection from former pupils and fellow-professors from all parts of Germany, and even beyond its limits. A few years before his death symptoms of disease of the heart manifested themselves, but did not prevent his fulfilling his duties until eleven weeks before his death, which took place on June 16, in the 77th year of his age.

It was, Dr. Waldenburg observes in a highly appreciative obituary notice in the Berlin *Wochenschrift*, in the province of the pathology of the nervous system that Romberg's celebrity was attained, founding it on the "epoch-making" discoveries of Charles Bell and John Müller in neuro-physiology. As the creator of this his name will always live in the annals of Medicine, and his "Lehrbuch der Nervenkrankheiten" is a classic monument of German medical science, which, as a source of instruction, is inexhaustible. Earnest intellectual work excites in others similar activity; and the various other provinces of knowledge will under the same discipline not long remain in the background, if the pulsations of a reinvigorated life have begun to manifest themselves. In this way the impulse of Romberg's creation excited productive emulation in other branches of practical medicine, constantly calling new productions into existence; and if a justifiable pride may be felt at the present position of German medical science—which during the first third of the present century was so incomplete and powerless, all of importance being derived from abroad,—it should never be forgotten that, before all, this is due to those men who first came forward, Romberg the most vigorous among them, with good original work.

EDMOND WATERS, L.R.C.P. Edin., etc.

We regret to record the death of this gentleman, which resulted from an accident. After making a call at a neighbouring village on Monday last, he was about to remount his horse, and had placed his hand upon the saddle for that purpose, when the animal suddenly started up, throwing the unfortunate gentleman to the ground with such violence that he died the next morning. Dr. Waters filled several public appointments. He was educated at University College.

SURGEON W. P. PALIOLOGUS

Died at Isleworth on the 5th inst. He was on the half-pay list. He entered the army September 1, 1854; became surgeon October 20, 1869, and retired upon half-pay April 13, 1872. He served with the 34th Regiment in the Indian campaign of 1857 and 1858, including the actions of November 26, 27, and 28, 1857, at Cawnpore, siege and capture of Lucknow, and relief of Azinghur; medal with clasp.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At examination meetings of the College held on Tuesday, Wednesday, and Thursday, July 8, 9, and 10, the licence to practise Medicine was granted to—

Atkin, Nicholas Edward.
Brereton, Joshua George.
Crowe, John Wainwright.
Keelan, Peter.
Loughnan, Michael.
M'Ganu, James.
Richardson, Henry Anthony Wills.

The Midwifery diploma was granted to—

Atkin, Nicholas Edward.
Crowe, John Wainwright.
Keelan, Peter.
Loughnan, Michael.
Richardson, Henry Anthony Wills.

It is proposed to elect three Fellows of the King and Queen's College of Physicians on St. Luke's-day, October 18. Five candidates have entered the lists to compete for the three fellowships—namely, Drs. Hawtrey Benson, Robert Cryan, George F. Duffey, Thomas More Madden, and J. W. Moore.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology, at a meeting of the Court of Examiners on the 15th inst., and when eligible will be admitted to the pass examination, viz.:—

Alsop, Thomas O. F., student of the Edinburgh School.
Clippingdale, Samuel D., of the London Hospital.
Cornilliac, John J. P., of the Dublin School.
Davies, Francis Thomas, of the Glasgow School.
Evans, Thomas D. F., of the Edinburgh School.
Howe, Lucien, of the New York School.
Jackson, George H., of the Liverpool School.
Job, John, of the London Hospital.
Mackenzie, John, of the Bristol School.
Martin, John H., of the Edinburgh School.
Morshead, Ernest G. A., of University College.
Needham, Joseph, of the London Hospital.
Rygate, Brougham R., of the London Hospital.
Smyth, John, of the Belfast School.
Stone, Herbert Stanley, of the Edinburgh School.
Wright, Newton W., of the Manchester School.

The following passed on the 16th inst., viz.:—

Ayres, James Wm., student of the Charing-cross and Guy's Hospitals.
Fox, Thomas C., of the University College.
Greenwood, Charles, of the University College.
Griffith, Thomas N., of the University College.
Harvey, Thomas P., of the London Hospital.
Hunter, Christian B., of the University College.
Jones, John D., of the University College.
Kesteven, Leighton, of St. Bartholomew's Hospital.
Moore, Charles A., of St. Bartholomew's Hospital.
Norman, Walter, of the Birmingham School.
Orchard, Thomas N., of the Aberdeen School.
Pearson, Alfred W., of the Birmingham School.
Sankey, Herbert R. O., of the University College.
Taunton, William W., of the University College.
Thompson, Harold, of St. Bartholomew's Hospital.
Tweedale, James T., of the Manchester School.

The following passed on the 17th inst., viz.:—

Barlow, Thomas C., student of Guy's Hospital.
Barrow, Lancelot A., of St. Bartholomew's Hospital.
Bass, Charles W., of University College.
Bernays, Herbert L., of St. Thomas's Hospital.
Brenchley, Algernon D., of Guy's Hospital.
Coates, William H., of Guy's Hospital.
Coley, Frederic C., of Guy's Hospital.
Collins, Floyd, of University College.
Gardner, Arthur J., of the Leeds School.
Gibbons, Robert A., of the Edinburgh School.
Jones, Charles A., of St. Bartholomew's Hospital.
Lacy, A. G., of Guy's Hospital.
Lequesne, Edwin J., of St. Bartholomew's Hospital.
Lilley, George H., of University College.
Maples, Reginald, of St. Thomas's Hospital.
Miskelly, William J., of the Liverpool School.
Norman, John Edward, of the Aberdeen School.
Palmer, Francis C., of the Bristol School.
Parkinson, George W., of St. Bartholomew's Hospital.
Pearce, Herbert D., of St. Bartholomew's Hospital.
Routh, Alfred C., of Guy's Hospital.
Sykes, John F. J., of Guy's Hospital.
Thomas, John H., of University College.
Traill, Mark W., of University College.
Watteville, Armand de, Baron, of the University College.

Apothecaries' Hall.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, July 10:

Hudson, John, Horsforth, Leeds.

The following gentlemen also on the same day passed their primary professional examination:—

Cree, William Edward, Middlesex Hospital.
Davies, Elijah Knox, Middlesex Hospital.
Dry, Herbert Bernard, Guy's Hospital.
Newton, Edward Shackfield, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ALEXANDER, JOHN, L.R.C.P. Edin., L.R.C.S. Edin., L.M.—Medical Officer to the Parish of Watten, Golspie, N.B.

AROLES, FRANK, M.R.C.P., M.R.C.S.—Medical Officer to the Schools at Leytonstone.

BRICKWELL, BENJAMIN ARTHUR, M.R.C.S., L.S.A.—Medical Officer of Health for the Rural Sanitary District, Amersham, Bucks.

CORBY, HENRY, A.B., M.D., M.C. Queen's Univ. Ire., L.A.H.I.—Resident Surgeon at the North Charitable Infirmary, Cork.

HAMILTON, A. MACLEOD S., M.D., M.R.C.S. Eng.—Assistant Medical Officer to the Workhouse, Brownlow-hill, Liverpool, *vice* Armand Bernard, L.R.C.S. Edin. M.B. Dub. Univ.

LAVER, ARTHUR H., M.R.C.S., L.S.A.—House-Surgeon at Sheffield General Infirmary, *vice* Mr. Arthur Hallam, resigned.

MACDONALD, JOHN, M.B. Glasg., C.M.—Parochial Medical Officer to Drymen and West of Stirlingshire.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The undermentioned officers have been promoted to the rank of Staff-Surgeon of the second class in her Majesty's Fleet, with seniority of the 7th inst. Henry Ricard, William Edward Dillon, George Mair, M.D., John Stephen Dobbyn, John Mulvany, John Lambert. Thomas A. O'Donnell, Surgeon to the *Rattlesnake*, additional for disposal. Septimus Evans, Surgeon, to the *Royal Adelaide*; Henry Beaumont, Surgeon, to the *Beacon;* John Mackie, Surgeon, to the *Ariel;* William A. O'Connor, M.D., Surgeon, to the *Cambridge*. S. Fisher, Staff Surgeon, second class, to the *Rattlesnake;* John T. W. Bremner, Staff Surgeon, to the *Duncan*, additional for services at Deal; Samuel S. D. Wells, Staff Surgeon, to Haulbowline Hospital; James N. Dick, Staff Surgeon, to the *Lord Warden*.

WAR OFFICE.—Army Hospital Corps: Apothecary to the Forces Ferdinand Fernande, to be Captain of Orderlies. Medical Department: Surgeon Edward Thomas Palmer is placed upon temporary half-pay.

BIRTHS.

CLOTHIER.—On July 9, at 7, Ridgmont-terrace, Highgate, the wife of H. Clothier, M.D. Lond., of a son.

LONGMORE.—On July 8, at Woolston, the wife of Surgeon-General T. Longmore, C.B., of a son.

PEARCE.—On July 7, at the Manor House, Brixton-rise, S.W., the wife of Chaning Pearce, M.B., M.R.C.S., L.S.A., of a daughter (Amelia Stancomb).

ROBERTS.—On July 10, at Eastbourne, the wife of Bransby Roberts, L.K.Q.C.P., M.R.C.S. Eng., L.S.A., of a daughter.

MARRIAGES.

AUSTIN—VINE.—On July 9, at St. Martin's-in-the-Fields, John Edward Austin, eldest son of James Austin, Esq., of Glastonbury Abbey, Somersetshire, to Ada Harriet, third daughter of George J. Vine, M.D., of 3, Henrietta-street, Covent-garden, W.C.

BLACKWOOD—DAVEY.—On June 10, at St. James's Church, Lahore, India, Captain and Bt.-Major G. F. Blackwood, Royal Horse Artillery, to Madeline Grantham, daughter of J. G. Davey, M.D., Northwoods, Gloucester.

CASSIDY—ANGUS.—On July 8, at the parish church, Sandhurst, Berks, David M. Cassidy, M.D., Broadmoor, to Helen, elder daughter of the late James Angus, Esq., of Inverkeithing, Fife.

FENTON—MACKAY.—On July 9, at St. George's Church, Kensington, Frank John, eldest son of John Fenton, M.D., to Anne Julia, third daughter of the late Hugh Mackay, Esq., of Liverpool and Quebec.

HINGSTON—HINGSTON.—On July 8, at St. Andrew's Church, Plymouth, George, son of Alfred Hingston, Esq., to Clara Gertrude, daughter of the late Charles Hingstou, M.D., of Seven Trees, Plymouth.

ROBERTS—THORNDIKE.—On July 3, at St. Simon's, Southsea, Warden H. E. W. Roberts, Assistant-Paymaster R.N. (Retired List), eldest son of the late John Isbell Warden Roberts, Surgeon R.N., to Diana E., youngest daughter of the late Lieut. Charles Alexander Thorndike, R.N.

ROMF-FIRTH.—On July 10, at the parish church, Stone, James Romf, Esq., of Stone, to Ellen, youngest daughter of the late John Firth, M.R.C.S. Eng., L.S.A., of Macclesfield.

SMART—BRYANT.—On July 15, at St. James's, Paddingtou, R. Lynn Smart, Lieutenant R.N., H.M.S. *Excellent*, son of the Rev. Prebendary Smart, rector of Burghfield, to Caroline Wentworth, youngest daughter of Walter Bryant, M.R.C.P. Edin., F.R.C.S. Eng., L.S.A., of 23A, Sussex-square, Hyde-park, W., and Highwoods, Burghfield, Berks.

DEATHS.

BRAMLEY, EMILY JANE, wife of Lawrence Bramley, F.R.C.S. Eng., L.S.A., Halifax, on July 9.

BROUGHAM, CHARLOTTE, widow of Stephen Brougham, M.R.C.S. Eng., L.S.A., at Falmouth, on July 12, aged 71.

HAMMOND, JANE, wife of George Hammond, M.R.C.S. Eng., L.S.A., Irthlingborough, Northamptonshire, and relict of George Fletcher, Esq., surgeon, Croydon, Surrey, at the residence of her brother, W. G. Marshall, F.R.C.S. Eng., L.S.A., Colney Hatch, on July 11.

LASSETTER, RICHARD, M.R.C.S. Eng., L.S.A., at Bramshall, near Uttoxeter, on July 13, aged 67.

MARTIN, EMMELINE HARRIET, only daughter of the late Charles Martin, of Twickenham, Middlesex, aud niece of the late Thomas Martin, Esq., Solicitor, Havant, Hants, at Havant.

PRIDHAM, THOMAS LAWRENCE, M.R.C.S. Eng., L.S.A., J.P., late Coroner for the Borough of Bideford, at his residence, Hyefield, Bideford, North Devon, on July 11, aged 70.

TODD, ARMSTRONG, M.B.T.C.D., youngest son of the late Charles H. Todd, Esq., Professor of Surgery, R.C.S.I., on June 3.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM, BOROUGH OF.—Surgeon to the Borough Prison. Applications, with testimonials, to Messrs. Gem and Hebbert, Magistrates' Clerk's Office, Moor-street, Birmingham, on or before July 21.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Candidates must be legally qualified. Applications, with testimonials, to the House Governor and Secretary, on or before July 26.

BOURNEMOUTH DISPENSARY.—Resident Surgeon. Candidates must b duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

BRADFORD INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to W. C. Woodcock, Secretary, 65, Market-street, Bradford, on or before August 4.

CHARING-CROSS HOSPITAL.—Assistant-Physician. Candidates must possess a degree from one of the Universities recognised by the General Medical Council, and be Fellows of the Royal College of Physicians of London. Applications, with testimonials, to Henry Woolcott, Esq., Secretary, on or before July 22.

CHESTER, TARPORLEY, &c.—Medical Officer of Health. Candidates must be legally qualified medical practitioners, and registered under the Medical Act of 1858. Applications, with testimonials, to Mr. Walker, Town Clerk, Chester, on or before July 24.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to John Binks, Esq., Hon. Sec., Wakefield, on or before July 21.

DERBY COUNTY ASYLUM.—Assistant Medical Officer. Candidates must be duly qualified in Medicine and Surgery. Applications, with testimonials, to John Barber, County Lunatic Asylum, Mickleover, Derby.

DERBYSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Applications, with testimonials, to the Secretary, 4, Victoria-street, Derby.

KING'S COLLEGE, LONDON.—Chair of Anatomy. Applications, with testimonials, to the Council.

KNIGHTON UNION.—Medical Officer for the Llanbister District. Candidates must be legally qualified medical practitioners. Applications, with testimonials, to Edward Hooper Deacon, Clerk to the Guardians, Knighton, Radnorshire, before August 2.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 24, Friar-lane, Leicester, on or before August 4.

LONDON TEMPERANCE HOSPITAL.—Visiting Physician and Visiting Surgeon. Candidates must be total abstainers. Applications, with testimonials, to Chairman of Managers, London Temperance Hospital, 112, Gower-street, W.C.

NORTH BIERLEY UNION.—Medical Officer of Health. Applications, with testimonials, to W. Lancaster, Esq., Solicitor, Bradford, Yorkshire, on or before August 4.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-UPON-TRENT.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before July 23.

NORWICH DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Treasurer, R. Chambers, Esq., Catton House, Norwich.

NORTHUMBERLAND CO. LUNATIC ASYLUM, MORPETH.—Assistant Medical Officer. Candidates must be unmarried, and duly qualified and registered. Applications, with testimonials, to Mr. Wilson, Medical Superintendent, on or before July 19.

PENRITH UNION AND LOCAL BOARD OF HEALTH.—Medical Officer of Health. Candidates must be legally qualified medical practitioners aud registered under the Medical Act of 1858. Applications, with testimonials, to W. B. Arnison, Clerk to the Rural Sanitary Authority, Penrith, on or before July 19.

SAFFRON WALDEN AND DUNMOW UNIONS.—Medical Officer of Health. Candidates must be legally qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to Wm. Thurgood, Clerk to the Rural Sanitary Authority, Saffron Walden, on or before July 19.

SEAMEN'S HOSPITAL, GREENWICH.—Visiting Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to Kemball Cook, House-Governor and Secretary, on or before July 21.

STRATFORD-UPON-AVON, ALCESTER, AND EVESHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to J. C. Warden, Esq., 11, Guildford-street, Stratford-upon-Avon, on or before July 19.

THIRSK UNION.—Medical Officer. Candidates must be legally qualified medical practitioners and registered under the Medical Act of 1858. Applications, with testimonials, to C. McC. Swarbreck, Clerk, on or before July 24.

WANDSWORTH AND CLAPHAM UNION.—Resident Medical Officer for the Workhouse and Infirmary. Candidates must be duly qualified. Applications, with testimonials, to John Sanders, Clerk to the Guardians, New Wandsworth, on or before July 26.

WOBURN UNION, BEDFORDSHIRE.—Medical Officer for the Aspley Guise District. Candidates must possess both a medical and surgical qualification, and be registered under the Medical Act of 1858. Applications, with testimonials, to the Clerk to the Board of Guardians, Woburn, on or before July 31.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Physician's Assistant. Candidates must be graduates in Medicine of a British University, or be possessed of such medical qualifications as are satisfactory to the Medical Committee. Applications, with testimonials, to the Chairman of the Medical Committee, on or before August 9.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. For particulars, apply to Mr. J. G. Buckton, Secretary, 9, High-street, Wrexham.

MR. R. H. LLOYD, Resident Medical Officer of Princes-road Workhouse, Lambeth, has resigned.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bideford Union.—The Bideford District is vacant; salary £30 per annum. Also the Workhouse; salary £25 per annum.

Manchester Township.—Mr. J. Westmorland has resigned the Cathedral District; salary 170 per annum.

Neath Union.—Mr. F. M. Russell has resigned the Eastern District; population 14,628; salary £45 per annum.

Norwich Union.—Mr. Wm. Summerhayes has resigned the Third District; population 10,262; salary £75 per annum.

Oswestry Incorporation.—The Llansilin District is vacant; area 18,173; population 3120; salary £52 per annum.

Woburn Union.—Mr. Thos. E. Trew has resigned the Aspley Guise District; area 7406; population 3334; salary £70 per annum.

APPOINTMENTS.

Dudley Union.—Thos. F. Higgs, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Dudley North District.

Goole Union.—Thos. H. Wagstaffe, M.R.C.S. Eng., L.S.A., to the Swineflect District.

Headington Union.—Thos. E. Blick, M.R.C.S. Eng., L.S.A., to the Otmoor District.

Hunslet Union.—Joseph M. Nicholson, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Workhouse.

Leeds Borough.—Mr. Thos. Fairley, F.C.S., as Analyst.

Liverpool Parish.—Armaud Beruard, M.D. Dub., L.R.C.S. Edin., to the Seventh District.

Lunesdale Union.—Wm. Wyllie, M.D., C.M. Univ. Glasg., to the Third and Fourth Districts.

Manchester Township.—John Williams, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Schools at Swinton; and Joseph Westmorland, M.R.C.S. Eng., L.S.A., to the St. Michael's District.

Portsea Island Union.—George Turner, L.R.C.P. Lond., M.R.C.S. Eng., as Analyst for the Borough of Portsmouth.

Preston Union.—Lawrence W. Spencer, M.R.C.S. Eng., L.R.C.P. Edin., to the Longton District.

Shipston-on-Stour Union.—Charles Wm. Morris, M.R.C.S. Eng., L.S.A., to the Campden and Mickleton District.

SUPERANNUATION ALLOWANCE.

Bath Union.—Mr. Wm. Hitchins, late Medical Officer for the Sixth District, has been granted a superannuation allowance of £26 13s. 4d. per annum, after fourteen years' service.

We are requested to announce that Mr. Lane's lecture on Tertiary Syphilis—unavoidably postponed on July 9—will be given at St. Mary's Medical School on Wednesday next, July 23, at 3 p.m.

The excellent health enjoyed by the troops on the march to Khiva the *Russian Invalide* attributes greatly to the substitution of tea for brandy as a regular beverage.

Cholera.—The telegram reports that the cases of cholera at Vienna are very few, and we may add that visitors there know nothing of it until they see the foreign papers.

Sensible Guardians.—Mr. Ward, a guardian, gave notice at the meeting of the Wakefield Board of Guardians, last week, that at their next meeting he should move that the Board refuse to prosecute any person or persons for neglecting to have their child vaccinated. This notice was received with laughter.

Insanitation in China.—There are cities in the North (says Mr. Harvey, of the China Inland Mission) where only one side of the main street can be used at once,—the other forming the receptacle for filth of all kinds, which in the hot summer sun bakes hard, when it is walked upon and becomes the walkable part of the road; whilst the other side is used by the neighbours along the respective streets to receive all conceivable filth for the next twelve months.

Royal College of Surgeons.—From the annual report of the receipts and expenditure at the above institution, which was submitted to the Council at its meeting on Thursday, it appears that in the year, from Midsummer-day, 1872, to Midsummer-day, 1873, the total receipts amounted to £13,311 16s. 5d., derived principally from fees paid for the diplomas of Fellow, Member, Licentiate in Midwifery, and Licentiate in Dental Surgery, which produced £10,713 7s.; rent of chambers and dividends on stock, £2061 1s. 6d.; elections to the Fellowship, Council, and Court of Examiners, £231. The expenditure amounted to £12,276 6s. 2d., or a balance of £1035 10s. 3d. in favour of the College. The largest amount in the disbursements was in fees paid to the Council, Courts of Examiners, and expenses incidental to the examinations—viz., £5067 8s. 4d.; followed by salaries and wages in the three departments of college, museum, and library—viz., £3314 16s. 9d.; for pensions, £353 12s.; taxes, rates, and stamps (exclusive of postage), £1034 1s.; lectures and oration, £265 11s. The following is a summary of receipts—viz., the College income, £13,021 0s. 3d.; trust funds, £290 16s. 2d.—total, £13,311 16s. 5d. The summary of disbursements for College purposes, £12,092 16s. 1d.; for trust funds, £183 10s. 1d., being a total of £12,276 6s. 2d.

NOTES, QUERIES, AND REPLIES.

He that questionetly much shall learn much.—*Bacon.*

John Forster, Esq., Mount Barker, New Zealand.—Letter with enclosure received.

Edwin T. F.—The third number of *Public Health*—article, "Hospital Reform."

Ralph.—The *Examiner*, July 12—"Spiritual Séances."

G. V. C.—Mr. Darwin has been rejected by 26 against 6 votes as Corresponding Member of the French Academy of Sciences.

M. C. S.—Dr. J. Simms, of New York, has been delivering a course of lectures on "Physiognomy and Physiology" in Edinburgh during the past fortnight.

Arts Examination.—The result of the recent preliminary examination for the diplomas of Fellowship and Membership of the Royal College of Surgeons has just been communicated to the numerous candidates.

F.R.C.S.—Mr. John Marshall will go out of office in July next, but of course will be re-elected. He occupies the chair vacated by Mr. Charles Hawkins, whose turn it would have been. Mr. J. F. South is the last surviving life-member of the Council.

Students, Br. Museum.—A small school manual of Comparative Anatomy and Zoology, by Dr. C. Carter Blake, of the Westminster Hospital School, will shortly be published. The preface will, it is said, be by Professor Owen, F.R.S.

Orion.—The mortality of the troops serving in the United Kingdom in 1871, by the statistical report just published, shows the deaths were 8·62. This is considerably less than the average of the last ten years (1861-70), which was 9·45. The mortality was lower than in 1870 at all the groups of stations, excepting the manufacturing towns and among the men detached from their corps.

A Ratepayer.—The Metropolitan Board of Works have directed their Works and General Purposes Committee to inquire and report to the Board what, if any, steps have been taken by the water companies to carry out the Metropolis Water Act, 1871, and the regulations of the Board of Trade under that Act.

The late Mr. Streeter.—We have received a letter from Mr. William Streeter referring to the obituary notice of his brother in our last issue. That notice he states contains "two inaccuracies." We give the corrections in his own words:—"He was born in Frith-street, Soho, and not in Drury-lane, where he never resided until about the years 1825 or 1826. He was not buried at 'Thornton's Heath,' but at Sanderstead, a rural, quiet little village about three miles south-east of Croydon."

Professional Examinations.—The following unpublished letter from Sir Astley Paston Cooper will, no doubt, be read with some interest at the present time; it is addressed to William Lynn, Esq., President of the Royal College of Surgeons, who filled that position in 1825-26,—the letter, which is undated, must therefore have been written at that time:—

"My dear Sir,—As I lecture this evening at eight o'clock, I cannot possibly attend the meeting at the College.

"My suggestions for the improvement of the examinations would be—

"1st. That each person should attend two evenings, and that the first evening he should be examined in Anatomy, and the second in Surgery.

"2nd. That each examiner should examine an individual applicant for examination instead of two persons as at present.

"3rd. That the person who examines in Anatomy should not examine the same individual in Surgery. I am, yours very truly,

"Astley Cooper.

"P.S.—If I can I will see you at nine o'clock."

Sir Astley Cooper was twice elected President of the College—viz., in 1827, and again in 1836.

Mr. Greenslade's Fracture Apparatus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have read Mr. Greenslade's letter in your issue of July 12, correcting errors which he thinks I am "evidently labouring under" respecting the above-named apparatus. The only error I may have committed is in thinking the space between the hinged side-splints unalterable, and this error is pardonable, considering the point is not mentioned in the description of the apparatus in your issue of May 31. I thought these side-splints were simply hinged to the back-splint, after the fashion of certain fracture-boxes of a former century. I now presume the hinges are made to traverse across the back-splint. With fixed hinges, the *free edges* of the side-splints could be made to lean towards each other when treating a small limb, but this would be objectionable on account of the pressure which would be exerted on the limb from before backwards. However, as I have intimated in my former communication, I do not consider hinged side-splints possess any "peculiar advantage" over unattached splints, and that even supposing the employment of hinges to be advantageous, the idea is an old one. That perforated metal splints are superior to wood splints in cases of compound fracture, or where moisture is applied to the limb, is very evident, but I am not aware we are indebted to Mr. Greenslade for these appliances, which have existed many years. I have occasionally used metal side-splints, and any surgeon, when using my apparatus, may do likewise; but it would be wrong to term such use one of the advantages offered. This is not a matter of mechanical construction. Mr. Greenslade speaks of *his* "suspending bar." Considering the above-named apparatus has only been introduced four years, and that a similar bar formed a part of my suspender in 1864 (a description of which appeared in the *Lancet* of February 24, 1866), this contrivance, also, can scarcely be termed a novelty. The few improvements I made a year or two afterwards

in my apparatus may be seen at the International Exhibition. As regards the power of the patient "to shift sideways"—or rather, I presume, to lie diagonally across the bed—whilst his leg is suspended in any narrow two-sided framework, fashioned like Salter's leg-sling, it must be very limited, and to do this he must first draw himself up in the bed so as to get the trucks near the upper end of the truck-rail, and he need then be careful not to slide down in the bed whilst in that position. As to adduction or abduction of the limb in an apparatus of this kind, or shifting the body sideways, there is no provision for such movements; a lateral swinging motion is all that can be obtained.

In sending this communication, which will be my last in this matter, I beg to remind you that in my first letter I avoided criticising the fracture apparatus reported on in your issue of May 31, having written simply in defence of my own invention. The subsequent correspondence arose out of your editorial note of the 21st ult. I am happy to say my suspender has been the means of saving limbs which were considered beyond the pale of treatment, and that it has met with the approval of some of the most celebrated surgeons of the day, one of them—Mr. Haynes Walton—having paid me a high compliment by describing it at a meeting of the Medical Society of London as "one of the best appliances of modern surgery." I have now great pleasure in adding the favourable testimony of your correspondent, Mr. George Greenslade.

I am, &c.,

Plymouth, July 12. HENRY GREENWAY.

COMMUNICATIONS have been received from—

Dr. PEACOCK; Dr. HANDFIELD JONES; Mr. E. LUND; Mr. J. CHATTO; Dr. CHEADLE; Mr. TEALE; Mr. BLOCKADER; Mr. T. C. WHITE; Mr. W. STREETER; Mr. GREENWAY; Dr. IRVING DE LISLE; Dr. ROYLE; Mr. D. ALEXANDER; Mr. LAVER; Mr. B. H. HERBERT; Dr. BAKEWELL.

BOOKS RECEIVED—

On the Influence of Digitalis on the Weak Heart of Typhus Fever, by Dr. Grimshaw—Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, vol. xvii.—Leishman's System of Midwifery—Pettenkofer on the Air in relation to Clothing, Dwelling, and Soil, translated by Hess—A Treatise on Pneumatic Aspiration, by Dr. Dieulafoy—Jagielski on Marienbad Spa—Physiological Action of Light, by Dewar and M'Kendrick—Life and Mind, by Robert Lewins, M.D.—Watson's New Operation for Anchylosis of the Elbow-Joint resulting from Fracture.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Pharmaceutical Journal—American Journal of Obstetrics, vol. vi., No. 1—Gazette Médicale—Gazette des Hôpitaux—L'Union Médicale—Le Progrès Médicale—The Colonial Standard and Jamaica Despatch—Le Mouvement Médical—La Tribune Médicale—La France Médicale—Journal of the Scottish Meteorological Society—Guy's Hospital Gazette—Gazette Hebdomadaire—Manchester Guardian, July 9 and 11—Chemist and Druggist—Canada Lancet—Bulletin Thérapeutique—Western Lancet—Medical Notes and Queries—Masonic Magazine—Grant College Students' Journal—Preston Herald—Medical Press and Circular—Allgemeine Wiener Medizinische Zeitung.

APPOINTMENTS FOR THE WEEK.

July 19. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

21. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

23. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

24. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

25. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

QUEKETT MICROSCOPICAL CLUB, 8 p.m. Annual General Meeting: Election of Officers and President's Address.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 12, 1873.

BIRTHS.

Births of Boys, 1142; Girls, 1075; Total, 2217.
Average of 10 corresponding years 1863-72, 2027·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	578	603	1181
Average of the ten years 1863-72	715·9	648·2	1364·1
Average corrected to increased population	...	...	1501
Deaths of people aged 80 and upwards	...	...	32

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	1	1	7	...	2	1	15
North ...	751729	...	...	2	1	6	1	1	2	21
Central ...	334369	...	4	1	1	3	...	2	...	9
East	639111	1	5	...	...	15	1	1	1	39
South	967692	2	12	2	2	5	...	4	4	16
Total	3254260	3	24	6	5	36	2	10	8	100

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·794 in.
Mean temperature	62·6°
Highest point of thermometer	81·9°
Lowest point of thermometer	49·7°
Mean dew-point temperature	53·3°
General direction of wind	S.W.
Whole amount of rain in the week	0·49 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 12, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending July 12.	Deaths Registered during the week ending July 12.	Temperature of Air (Fahr.): Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.): Weekly Mean of Mean Daily Values.	Rain Fall: In Inches.	In Centimetres.
London	3356073	43·0	2217	1181	81·9	49·7	62·6	17·00	0·49	1·24
Portsmouth ...	118280	12·4	87	31	79·4	48·2	60·5	15·83	...	...
Norwich	81677	10·9	57	30	79·2	49·0	61·3	16·28	0·40	1·02
Bristol	189648	40·4	125	72	75·8	50·7	59·0	15·00	0·13	0·33
Wolverhampton ...	70084	20·7	55	24	76·0	49·0	59·2	15·11	0·14	0·36
Birmingham ...	355540	45·4	258	107	75·6	48·3	59·0	15·00	0·04	0·10
Leicester	102694	32·0	77	36	82·2	46·0	60·9	16·06	0·17	0·43
Nottingham ...	89557	44·9	51	38	77·5	46·3	58·9	14·94	0·06	0·15
Liverpool	505274	98·9	364	223	75·0	48·4	58·3	14·61	0·32	0·81
Manchester ...	354057	78·9	255	176	78·3	49·3	60·5	15·83	0·69	1·75
Salford	130468	25·2	85	57	75·0	47·9	57·8	14·33	0·72	1·83
Oldham	85141	20·4	65	34	73·5	...	...	...	0·78	1·98
Bradford	156609	23·8	109	53	77·5	52·6	61·1	16·17	0·09	0·23
Leeds	272619	12·6	204	98	78·0	51·0	60·2	15·66	0·05	0·13
Sheffield	254352	11·1	195	102	...	...	...	...	...	...
Hull	128125	35·9	91	62	79·0	50·0	60·9	16·06	0·35	0·89
Sunderland ...	102450	31·0	50	28	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	90	55	73·0	50·0	57·7	14·28	0·08	0·20
Edinburgh	208553	47·1	114	82	65·4	53·3	60·2	15·66	0·30	0·76
Glasgow	498462	98·5	380	240	66·7	48·8	58·1	14·50	1·01	2·57
Dublin	314666	31·3	158	158	71·9	44·3	58·1	14·50	0·64	1·63
Total of 21 Towns in United Kingd'm	7507575	34·5	5087	2887	82·2	44·3	59·7	15·39	0·36	0·91

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·79 in. The highest was 29·98 in. on Wednesday morning, and the lowest 29·57 in. at the end of the week.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON TWO CASES OF ACUTE PHTHISIS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

W. R., aged 22, worker at coachmaking, admitted August 6 1869 [2227]. Felt quite well yesterday morning; about 6 p.m. was taken with spitting of a little blood; soon after this he began to retch and vomit blood: he brought up half a pint, he thinks, at once. He turned faint, but did not become insensible. Before this he had been spitting a little blood with cough for a week. During the seventeen hours after his admission he spat up very little. Pulse (on 7th) 90, soft, regular. Good resonance and good full breathing in both fronts; expiration much prolonged at right upper front. In left back there are some dry sounds at upper part; at base some obscure crepitation. In right back at lower two-thirds the vesicular breath-sound is very weak, the air enters imperfectly, and on a deep inspiration high-pitched tube-sound is heard. At upper third of back the breathing is more free. No dulness in either back. Heart's sounds quite normal. Bowels open. Temperature 98·8°; respiration 30. No indigestion. All his family very healthy. Plumbi acetet. gr. ij., opii gr. ss., in pil. ter die. Ice, 2 lbs. Broth.

August 8.—Was much the same. Had only spat up several bloody coagula while I was in the ward; but soon after (3.30 p.m.) he was taken with severe dyspnœa, without much cough. He was dry-cupped, and had some ice, and it ceased in about fifteen minutes. He did not sleep much in the night.

9th.—This morning he was pretty quiet: said he was pretty comfortable; but about 1.30 a very severe paroxysm of dyspnœa came on, for which he was cupped to about four ounces with much relief. Before the cupping was performed he was quite cyanotic. I saw him before the cupping was concluded, and found the pulse 158, sharp. He had expectorated several ramifying coagula, evidently moulded in the bronchi. He complained of being unable to get his breath, from a sense of oppression at the right front. There was dulness at the left posterior base, and some way higher up. The breathing almost everywhere was weak and imperfect. The heart's sounds were not clear, but without distinct bruit; its action was struggling. Respiration 56. Pulv. ipecacuanhæ gr. xxx. was administered in three doses, and vomiting was produced. Shortly after he became better. His pulse was about 120; respiration 44.

10th.—Night not good—much cough. Has brought up a good deal more blood in black lumps. His breathing, he says, is a great deal easier. Dulness at lower half or more of both backs, and breath-sound very weak, but scarce any râle. In the fronts the breath-sound is fairly free—better in the right than in the left. Has taken his food to-day better than he has yet. The ramifying casts brought up yesterday consisted to a great extent of decolorised fibrine, of healthy appearance, containing but few corpuscles, some fibrils. He has begun ext. ergotæ liquid. ℥ j. 3tis horis. Ordered to repeat the ipecacuan until vomiting is produced.

11th.—Faints away on very slight exertion; has done so several times since last evening. Gets very dark in the face at times. At 4 a.m. had another attack of dyspnœa, which lasted two hours. Breathes now with difficulty. No sleep. Face flushed; lips of good colour. Pulse 102, jerky, not apparently weak; temperature 103°; respiration 44. Ergot omitted. Acidi gallici gr. xv., glycerinæ ℥ j., aquæ ℥ j., o. ½ horâ.

12th.—Pulse 102, of fair force; temperature 103°. Has brought up but little more blood. The sputa are reddish and watery, with lumps of blood coagulum as before, and with a greenish tinge. Some syncope now and then. Has had no paroxysm of dyspnœa. Has port wine—four ounces.

13th.—Pulse 100, of good force; temperature 102·2°. No syncope; has spit up much less blood.

14th.—Pulse 102, compressible, jerky; temperature 102·9°. Resonance in both backs impaired; breathing weak, very deficient, attended with sonorous and half-moist râles; eyes bright; sputa more mucous; urine clear, high-coloured, sp. gr. 1024, gives a notable dark precipitate with liq. ferri murias. He is nervous and restless; does not like to be alone.

15th.—Loses himself, and wanders at times; feels giddy. Sputa dark-stained, more mucous. Temperature 103·3°; pulse 100, small and weak. Reptr. mist. 2dis horis.

18th.—Pulse 105—hand feels cooler; temperature 103·3°; respiration 33. Sputa scanty, mucous, with some dark-green masses; urine clear, sp. gr. 1023, strikes an inky black with liq. ferri murias. Still rambles at night. Two or three suspicious spots, like typhoid flecks, on chest.

19th.—Wandering decidedly to-day. Pulse 107, soft; temperature 103·3°. Asks for more food—fish.

20th.—Loud, clear breathing below right clavicle; below left abundant expiratory moist râles. In both backs there is heard a great deal of moist râle. Quin. disulph. gr. v., acid. q. s., aquæ ℥ j., 4tis horis. Temperature 103°.

23rd.—Pulse 108; respiration 36; temperature 101·5°. Sputa scanty, yellowish. Tongue inclined to be dry.

26th.—Expectorates ordinary muco-pus. Temperature 103·3°; pulse 146; respiration 48. Urine of natural appearance, not albuminous. Bowels rather loose.

28th.—Patient died.

Autopsy.—A large cavity at left apex; the greater part of left lung occupied with masses of greyish-whity solid tubercle, and with separate tubercles. The vast majority of the masses and tubercles showed no traces of softening. In the right lung there were numerous tubercles, but they were not aggregated into masses as in the left, and there was no cavity. The process was evidently much less advanced. Lower lobe of right lung was of dark purple colour, containing very much blood and some tubercle. Lower lobe of left was filled with tubercle, but was not so dark and hyperæmic as that of the right lung. A small tubercle from a part where there were but few, showed a limited deposit blocking up the air-cells. This consisted of abundant finely granular matter with nuclear corpuscles, most of them spherical and small, not bigger than a red blood-globule; some larger and more or less fusiform. The adjacent air-cells exhibited their homogeneous membrane distinctly, beneath which were numerous corpuscles not unlike those of the tubercle. The masses of tubercle taken from a part where the process was most advanced were evidently not made up simply of aggregated spherical tubercles, but were formations of very various shape and size, consisting, however, of quite the same material as the smaller isolated tubercles. This material did not contain any large granular cells, and seemed to be very different from inflammatory exudation. Heart unusually pale, thin, and flabby; weight 9 oz. Small intestines much inflamed with greatly enlarged mesenteric glands. Kidneys normal; left weighed 6½ oz., right 5½ oz. Left was much paler than right.

The above case may be fairly reckoned one of galloping phthisis. The man was fairly well at the beginning of August, and was dead before the end of the month. He seems to have had no hereditary tendency to the malady, but I do not think this point was sufficiently inquired into. If none of his family had suffered from chest disease, they might have from strumous joint disease, or other similar. His first symptom was hæmoptysis, which, beginning gradually, came on after some days with great severity, and well-nigh killed him outright. No definite cause can be assigned for it, but it is worth notice that there was great tendency to syncope, much more than the mere loss of blood can account for. At the post-mortem the heart was found unusually pale, thin, and flabby. It seems as if the cause which produced leakage of the small vessels produced weakness of the heart also. The hæmorrhage persisted, in spite of a fair trial of acetate of lead, ipecacuanha emetics, cupping, and full doses of ergot; but yielded, or at any rate ceased, under the administration of gallic acid *à haute dose*. The system was well saturated with the drug, for not only were the sputa rendered dark green by it, but the urine was turned to dilute ink when muriate of iron was added to it. The temperature on admission was nearly normal, but before the hæmorrhage had ceased it had risen to 103°, about which figure it remained to the close. Why did it rise? The hæmorrhage would not raise it, but have the contrary effect. The presence of tubercle masses not undergoing softening does not seem a very likely cause. Was it, then, the irritation produced by blood which had been effused or drawn into the air-cells? This is recognised as a cause of inflammation by Niemeyer, Baümler, and Weber, as it had been by physicians before the time of Laennec. Weber, however, objects to Niemeyer's statement as going too far when he says that most cases of hæmoptysis are followed by more or less violent irritation of the lungs and pleura. He tells us that five out of nine

cases of more or less severe hæmoptysis, which he watched carefully during at least ten days after the occurrence of the bleeding, presented no rise of temperature or other sign of pleuro-pneumonia (*Clin. Soc. Trans.*, ii., p. 153). I do not deny the possibility of the hæmorrhage exciting inflammation and fever, but I think there is much need for us to be on our guard against *post hoc propter hoc* conclusions when we find the supposed cause so often not followed by the expected effect. Not only in such instances as Dr. Weber has noticed is pneumonia often awanting, but in cases of pulmonary apoplexy from cardiac disease this seems still oftener the case. Moreover, I should feel great difficulty in admitting that the cheesy masses, which were so large and numerous in this instance, had resulted in so short a time from changes in extravasated blood, or in exudation produced thereby. They were certainly very unlike ordinary inflammatory products. Again, if we look at our other case, we find a very considerable amount of broncho-pneumonia existing without any hæmoptysis, and with a much smaller amount of tubercle. What caused the fever in this instance is not easy to say,—at any rate, not hæmoptysis; but whatever the unknown cause may have been, it seems no unreasonable assumption that it may have been the efficient fever motor in the first case also. It may be noted that two or three spots resembling those of typhoid were observed on the chest, though of course much stress cannot be laid on this single observation. Death evidently occurred from asthenia, as in low fever. Quinine given in full doses lowered the temperature 1·5° F., but had no beneficial influence otherwise. The autopsy showed the existence of muco-enteritc, with an abundant formation of cheesy tubercle in the lungs. This certainly appeared to be primary.

Case 2.—J. H., aged 28, admitted October 8, 1871. Was in good health up to two weeks ago; caught a cold, had shivering, and became feverish and thirsty, with a troublesome cough. At the end of a week he got worse, and had to go to bed. He has lately lost his wife, and had some young children left on his hands; in fact, has suffered mental distress. He is lying on his back towards his left side; his face is rather dusky; his aspect dull and heavy, like that of a man in fever; no eruption. Temperature 99·4°; respirations 40; pulse 84. Breathing abdominal; some dulness in both subclavicular regions; moist râles are heard here and throughout both fronts, indicating the presence of mucus in the smaller and medium-sized bronchi; the vesicular sound is much impaired —nearly lost. Both backs are dullish, the right rather the most, and moist râles are heard all through both. Tongue dry and coated. His temperature on the 10th was 105·4°; pulse 136; respirations 48; both radials compressed by 300 grammes. On the 11th the temperature was 105°. 12th: Face very dusky, lips tumid and bluish, and no expectoration; râles as before; lies down completely; temperature 103·6°. 13th: Pulse 123; left radial compressed by 192 grammes; respirations 39; temperature 103·6°. Tongue very dry; auscultatory signs much the same. Died at 9 p.m. of 15th. Was very dusky all day, and drowsy, but quite sensible. Temperature 104°; pulse 144; respirations 44, and laboured last day of life. The treatment employed was stimulant, brandy being given in doses increased to eight ounces daily.

Post-mortem.—Lungs highly congested and extensively consolidated, their upper and posterior parts presenting much the appearance of red hepatisation. The cut surface presented a multitude of little elevations, which were hardly to be pronounced tubercles off-hand, though one bystander immediately recognised them as such. In thin sections prepared for the microscope minute semi-pellucid whitish spots were seen, surrounded by congestion, but apparently devoid of vessels themselves. In one of these the deposit appeared as soft, pinky, granulous, and amorphous matter, quite devoid of corpuscles. After hardening portions of the lungs in chromic acid solution, I made a careful examination, and obtained distinct proof both by the naked eye and microscope of the presence of numerous minute tubercles. They consisted of a granulous basis matter, embedding feebly formed corpuscles. The tubercle masses were of various size, and evidently infiltrated the tissue, usually blocking up the air-cells. The bloodvessels were all full, even most of the minuter except the capillaries. The bronchial glands were not enlarged. The heart, spleen, liver, kidneys, and intestines were normal. The mesenteric glands were enlarged; two or three of them were as large as a walnut or nut, others about the size of a pea. The cut surface of the larger showed a whity, dense, opaque substance, much more consistent than that of cheesy masses, and rather resembling scirrho-encephaloid. The largest presented some small spots of caseous matter. Microscopically the enlarged glands exhibited only the normal structure of lymphatic glands—*i.e.*, nuclear corpuscles, embedded in a fibrous stroma, and canals, traversing the parenchyma, apparently without definite walls.

Remarks.—The course of this case was very rapid; death occurred in three weeks after the setting in of acute symptoms. Before this time he seems to have been healthy, and I presume was so structurally, with the exception of his mesenteric glands. These underwent chronic change, apparently primary, which marks him, to my thinking, as the subject of a strumous diathesis. The small spots of caseous substance in some of the glands will no doubt be regarded by some as the source of the infectious matter which produced the general malady and the miliary deposit, but I cannot assent to this view while cheesy masses are so often met with unattended by symptoms of infection. I quite agree, however, with the view held by Buhl, so far that I think the disorder in acute tuberculosis is the result of some infective material having entered the blood, though it seems very difficult to form an opinion as to what it really is. The great similarity, however, of the resulting condition to that existing in enteric fever suggests that it may be a miasm closely related, though not identical, with that which produces typhoid. I have long been inclined to think that enteric fever is by no means so specific and well-defined a malady as it has been commonly held; and though I do not mean to intimate my complete acceptance of Dr. J. Harley's views—viz., "that enteric fever and all its attendant phenomena may occasionally become a part of almost any other more general inflammatory condition, specific or simple,"—I think that they have really a foundation of truth.(a) In one respect the two cases I have related contrast strongly—viz., in the amount of tubercle discovered on dissection. In W. R. it was very large; in J. H. very small. Yet both cases ran a rapid course; the temperature in both was barely morbid at the time of admission, and rose afterwards. In W. R. the physical signs on first examination by no means indicated the existence of any large amount of tuberculous deposit in the upper parts of the lungs. If any connexion subsists between the abundant formation of tubercle and the profuse hæmoptysis, the cause may be found in this—viz., that hæmorrhage implies a loss of the natural retentive power of the vessels, which, though checked by the astringent so as to prevent the escape of the red corpuscles, still persisted for the phthinoplasms (as Dr. C. J. Williams calls them—the degenerate leucocytes), which therefore emigrated readily and produced the tubercle. It would be needful, however, to show a frequent correspondence of this kind to substantiate the hypothesis. At any rate, we may remember that acute tuberculosis may occur in either of these forms—viz., with copious or scanty production of tubercle, though some, I suppose, would not regard W. R.'s case as tuberculosis at all, but what they call "cheesy pneumonia." From this view I must dissent.

Much stress has been laid upon the fact that tubercular growths, and those disseminated, can be produced in rodents, especially in guineapigs, by the irritation of a mere seton, without any inoculation at all. The notion of tubercle as a specific growth is considered to have been well-nigh overthrown by these observations. Dr. Bastian, however, entertains doubts whether it be safe to conclude from what occurs in guineapigs that the same occurs in man; and I share his dubitation—especially for this reason: that in man similar irritations are constantly being produced without such effects ensuing. Think of the common impetigo pustules, the whitlows, the abscesses, the suppurations connected with diseased bone, the empyemas, and many like conditions, where common pus is generated and retained for a longer or shorter time, and might most easily infect the system if *per se* it were capable of giving rise to tuberculous formations. Yet surely we have no reason to think that such lesions have any power to set up acute or chronic tuberculosis in an otherwise sound and not predisposed system. Fistula in ano is believed by no mean authorities to have a preventive influence on the development of phthisis. The late Dr. Seymour mentioned an instance to me where six out of seven children of a family had died of this disease, the survivor having a fistula in ano. Schönlein in his "Vorträge" says—"So long as the latter is present the chest affection remains quiescent; but now comes in a surgeon delighting in operations,—he operates, and cures the fistula: this is at first a

(a) *Vide Med.-Chir. Proc.*, vol. vii., p. 18.

matter of rejoicing and congratulation, but three or four weeks after the chest affection starts afresh, pulmonary phthisis developes itself with great rapidity, and the patient succumbs." Whether fistula in ano has this preventive power or not, it can scarcely be held that it produces phthisis, and therefore may well be added to the list above given. The following passage from a paper by Dr. Goodhart (*Edinburgh Medical Journal*, October, 1871) is also very apposite to this topic; I had quite forgotten it until some days after writing the above I lighted on it again:—"But if it be the fact that caseous and suppurating deposits are liable to set up a tuberculosis, we shall find, it may be said, in surgical wards a large amount of such disease. Is this so? Several hospital surgeons have told me that it is not so very common, and this opinion is borne out by post-mortem records; for of 147 cases of joint disease with prolonged suppuration inspected at Guy's Hospital during the last seven years, I find only thirty-three, or less than a fourth, were affected with tubercle." Also, as to the constant dependence of miliary tubercle on pre-existing cheesy deposits, Goodhart finds among 166 cases of tuberculosis in the post-mortem records at Guy's Hospital for 1868-69, that eighty, or nearly half, have no mention of any suppuration or cheesy glands, or anything of the kind. Among my notes I find mention of a male dying with disease of supra-renal capsules; these organs contained a whity deposit partly firm, partly softened and disintegrating; no miliary tubercles anywhere. Such instances I take it are common. This evidence seems to me quite sufficient to outweigh that derived from experiments on rodents, and therefore this objection—the gravest yet made to the specific quality of tuberculous phthisis—falls to the ground.

As to the anatomical diagnosis of tubercle, which has been thought by some so very uncertain, I believe in the vast majority of cases it presents no serious difficulty. A firm, roundish, well-defined mass of the size of a small shot, made up of ill-developed nuclear corpuscles closely crowded together and blended with a varying amount of granular and fatty matter, represents to me a tubercle. The distinction between this and the inflammatory exudation-cells — much larger and often nucleated,—which are frequently very abundant in the adjacent air-cells, is as marked as can be. Even in cases of grey hepatisation, where the exudation product consists solely of much smaller corpuscles, like those of pus, there can be little difficulty in perceiving the difference between this diffused product and a tubercle mass. The action of acetic acid on the two kinds of corpuscles would separate them sufficiently. Moreover tubercle, however small, is always infiltrated, while inflammatory products occupy the alveoli. I hold with Dr. Wilson Fox and Dr. Moxon that there is no histological distinction between yellow caseous tubercle and the grey granulation. The larger masses have the same structure as the smaller, only that they are more prone to contain the *débris* of tissues and of inflammatory products. If now we add that tubercle is devoid of vessels and tends speedily—in consequence probably—to decay, we have a list of diagnostic features which are quite sufficient, I believe, when well marked, to enable us to recognise it with great certainty. Certainly it cannot be confounded with ordinary acute inflammatory exudation; certainly not with any kind of cancer, with amyloid deposit, hydatids, fibroids, sarcomata, or myxomata. As to lymphatic overgrowths in the liver of leucocythæmatic subjects, they are so rare, in comparison with tubercle, that we need not shudder at the confusion likely to ensue from including them, even if the state of the blood did not at once distinguish the one pathema from the other. But I do not think we ought to conceive of tubercle as always of a typical kind, and I am quite disposed to believe that there are various grades which approximate to common fibroid induration material on the one hand, and on the other to grey hepatisation, or to a state where the consolidating material consists of small pyoid corpuscles instead of large nucleated cells. That grey hepatisation may occur primarily from acute inflammation the following case shows, and that it may occur similarly from chronic inflammation I have little doubt, when the system is under the sway of the tuberculous diathesis. It is of such cases, I believe, that Dr. Bennett writes—"Discussion has taken place as to whether such cases should be denominated chronic pneumonia or phthisis. In my opinion there is no difference between them. The exudation of the pneumonia degenerating, and not being absorbed, is transformed into tubercle, causing softening, ulceration, and destruction of the lung, in exactly the same way as if phthisis had been developed from tubercle at the commencement." The only point I question in the above passage is that the exudation is transformed into tubercle, although this quite corresponds with Laennec's statement as to the conversion of grey and jelly-like tuberculous infiltrations into yellow tuberculous matter. I should prefer to say that the exudation was transformed into matter behaving like tubercle, though perhaps not presenting the same histological features. But this is a small matter, and I think Dr. Bennett comes much nearer the truth than sundry German-worshippers when he says—"Transferring or limiting the term tubercle to the accidental granule, and calling the general and essential morbid product chronic inflammation or adenoid growth, constitutes no real advance in pathology. What we have from the first maintained is that we have to do with a *tubercular exudation*, which differs from an inflammatory and cancerous exudation in its low vital energy and diminished power of transformation into cell-forms, and that this is the essential ment of phthisis pulmonalis." (b)

The case of grey hepatisation above alluded to is as follows:

E. W., about mid-age, a hard-drinking man, discharged from his work for misconduct, threw himself into the canal. He was got out alive, but died in forty-eight hours from the effects of the immersion. A very large part of both lungs was in a state of grey hepatisation, sinking in water, and of a very faint pinky-grey colour. Examination with the microscope showed the air-cells more or less filled and blocked up with corpuscles, which were remarkably uniform in size and appearance, and were essentially the same as pus or mucus globules. There were no glomeruli, no large nucleated celloid particles; the membrane of the air-cells was normal. There was scarce any trace of blood. The point which I wish to lay stress upon is, that the hepatisation must have been grey—puriform—from the first. And so I think, in a predisposed state of system, and with a process of slower course, the consolidation might have been of tuberculous quality from the first. Such a condition would correspond to Rokitansky's description of infiltrated tubercle, "which arises (he says) from a more or less extensive croupous pneumonia, whose products . . . become variously discoloured and converted into yellow tubercle instead of being absorbed or dissolving into pus."

Next as to the process by which the tubercle or cheesy mass is produced. Rindfleisch ("Patholog. Histol.," ii., p. 30) regards the grey granulations as broncho-pneumonic foci, whose walls are infiltrated with cells and pass uninterruptedly into the catarrhal infiltration of the surrounding alveoli. Following Virchow, he traces many cases of phthisical destruction of the lungs to a primary catarrhal affection of the mucous membrane of the bronchi, especially of those which ramify in the upper lobes. "This catarrh is characterised partly by its singular obstinacy and tendency to recur, partly by the never-failing enlargement of the retro-bronchial glands." Here it seems to be admitted that there is something special about the catarrh: it affects the upper regions of the lungs, while ordinary catarrh affects the lower; it is singularly obstinate, and is attended constantly with scrofulous enlargement in the related lymphatic glands. These are very material distinctions. Niemeyer, on the other hand, confidently asserts that every form of pneumonia may, under certain conditions, terminate in cheesy infiltration; and there is no form of pneumonia of which cheesy degeneration is the constant and only result. He thinks that the creation of a tubercular or cheesy pneumonia from the beginning of a special kind is quite a mistake, and threatens us with fresh confusion. In common acute pneumonia, however, he admits this termination is rare; in chronic catarrhal it forms almost the rule. This latter disease, he says, is one of the very commonest,—a statement which seems to me sufficiently startling, and utterly opposed to my own experience. In fact, I know of no such morbid state unassociated with tuberculous or cheesy deposit, except those conditions of induration of the lung of inflammatory origin, so well described by Dr. Addison. These, according to his account, may occur quite unassociated with any tubercle, may give rise to cavities, and produce a very exact symptomatic picture of phthisis. He says if he were to give an expressive name to tubercular phthisis it would be scrofulous pneumonia. He distinguishes pneumonic phthisis, tuberculo-pneumonic phthisis, and tubercular phthisis. In the first the disorganisation of the lung results from mere inflammation and its consequences; in the second, which is very common, although tubercles are present, the really efficient

(b) Reynolds's "Syst. of Med.," vol. iii., p. 553.

cause of the phthisical mischief is pulmonary inflammation; the third is characterised by a preponderance of asthenic compound tubercles—*i.e.*, of cheesy masses much more prone to disintegration than the grey. Dr. Addison closes one of his essays with the proposition that "inflammation constitutes the great instrument of destruction in every form of phthisis." He was by no means regardless of the influence of the state of the system on the results of inflammation, and uses the terms "strumous" and "scrofulous" to designate that in which the symptoms evoked are those of pulmonary phthisis. To return now to Niemeyer, who evidently has trod in Addison's footsteps. True, tubercles, according to Niemeyer, in the majority of cases are secondary formations, originating in some unknown way in the action of cheesy morbid products on the organism, these products being situated in the lungs or elsewhere. Buhl holds the same view, and considers that the etiology of acute miliary tuberculosis is to be explained by the theory of infection, the infectious matter being derived from pre-existing cheesy centres. He admits, however, that they may be developed independently of such centres as the result of a primary tubercular inflammation. Buhl further admits the existence of a constitutional predisposition as lying at the root of tuberculosis as well as of desquamative pneumonia. Dr. Hughes Bennett, while fully admitting in some cases the influence of lung inflammation, holds, as a general conclusion, that the great cause of tubercle is weakness of constitution, or diminished vital power, however produced. Dr. Moxon believes that all phthisis is tuberculous—he does not know active phthisis without tubercle. He thinks it contradictory to the certain evidence of facts to say, with Niemeyer, that the early stage of phthisis is catarrhal pneumonia. He holds it certain that the initial stage of chronic phthisis is not a diffused disease, such as catarrhal pneumonia is. Instead of this it is a small circumscribed patch. However early phthisis is seen, there are the tubercles; nay, the more early chronic phthisis is seen, the more purely tuberculous it is. However phthisis first begins, it does not attain one inch in extent before it has tubercles present in it. In one instance under my own care, the limitation of the morbid process at the outset was very marked, though subsequently it became much more extensive, and ended fatally in about ten months. The pulmonary expansion was very full and free everywhere, and free from râle except in the right apex, where, especially posteriorly, there were distinct and rather small crepitations.

To bring this discussion to a close, I would say that it seems to me as reasonable to ascribe phthisis with its tubercles, cheesy masses, or infiltrations to ordinary non-specific inflammation, as it would be to ascribe syphilis or gout with their lesions, or psoriasis, or lupus, to the same cause. In all these pathemata there is inflammation; but there is something more, and that something is all-important to a true pathology.

The chief points in debate may be comprehended in the answers to the following questions:—(1.) Is inflammation *per se* an adequate faction of phthisis, or must it be inflammation occurring in a peculiar state of system and giving rise to a peculiar product? (2.) Can tubercles or cheesy masses be formed without any pre-existing inflammation? (3.) Is the deposit of tubercle essential to constitute the condition termed phthisis? (4.) Can a diffuse induration consolidating a lung be regarded as the equivalent of tubercle, capable of undergoing the same changes, and of affecting the system in the same way? To the first, I reply that without a special state of system inflammation does not produce phthisis, but that in a predisposed system it may precipitate it very greatly. To the second, that in very many instances, perhaps the majority, tubercles are deposited without any pre-existing inflammation as the result of deterioration of the health. To the third, that, as a rule, tubercles, large or small, are essential to the production of phthisis. To the fourth, that in comparatively rare cases a diffuse induration may act as the equivalent of tubercle. These indurations may mostly be distinguished by the following features:—They are more apt to be one-sided, to involve the lower parts of the lungs, to be attended with a lower temperature, to be more chronic, and to affect the general system less injuriously than tuberculous formations.

If the answers returned to the above queries had little or no bearing on practice, we should not need to attach so much importance to them. But you will see immediately that this is not the case. The practical outcome of Niemeyer's views is very apparent in his directions for the treatment of ordinary phthisis (*vide* pp. 65, 66, "Lectures on Phthisis," Syd. Soc. Translation). "Let any one (he says) make the experiment of having patients with the supposed signs of a commencing pulmonary tuberculosis strictly confined to their beds for a time, forbidding them all unnecessary talking and coughing, covering their chests with poultices, ordering a local abstraction of blood by leeches, or cupping on the first appearance and on every recurrence of pleuritic pains, and he will soon satisfy himself that many a patient gets well who would formerly have been assumed to be the subject of tuberculosis, and therefore incurable (*vide* p. 65). . . . The treatment just alluded to (he continues) must also be urgently recommended for the exacerbations which occur in the course of a chronic pulmonary consumption with symptoms of more intense pyrexia. . . . We can prove (says Niemeyer) by a great number of recorded cases how great even in such conditions is the influence of a treatment which takes into account the inflammatory nature of the lung disease. In the clinique at Tübingen, which principally gets its patients from the population of the neighbouring villages, it is common for phthisical patient to be during several years repeatedly admitted for a short time. In these cases it is of quite frequent occurrence that in the few weeks during which they stay in the hospital and are treated in the above manner, the fever, the debility, and the emaciation which on their admission have often reached such a degree that the worst might have been anticipated, completely disappear, and that the patients themselves ask to be discharged in order to return to their occupations."

My experience of the effects of hospital residence on phthisical patients is sadly unlike Niemeyer's. Real improvement is quite the exception; deterioration rather the rule. Commend me, if I had phthisis, not to Niemeyer's treatment of lying in bed with leeches or poultices on my chest, but to Sydenhem's, of daily riding on horseback, which he says is all in all—"Do this and you may neglect the rules of diet, and deprive yourself of no sort of meat or drink." Dr. Bennett has known several young men on large sheep-farms in Australia cure their tuberculous lungs by eating fat mutton and galloping about on horseback. He says—"It is now twenty-five years ago since I became convinced of the injury of shutting up patients in their rooms during winter and regulating the temperature, as was formerly the custom. A young man with cavities in his lungs, who had borne confinement in this way tolerably well for a winter, found it so irksome on a second trial that on one occasion he went out and walked to the top of Arthur's Seat. Instead of being worse, he ate his dinner that day with appetite, all his symptoms were moderated, and under the combined influence of pure air and exercise he ultimately worked out a perfect cure, and is now alive and in good health." Dr. Stokes's case of recovery under a prolonged course of duck-shooting, involving frequent wading in water, is to the same purpose. No doubt there is risk of exasperating pulmonary inflammation by exposing phthisical patients to chill, damp air, but they will not escape catarrhs (influenzal) by any amount of confinement to warm rooms, and they certainly suffer injury by breathing deteriorated air. On the whole, as it has been well said, there is more danger in staying in the house than in going out.

Death of Dr. Berend.—Geh. Sanitsrath Dr. Berend died on June 25 at Berlin, in which city he had practised with great success as a surgeon during forty years. Formerly an assistant of Dieffenbach, and then surgeon to the Jews Hospital, he became famous in operative surgery. He is best known abroad, however, for his famous Orthopædic Institution which he founded thirty-three years ago, and continued to direct with great success, patients resorting to it from all parts, his great aim being not to separate orthopædics from the general practice of surgery. He founded, also, the Berlin "Gesellschaft für Heilkunde."—*Berliner Wochenschrift*, June 30.

Quinine in Pertussis.—Dr. Dawson strongly recommends the employment of quinine. For children under three years of age he gives from five to eight grains to the ounce of water, and for older children ten to twelve grains. Of the mixture, not less than a teaspoonful should be given every hour, or, at longest, every second hour during the day, and when the cough comes on during the night. Nothing should be given for five or six minutes (after when some sugar or orange may be given) to destroy the taste, or wash out the mouth. It should be continued to be given although the first doses may be vomited.—*New York Medical Record*, June 16. [American children must surely be more tractable than the British infant, to admit of this nauseous mixture being given so frequently.]

ORIGINAL COMMUNICATIONS.

ON

A CASE OF MYDRIASIS, WITH PARALYSIS OF THE ACCOMMODATION.

By C. S. JEAFFRESON,
Surgeon to the Eye Infirmary, Newcastle-upon-Tyne.

Cases of uncomplicated mydriasis and paralysis of the accommodation are sufficiently rare in ophthalmic practice to be worthy of placing on record, and I trust the details of the present one may be interesting to the profession.

W. S., aged 30, captain of a small vessel, complained of confusion of sight, especially when looking at close objects. Imagining himself bilious, he applied to a medical man, who, noticing the dilated condition of one of his pupils, sent him to me. When he presented himself a careful examination was made, with the following result:—

The pupil of the right eye was dilated to about 3‴ in diameter; it was perfectly immovable to any stimulant of light; that of the left eye was active, and varied from 2½‴ in partial obscurity to a little less than 1‴ in bright diffused sunlight. The patient was most anxious about his condition, for close-to his vision was most defective $=\frac{1}{xx}$, nor could he see well at a distance $=\frac{20}{xl}$. This circumstance led me to suspect the presence of hypermetropia, and an examination of the sound eye proved that it suffered from Hm $\frac{1}{30}$. The accommodation of this eye being paralysed by atropine, I found that its total hypermetropia or Ht $=\frac{1}{24}$. Inferring that the refraction of both eyes would be similar, I now placed a $+\frac{1}{24}$ before the diseased eye, when the sight became at once normally acute for distance, or $=\frac{20}{xx}$. A $+\frac{1}{10}$ was now placed before the eye, and it was found that at 11½ inches he could read No. 1 perfectly; thus the absence of amblyopia and the presence of hypermetropia was conclusively diagnosed.

The cause of the mydriasis and paralysed accommodation was not very evident in this case. The patient was a healthy-looking man in the prime of life, was at sea when first attacked, and had suffered from no rheumatic or other constitutional affection. It is true that four years ago he had had a small sore upon the penis, but this had not been followed by any one symptom of constitutional syphilis, and its specific nature was doubtful. Latterly he had suffered from occasional attacks of epistaxis, indicating congestion of the great nerve-centres, and to this cause alone I considered the attack referable. Inwardly an aperient tonic was administered three times a day; locally the use of the Calabarised discs.

The characteristic effects of the bean were very rapidly produced, and on the first application the following notes were taken:—

At 10 a.m. on June 20 a Calabar disc was introduced into the eye. The pupil then measured 3‴, and . . . . . V = $\frac{20}{xl}$

At 10.15 the pupil measured 2½‴ . . . V = $\frac{20}{xxx}$

At 10.30 the whole of the hypermetropia was neutralised. The pupil measured a little less than 2‴ . . . . . V = $\frac{20}{xx}$

At 10.45 the pupil had not varied perceptibly . V = $\frac{2}{vi}$

At 11 o'clock the pupil had apparently somewhat suddenly contracted, and was a little less than 1‴ in diameter . . . . . V = $\frac{2}{ii}$

At 11.15 no change was noted in the pupil . V = $\frac{9''}{i}$

In one hour and one quarter, then, the height of the action of the bean was observed, the near point being brought to within 9″ of the eye. From this time the effects of the bean began rapidly to subside, and at 2.30 p.m. of the same day its effects had entirely passed off, and the eye had resumed its condition of paralysis, the pupil, however, remaining somewhat smaller than previously.

For a week the patient was directed to place a disc into the eye every morning, and at the end of this time I again repeated my experiments. On this occasion, though I found the acuity of vision the same, the patient readily reading No. 1 with a $+\frac{1}{10}$ at 11½″, yet the influence of the bean upon the accommodation had much deteriorated. The discs now produced only sufficient accommodative power to enable the patient to read 3½ at 18″, and it required a much stronger solution to bring the near point to within 9″ of the eye. I regret to say my patient's occupation prevented his remaining sufficiently long with me to enable me to make further experiments or watch the result of treatment; but I wish to call attention specially to the gradual failure of the characteristic effects of Calabar bean after its prolonged use,—a circumstance I have observed on more than one occasion.

CASE OF TRUE SYCOSIS.

By GEORGE GASKOIN,
Surgeon to the British Hospital for Diseases of the Skin.

A. P., aged 21, clerk. He presented himself with an eruption principally in the region of the beard. The patient believes that he has received infection from his sister, who has ringworm of the scalp. I bade him bring the girl with him, and found that she had patches of denudation with uneven scars, and some few ulcers. In her the disease seemed to be wearing itself out; in the brother it is recent: it displays much virulence, and an inclination to disseminate itself with rapidity from detached foci. The chin, the lower lip, sub-mental region, whiskers, eyebrows, and cheeks are successively invaded. There are spots upon the forehead, and patches which approach the pole of the neck, resembling those on the beard—discharging surfaces which are round as a shilling, and somewhat projecting. The disease, in fact, is not different from ordinary ringworm as seen on the scalp or pubes. Partly to economise the time of the patient, temporarily dismissed from his employ, and partly to indulge my fancy in the study of the complaint, I undertook the treatment by epilation. The roots of the hairs were white with trichophyton.

The cure lasted five weeks with use of the ordinary parasiticides. This, then, is the true sycosis,—the "barber's itch" of colonial life. So much do we read of it; what we see of it is comparatively little. In its course and its behaviour, can anything be more unlike the sycosis of our daily experience? Call it eczema, impetigo, or acne sycociforme, there would be many a case to one of this. The proportion would be far greater than exists in the young between eczema capitis and ringworm.

As affecting the beard, these non-parasitic eruptions are about the most tedious and obstinate that are seen. There are rich men in London who can never get rid of them, proceeding as they commonly do from some hereditary taint. But even where local causation is in fault they are beyond measure tedious.

I have now under my care a German engineer, of tolerable health, but phthisical aspect, who has a defined spot of impetigo sycociforme on the right whisker: it lies between aching teeth on the lower jaw and an ear that troubles him with chronic inflammation; and this single spot, no larger than a shilling, has been with him off and on for thirteen years. It is altogether another thing from the invasion of parasites, which, indeed, have no special preference for the strong-bearded adult. Indeed, it is not in such that we are accustomed to look for ringworm on the scalp.

What shall we conclude, then, of the modern teaching, which leans so strongly in the direction of parasitic disease? The practitioner will expect to find it always in sycosis, and he will find it but seldom. What are we to say of the instruction of Dr. Hardy, that talented expositor of the French dermatology? Has he not sinned immensely against proportion, or was there not rather a plague of trichophyton at Paris in the days when he wrote his book, as at Rome in the days of Pliny? French writers, indeed, have suggested fluctuations that are considerable in this complaint. In London there would appear to be a great declension or extreme mitigation of parasitic disease. The averages of Glasgow, Paris, and Vienna concern us not at all, further than as they may suggest to us Rochefoucauld's maxim, which is too unamiable to be repeated.

Since I am upon the subject, I cannot omit a question that was put to me by a patient's father one evening, Whether

animals could take the ringworm? He stated that since his boy had been kept away from school, where he took the complaint of a schoolfellow, they had observed both the dog and the cat to part with hair. Both of them had been fondled by his son. *Valeat quantum.*

It would serve to show that these interesting animals expose themselves to risk in their intercourse with mankind, and especially with educated man.

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, &c., &c.

THE subject of snake-poisoning is one of considerable interest to the inhabitants of those countries in which venomous snakes abound, and also of occasional great anxiety to the medical practitioner who may be called upon, always suddenly, to treat a bitten person. From the English reader, moreover, it deserves attention, as affording unmistakable evidence of direct inoculation or infection, and presenting a series of results directly flowing therefrom. In this respect it is as interesting to the pathologist as is syphilis or small-pox, and to the toxicologist as is prussic acid or any other rapidly fatal poison. It is the duty, therefore, of everyone who enters into this peculiar field of research, and who may not regard it in so hopeless a light as his fellow-workers, to present his facts as to him incontrovertible—that is to say, that where his own observations are detailed, they should have been, whenever possible, thoroughly repeated, and, when practicable, verified by others. This is the spirit in which I have always worked, and it is requisite it should be here stated, for I have had during the last few years some ardent admirers and quite as bitter opponents. I have kept myself as clear as possible from both parties, striving to remain uncontaminated by praise or blame, and keeping my mind intently fixed on the physiological and pathological questions involved. How far I may have succeeded in this difficult but necessary task it is for others to judge.

The accident of snake-poisoning is one very embarrassing to the practitioner. In a large number of instances the reptile is not seen, or glides away so rapidly that the person bitten is unable to tell the sort or species of snake it may have been. Then the patient has very frequently been drenched with brandy and ammonia, so that it becomes perplexing to say how far the comatose symptoms may be due to alcohol or to venom. Again, the usual suddenness of the thing, the consternation it frequently gives rise to, and the insidious action of the poison, perplex the practitioner to a degree little understood by people not on the spot. Some of the bystanders are for giving more brandy; others for walking the patient about; others for tying him behind a horse and cart, and trotting him about till he recovers or dies; others for beating it out of him with good sticks. More recently, however, the injection of ammonia into the veins has been resorted to, and we cannot at all wonder that this mode of treatment has also added to the anxiety of those adopting it; for previously to my experiments it had never been thought possible to throw ten or twenty minims of the strongest liquor ammoniæ into a man's veins without killing him on the spot. This treatment, then, has always been resorted to under circumstances of anxiety and doubt, and with more fear than there was occasion for, since we now know we may repeat this quantity many times during the progress of a bad case. Had it fallen to my lot, or to that of any one medical man, to have treated all the cases recorded in this communication, the value of the treatment would have been more easily arrived at, but I have myself only seen one of the cases here recorded,—the remainder have occurred miles away; but I have been most careful to ascertain, by correspondence or personally, the facts of importance: and before proceeding further, tender my thanks to the various practitioners and others for the full details they have forwarded to me. I have spared no trouble in seeking information from them, nor have they, I am pleased to say, in giving it to me.

And first, of the snakes of Victoria. If we exclude the two species of blind snakes (typhlops preissii and typhlops bicolor), there are only two which are not venomous—viz., morelia variegata (carpet snake) and dipsas fusca (brown tree snake); whereas there are nine venomous species, viz.:—

Hoplocephalus curtus—Tiger snake.
Hoplocephalus superbus—Copper-head.
Hoplocephalus flagellum—Little whip snake.
Hoplocephalus coronoides—Whip snake.
Diemenia superciliaris—Brown snake.
Diemenia reticulata—Grey snake.
Pseudechys porphyriacus—Black snake.
Vermicella annulata—Ring snake.
Acanthophis antarticus—Death adder.

Of these the most common in Victoria, and those to which the bites are chiefly due, are probably in the following order:—Hoplocephalus curtus; Diemenia superciliaris; Pseudechys porphyriacus; Hoplocephalus superbus.

In some districts these species literally swarm. In the settled parts a snake is only rarely seen; in others they may be occasionally met with basking in the garden, coiled up in the nursery, or somewhere about the bedroom.

Hoplocephalus curtus: Very common and very deadly; will occasionally attack. It is an extremely vicious species, and is that with which I am most familiar. About four feet and a few inches is its average length as met with here; it is said by Mr. Gerard Krefft(a) to attain to six feet.

Diemenia superciliaris: A more sluggish snake; common, and extremely venomous. Length from four to six feet.

Pseudechys porphyriacus: Very common in swampy districts; its bite is very fatal. Length five to six feet.

Hoplocephalus superbus: May attain according to Krefft a length of from five to six feet. The same author considers it to be of a "highly venomous nature." By experiment I have ascertained that it is so.

The probabilities are, therefore, that when a person finds himself bitten by a snake in Victoria, and sees two minute punctures about a quarter of an inch apart, the snake is venomous, and his case should be attended to at once. Not that it is necessarily to be fatal, for such an idea would certainly add to the mischief.

Viewing these snakes anatomically, no one would doubt, from the presence of tubular poison fangs, ducts, glands for the secretion of the venom, and powerful striking and ejecting muscles, of their affinity to the celebrated cobra di capella of the East Indies. I know of no more graceful sight than that which is exhibited by our tiger snake when curving and pirouetting about with dilated neck and flashing eyes under excitement. It has its exact parallel in the behaviour of the cobra under similar circumstances.

There has been a very great tendency to underrate the potency of the poison of our snakes. It may be that in the southern parts of Australia, as Victoria, owing to the greater coolness of the climate, the bites of our snakes are less serious than the bites of venomous snakes in the hotter parts of India. And we should expect it to be so,—for there is no animal more invigorated by heat or depressed by cold than a snake. The sensitiveness of these creatures to heat is well seen by their immediately arousing from the torpid condition when subjected to a moderate rise of temperature; and when, as I have frequently seen, the sun's heat is condensed with a burning-glass upon any portion of a snake's body it cannot endure the condensed rays for an instant, but flies about the cage, and, if the experiment is repeated a few times, the reptile is driven into a state of apparent mad excitement. We find also that when we have had a succession of hot days, as during the past summer, accidents from snakes are far more numerous; the creatures are, in fact, more active, and, as a consequence, when they bite, eject more poison than in colder weather. But in the tropical parts of Australia I should fear the bites of snakes as much as I should fear similar accidents in Bengal. Moreover, the effects of increased temperature have probably an injurious influence upon the bitten animal. All chemical and vital processes follow on faster in hot climates than in cold. Exhaustion is sooner induced, the progress of fevers is more rapid; and as in tropical countries no twilight, or little, intervenes between day and night, so there is frequently little interval between life and death. But if we leave out of consideration all the accessory circumstances and modifying influences of snake-poisoning, we shall have reason to believe that there is little difference in the power of the poison itself, whether taken from an Australian, Indian, or American snake; for the death of a dog follows as rapidly after the bite of an Australian snake as after the bite of a cobra; the symptoms

(a) "The Snakes of Australia," by Gerard Krefft, F.L.S., C.M.Z.S., etc.

preceding death are alike, and the post-mortem appearances identical.

That death follows as rapidly after the bite of hoplocephalus curtus as after that of cobra di capella I infer from the following data :—

Deputy-Inspector-General Dr. J. Macbeth records the deaths of twenty-nine dogs which had been bitten by cobras, and to which no remedy had been applied. The average time between the bite and death in these cases is three hours and twenty-three minutes; the shortest eleven minutes. I find that two hours and fifteen minutes is the average time between the bite of hoplocephalus curtus and the death in nineteen dogs, the shortest interval being seven minutes. The cobra kills fowls, according to the same authority, in about eighteen minutes. I have preserved no notes as to the time required by our snakes to kill birds, but my memory enables me to say that it is quite as short. In the case, however, of puppies a few weeks old, three died from the bite of the hoplocephalus curtus in eight minutes; a fourth lingered on one hour and a half.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

BIRMINGHAM GENERAL HOSPITAL.

MALIGNANT TUMOUR FROM THE BONES AT THE BASE OF THE CRANIUM, SUCCESSIVELY DESTROYING THE SEVERAL OCULAR NERVES: THE PROGRESS MARKED BY PARALYSIS OF THE MUSCLES OF THE GLOBE, AND BY HORIZONTAL LOSS OF VISION.

(Under the care of Dr. RUSSELL.)

J. J., AGED 36, was admitted on June 13, when he presented the following symptoms :—Ptosis of the right eye nearly complete. Right eyeball nearly immovable, from paralysis of all the recti muscles alike, the cornea occupying the median line. The pupil acted sluggishly in consonance with that of the opposite eye. He could only distinguish No. 16 Jaeger with the right eye. The left eye was natural in every particular, and the function of all the other cerebral nerves was performed in a normal manner. The patient complained of a considerable amount of pain diffused over the entire right side of the head. He appeared in perfect health, and very robust. There was entire absence of any other nervous symptom. The pain in the head began five weeks before admission, and had been continuous ever since; it was worse at night; the muscular apparatus of the eye became affected soon after.

At this time the eye was examined by Mr. Priestley Smith, the House-Surgeon of the Eye Hospital, and the optic disc appeared healthy.

The diagnosis made at first was that there were probably two separate foci of disease, affecting the third and sixth nerve; and on this account, with the confirmation derived from the man's previous history, a syphilitic hypothesis was adopted in explanation of the symptoms, and a corresponding treatment was prescribed.

On July 9 the condition of the right eye remaining unchanged, our clinical assistant, Mr. Blake, drew my attention to the circumstance that voluntary movement was extinguished in the *left* external rectus, though the muscle retained power to antagonise the opposing muscle. The patient now complained that vision in the right eye had declined still further. On July 16 Mr. Priestley Smith made a careful examination of the condition of the eyes, and he then discovered horizontal hemiopia in the right eye, vision being absolutely lost in the half of the retina above the equator, whilst with the lower half the man could distinguish No. 10 Jaeger. With the left eye he continued to read No. 1. The veins of the disc were engorged, and the arteries were very fine, but no difference was observable between the upper and lower halves of the disc. The margin of the disc was not quite clear. Subsequently, the conjunctiva of the left eye was noticed to be much injected, and there was considerable secretion of mucus from it. The correctness of the original diagnosis was of course rendered more than questionable by the larger extension now attained by the disease; and the presence of a tumour—probably maglignant—which involved several of the nerves at the base, was now accepted as the more probable supposition.

On August 3 vision was completely extinguished in the whole of the right eye, both upper and lower half, even as tested by the reflector of the ophthalmoscope. The veins of the disc Mr. Smith found distended, and the arteries lessened in size. With the left eye the patient still read No. 1; the veins, however, were large, and the arteries small; there was also obscurity at its edge, chiefly on the inner side. The left palpebral conjunctiva continued very vascular, and secreted mucus. The pain in the right side of the head was still present at times.

I now left town, and am indebted to Mr. Blake and Mr. Priestley Smith for further reports. On August 14 no change had taken place in either fundus, the sole abnormal appearance being engorgement of the veins and slight diminution in the size of the arteries, with lessened clearness of the edge of the disc; but now vision was nearly destroyed in the left eye also, the only sensitive portion being the lower and outer quarter of the retina. A discharge of very fetid sero-sanguinolent fluid was taking place from the right nostril. The man was sallow and emaciated, had become very dull, and slept all day, and his intellect was manifestly enfeebled. Early in September he was incoherent. Both eyes were closed; he tried ineffectually to raise the lids with his fingers. The discharge from the nostril was copious and offensive. I found him on my return semi-comatose on September 14, and he died on the 20th.

There was some increase of sub-arachnoid fluid. A soft, spongy, undefined mass of considerable size lay in the middle line at the base of the brain, occupying a space a little in advance of the pons to somewhat in front of the optic commissure; it had much the aspect of blood entangled in loose cellular tissue, and blood oozed from it in considerable quantity, though none had been effused during life. The mass had hardly invaded the cerebral tissue, but had entirely destroyed the body of the sphenoid bone and a portion of the ethmoid, thus laying open the nasal cavity. The optic commissure itself, and each optic nerve also, were completely divided transversely. The optic nerve on the right side (the side on which vision had been injured for the longest period) was only half the diameter of that on the left side; its sheath was much thickened.

All the cerebral nerves passing to the orbit were involved in the tissue of the tumour. An irregular cavity, presumably the result of softening, lay in the right optic thalamus. No vessel at the base was obstructed, though the circle of Willis was covered by the mass. All the other organs of the body, the lymphatic glands included, were healthy.

The mass consisted mainly of vessels having very thin walls, and of cells 1-800 inch in diameter, most of them circular; a considerable number, however, were oblong, and not a few candate.

LARGE SARCOMATOUS TUMOUR SPRINGING FROM THE DURA MATER IN THE TEMPORAL REGION—OPTIC NEURITIS—ALMOST SUDDEN DEATH.

(Under the care of Dr. RUSSELL.)

J. W., aged 24, married, applied at the Eye Hospital on account of blindness. Mr. Priestley Smith, the House-Surgeon, sent him to me with the following ophthalmoscopic report :—Loss of vision complete. Extreme neuro-retinitis in both eyes. Right disc completely invisible—even its position not clearly distinguishable; position of the left disc indicated by short portions of retinal vessels which were visible near their point of convergence. Region around the disc in each eye occupied by large irregular patches of hæmorrhage, some recent, others undergoing absorption. Only very small portions of retinal vessels are here and there visible. Besides the loss of vision, the patient was considerably deaf with each ear.

During the three days he passed in the Hospital he is described by the nurse as being "mindless." He did unmeaning things, would not be quiet in bed, and repeated the same thing many times over. There was no paralysis, but it was a curious thing that he always insisted upon standing whilst he ate. His power of swallowing seemed somewhat impaired. Of the food, some regurgitated, and some was swallowed with a sudden effort; this, however, was not constantly the case. Of liquids, a part ran out of his mouth. A prominent symptom at the patient's admission was incessant desire to pass urine, even two or three times an hour. The day of his entrance the urine was densely loaded with amorphous phosphates, but on the day before his death it was quite clear; it was free from albumen.

On the third day of his residence in the Hospital he was suddenly taken with weakness in the right arm and leg, but he was able, nevertheless, to stand whilst taking his tea. During the night he is reported to have become very hot; beads of perspiration stood on his brow, and he complained much of his head. By midnight he was speechless, and the power of the right hand was quite lost. He had no convulsions, though he frothed during the day following. He died in the evening.

The patient was a remarkably healthy-looking man of regular habits. He did not admit the duration of his illness beyond three months, though he had had headache for two months previously. Three months before his death he was seized with shivering, and for several subsequent weeks he was liable to frequent shivers, with a sensation of cold. During the same period he vomited frequently, directly after taking his food. Impairment of vision dates from the same time (three months), and deafness seems also to have been contemporary. He had not had any fits.

On post-mortem examination, a large ovoid sarcomatous tumour weighing six ounces and a half was found in the right parietal region; it evidently sprang from the dura mater, with which it was perfectly incorporated in the temporal region. It originated in a small dense nucleus the size of a small walnut growing from the fibrous membrane, and presenting closely set fibres radiating from the surface of attachment; around this nucleus the main tumour was collected, soft in tissue, but exhibiting delicate fibres radiating through its substance from the nucleus. At the posterior extremity the tissue was intermixed with effused blood. The tumour had considerably indented a part of the middle lobe of the brain, but had chiefly compressed the posterior lobe. It appeared to have contracted organic connexion with the convolutions of a part of that lobe, as on being removed it drew away with itself a considerable tract of grey matter. The lateral ventricles were very capacious, but did not contain much fluid. There was no evidence of pressure having been exerted upon the parts at the base, and the deafness was unexplained. The auditory apparatus was healthy. By great carelessness I forgot the vessels at the base of the brain, and therefore the final attack was not accounted for: presumably it was occasioned by obstruction in the middle cerebral artery. The microscopic characters of the tumour differed from those usual in round-cell sarcoma, in the presence of strands of fibres derived as outgrowths from the dura mater, which gave to the sections much of the appearance of the loculi of carcinoma.

BRISTOL GENERAL HOSPITAL.

CASE OF POISONING BY VITRIOL—DEATH.

(Under the care of Dr. BURDER.)

[Reported by Mr. J. Howell Thomas.]

J. H., aged 34, was admitted June 19. Patient was brought to the Hospital at 9.15 p.m., with the history that he had just swallowed some oil of vitriol.

State on Admission.—Patient was quite insensible; pulse weak and feeble; stertor; extremities cold. He had vomited once on his way to the Hospital; lips were white, but there were no marks of the acid on his face. The tube of a stomach-pump was cautiously introduced, as he could not be got to swallow anything, and some solution of magnesia was injected. It was then withdrawn. The patient then vomited a quantity of black-looking fluid, consisting of blood, mucus, and epithelium, which had a strongly acid reaction. He then sufficiently rallied to be able to swallow some of the solution and also some olive oil. Enema of brandy ʒij. was also administered. He now spoke, and mentioned his name; these were the only words he uttered whilst in the Hospital. He continued to vomit similar fluid to the above at intervals until he died at 5.45 a.m. on June 20, having lived eight hours and a half since admission. It was ascertained that he must have taken at least two ounces of the strong oil of vitriol.

Autopsy (thirty-two hours after death).—Rigor mortis well marked; body emaciated; lips white and dry; front teeth blackened, but none of them were loose; the tongue and roof of the mouth were dry, shrivelled, and of a brownish-black colour; the epiglottis was shrivelled slightly, and of a dirty brown colour. On opening the larynx, the cords were seen to be covered with a brown glutinous liquid. The trachea was inflamed, and covered with the same liquid. Similar appearances were found in the bronchi, even into their divisions in the lungs. The lining membrane of the œsophagus was black and very much charred. On opening the stomach, some black glutinous liquid escaped. The wall of the stomach presented similar appearances to the œsophagus, only in a greater degree, the charring being more marked. There was one large perforation at the commencement of the greater curvature at the cardiac end of the stomach; there were several very thin spots on the wall, but no other distinct perforation; the contents of the stomach had escaped through this perforation into the abdominal cavity. The pylorus was contracted. The appearances in the duodenum were similar to those in the stomach and œsophagus. There were also two perforations—one about two inches from the pylorus, and the other about three inches further on. In the jejunum the charring was not so marked—it had the colour of dirty white paint; it had not gone further than the jejunum. The peritoneum was black at the upper part of the abdominal cavity. The under surface of the left lobe of the liver was also blackened. Brain: Convolutions were small. Some serous fluid in the lateral ventricles. The basilar artery was atheromatous, otherwise there was nothing to be remarked about it. The right pleura was strongly adherent to the chest-wall. Right lung: There was some yellow cheesy infiltration in the upper lobe; two cavities in the apex; the lower lobes were simply pneumonic. Left lung: Some amount of collapse in the lower lobe. Heart: Weight, 12½ ozs.; left ventricle contracted,—there was one small clot in it; right ventricle,—several clots in it, but it was not full. Liver: Weight, 3 lbs. 1½ oz.; substance fatty. Spleen: Weight, 6½ oz. Kidneys: Weight of both, 17½ ozs.; capsule very adherent; surface granular; ureters slightly dilated. There was a stricture in the urethra.

LEEDS GENERAL INFIRMARY.

TWO CASES OF AMPUTATION AT THE HIP-JOINT.

(Under the care of Mr. PRIDGIN TEALE.)

[Reported by Mr. A. F. McGill, formerly Resident Medical Officer.]

Case 1.—Rapid Development of Malignant Disease of the Femur following an Injury—Amputation at the Hip-joint—Recovery.

In the *British Medical Journal* for July 23, 1870, Mr. Teale reported a case very much like the present, in which the patient was admitted into the Infirmary with a swollen knee resulting from a blow on the joint a fortnight previously. The swelling proved to be cancerous, and amputation was performed a few months later at the hip-joint, on January 9, 1869. The boy recovered rapidly from the operation, but died eight weeks after from rapidly developed cancer of the lung.

Ann O., aged 15, a weaver, residing at Kilpenhill, was admitted on January 17, 1873.

Previous History.—Fourteen weeks before admission, while running, she fell on her hands and knees. At the time she was apparently none the worse for the tumble. Four weeks after the fall, and ten weeks before admission, the right knee began to swell, and gave her constant pain of a burning, cutting character. She continued work for a fortnight, and then, two months before admission, sought medical advice. Various liniments and iodine paint were applied, but notwithstanding the treatment the knee gradually increased in size, the pain became worse—preventing sleep,—and the skin over the tumour became red and inflamed. She lost her appetite, and her general health began to suffer.

Present Condition.—The patient is a thin, anæmic girl, with a hectic flush and an anxious countenance. She complains of cutting pain in the right knee and leg, but states that this is not so severe as it was a week before her admission. The right knee, leg, and thigh are much swollen, as the following comparison between the two sides will show:—Circumference of right thigh, 17 inches; left, 12 inches. Circumference of right knee, 23 inches; left, 13 inches. Circumference of right leg, 16 inches; left, 10 inches. The tumour has an elastic, semi-fluctuating character, the skin over it being very tense and shining, and of a mottled livid-red colour. The right leg and foot are œdematous, and the glands in the groin are slightly thickened. The various organs in the body are apparently healthy.

January 22.—She has suffered much and slept but little since her admission. The circumference of the tumour has increased an inch in the last five days.

23rd.—After consultation it was determined to amputate at the hip-joint.

Operation.—The patient having been placed under ether, and the femoral artery secured by digital pressure as it passes over the pubes, Mr. Teale marked out by incision through the skin a long anterior flap. He next transfixed the muscles in front of the femur, bringing the knife out through the skin incision, and, having secured the large vessels, opened the capsule of the joint. The operation was completed by making a short anterior flap by cutting from without inwards. The after-progress of the case was most satisfactory. The relief from pain was immediate, and the general health rapidly improved. The greater part of the wound healed by the first intention, but a sinus on the outer side leading to the acetabulum remained open. On March 2 she got up for the first time. Shortly after the unhealed sinus became unhealthy and phagedænic; she had to return to bed for a month, and then was well enough to be made an out-patient. In the end of June she returned to the Hospital, having fallen off in health, and symptoms of thoracic mischief (prebably cancerous) having developed themselves.

Case 2.—Amputation at the Hip-joint, after Excision of the Hip, accompanied by Fracture, and followed by Necrosis of the Shaft of the Femur—Rapid Recovery.

George H., aged 16, was admitted on November 10, 1871.

Previous History.—Shortly before Christmas, 1870, he became lame, had violent pain in the right knee and hip, and was soon unable to walk. He went to bed, and stayed there till June, 1871. By that time he was somewhat improved; the pain was less, and he could walk on crutches. This he did daily. He could not, however, put his foot to the ground, and he suffered considerable pain when he flexed his thigh in sitting down. A week before admission he noticed a swelling near the hip, and this it was that caused him to apply to the Infirmary.

Present Condition.—Besides the usual symptoms of hip disease, there is below the great trochanter a fluctuating swelling the size of an orange. The various organs are apparently healthy.

November 18.—The swelling below the trochanter is opened, and some ounces of pus are evacuated.

December 28.—There has been much suppuration for the last six weeks, and the patient is evidently losing ground; it is therefore determined to excise the head of the bone.

Operation.—Mr. Teale first made a semicircular incision over the neck of the bone, and dissected down to the joint. An attempt was then made to rotate the head of the bone out of the socket, when unfortunately the femur was broken about the middle. The head and neck of the bone, and the great trochanter—the latter very much thickened and softened—were removed piecemeal by means of the gouge and sequestrum forceps. After removal to bed a weight was applied to the limb.

The after-progress of the case was most unsatisfactory. Periostitis of the whole of the shaft of the femur supervened, and on January 20 a large abscess containing about sixteen ounces of pus, communicating with the fracture, was opened. From this date the discharge of pus was very great, and it was thought probable that the patient would sink. In spite of his rapid pulse, and of his exhausted and wasted condition, Mr. Teale (on July, 18, 1872) amputated at the hip-joint, after the manner described in Case 1. The operation, owing to the previous excision, was easily performed, and little blood was lost. On August 11 (twenty-two days after the amputation) the wound was nearly healed, and on August 18 he went home convalescent. He is now a stout, healthy lad.

Remarks.—Control of the Femoral Artery.—In these cases the femoral artery was controlled without difficulty by digital pressure near Poupart's ligament. In the case previously reported the circulation was commanded most perfectly by Lister's abdominal clamp, but Mr. Teale refrained from using it because of the sickness and epigastric tenderness which followed its employment. He thinks that the pressure on the abdominal viscera, and perhaps on the sympathetic nerves and ganglia, may be injurious. *The Form of Flap.*—The form of flap proved to be remarkably convenient. By the preliminary incision through the skin the exact amount required would be secured, long enough and broad enough up to its extremity to cover easily and amply the transfixed muscular portion of the flap—a condition which cannot be secured by simple transfixion of muscle and skin at one cut. The larger flap, being long and ample anteriorly, fell naturally over the front of the stump, and lay without tension or drag in the position required, the union of the flaps being in the position most favourable for the drainage of fluids. When a long posterior flap is made, it is liable by its own weight to fall away from its fellow, even when it may have united by first intention, and when aided to the utmost by care in dressing—a care which in these cases of the long anterior flap is superfluous.

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Medical Times and Gazette.

SATURDAY, JULY 26, 1873.

THE REWARD OF SCIENCE.

The recent refusal of the Treasury to increase the very inadequate stipends of the scientific staff at the British Museum is pretty conclusive evidence of the value set upon science by the average Englishman of the present day. It will scarcely do to assert that it is part of the ordinary cheese-paring policy pursued by Mr. Lowe and his colleagues, for unless the present Government believed that they would be supported by a considerable part of the public, they would not have ventured to refuse a request presented with the sanction and support of some of the first men in science and literature in the United Kingdom. The fact is, that although the present degree of prosperity of the country is primarily the fruit of the labours of its scientific workers—although science is belauded everywhere with an amount of lip-service which would be satisfactory if it were real,—there is no walk in life so likely to lead to disappointment and penury as the pursuit of science for its own sake, and there is no kind of labour for which the ordinary Anglo-Saxon Philistine is so unwilling to pay as the labour of scientific men.

Mr. Lowe has lately been explaining before a Commission of Inquiry the reasons on which a high rate of payment of clerks in the Treasury has been fixed. These offices compete in attraction with College Fellowships, and they are intended to be filled by men who in a public school have acquired the peculiar "freemasonry" which the education there given is supposed to confer. We are not of those who would depreciate public school education, or the power of "holding your own" which it gives; but at least the special education of a first-rate zoologist, botanist, or archæologist (and none else would be likely to get an appointment in one of the departments of zoology, botany, or archæology in the British Museum) should be held to represent as valuable a qualification as

the classics and mathematics possessed by a sixth-form boy. Why the latter should be bribed to serve in the public service by £250 a year to begin with, which is gradnally increased to £1200 or more, whilst the scientific man begins at £90, and rarely rises to £600, it is hard to understand except on the principle that Englishmen do not value science as they value the sum total of conventionalities which go to constitute the "freemasonry" discoursed of by Mr. Lowe. To come again to the scientific professions, we find that their present rate of remuneration is fast falling behind that of the commercial and bnsiness classes. Successful merchants or stockbrokers would be dissatisfied with the earnings of the foremost physicians and surgeons, and these wonld not bear comparison with the receipts of great brewers, ironmasters, or contractors. The physician's fee of one guinea is the same as it was in Radcliffe's time, althongh it does not represent mnch more than one-third of the valne. In addition to this, the amount of gratuitous work imperatively demanded by the public from the medical profession is enormously increased.

A statement by Sir Dominic Corrigan has lately gone the ronnd of the papers, to the effect that in Dnblin the ordinary medical income would average from £800 to £1000 a year, and the higher ones would monnt up to £5000. Irish estimates of fortnnes are proverbially often mistaken; but, accepting this as a trne statement, we wonld observe that the incomes of our Hibernian brethren are at least as good as those of medical men on this side the Channel, but that they are very small in comparison with the value set by a former generation on medical services. The medical practitioners of the last century, with far less of scientific training, with far less of expensive education, died and left large fortunes to their families. Such occurrences are at least rare in the present day.

For this state of things it is difficult to find a remedy. By some it may be asserted that the remnneration of the scientific professions is in the hands of those professions themselves, and that the doctors have only to take a lesson from trade unionists to bring abont a better state of things. Bnt Medicine has never yet been degraded into a trade by its professors, and we trnst it never will be. The remedy, we believe, is to be found in the dissemination amongst the pnblic of jnster views of the value of medical services, and especially by urging on the Government the duty of remnnerating scientific workers properly. A revised scale of pay for the Poor-law medical officer would tend to increase the remuneration of all medical men. Again, we think that medical men who have attained the highest round of the ladder of success shonld, in justice to their younger or less fortnnate brethren, distinctly refnse a class of practice which is not highly remunerative. Were the physicians and surgeons who now enjoy the cream of London practice to refnse any fee of less amount than two guineas, the income of the profession throughout England would be at least donbled in the conrse of twenty years.

RESPONSIBILITY IN OBSTETRIC PRACTICE.

At a recent inquest in the East of London the jury were asked to decide more than one question of some difficulty and delicacy. We shall not mention any names, as these are not essential to the objects we have in view. Moreover, as the only newspaper report which has reached ns is very imperfect in a medical point of view, and we have not the whole of the depositions before ns, it wonld probably be doing an injustice to some of the parties concerned were we on snch materials to fonnd an *ex cathedrâ* judgment of the whole case. But facts which are so far undisputed, especially if read in the light of another recent award by a jury of £300 damages against a medical practitioner for alleged malpraxis by an assistant in an obstetric case, warrant us in drawing attention to some points which are of interest to the whole profession. The present case presented two or three complications which we wish to clear away as non-essentials before we proceed to put the real question at issue. Thus the alleged fact that the principal, or defendant, possessed no diploma, is, we are informed, counterbalanced to a certain extent by his being registered under the Medical Act as being in practice before 1815. And further, it must be remembered that the law has forborne to affix any penalties to the mere practice of either medicine, surgery, or obstetrics by undiploma'd practitioners. As long as the practitioner makes no false pretences, the old maxim of *caveat emptor* must, in the present state of our jurisprudence, be considered applicable. Nor does it much matter whether, as alleged on the one side, the assistant, who happened to be also the son of the principal, had no qualification at all; or, as we have been since informed, that he had passed one or two primary examinations—notably those on anatomy and physiology at the Royal College of Surgeons. The fact that he was deaf, althongh it might account for some misunderstandings, mattered little, since it is not averred that he was deficient in other senses, such as sight. And again, his having attended 500 or 1000 cases of labour before this, and the deceased herself on two previons occasions, although it may very properly have weighed with the coroner and the jury, is non-essential to us, since this particnlar case might as well have happened at the ontset of his career. If any personal questions originated the inquiry or embittered its proceedings, we set them aside as uninteresting and unimportant to the bulk of the profession, and proceed at once to the relation of so much of the story as is necessary to understanding the important questions which arise out of it. It appears, then, from the evidence before us, that on June 12 last a multipara, who had been attended by the assistant in question on two previous occasions (he acting all the while on behalf of his father, who is said to be a registered practitioner, but laid aside from illness), sent again for this assistant, whom we will call Mr. A. No. 2, to attend her in labour. The summons was urgent, and his brother, whom we will call Mr. A. No. 3, attended for him, and was there until both a living child and a placenta of some sort came into the world. At this point, however, Mr. A. No. 2, first sent for, arrives, and takes charge of the case. Mr. A. No. 3 retires, and we need take no further notice of him, since it appears that Mr. A. No. 2 then assumed the responsibility of the case. It is admitted that he examined the placenta, and reapplied the usual binder; but there is a conflict of opinion on the perfect state or the reverse of the after-birth. The only nurse who was present was the patient's mother, and although she stontly affirmed on oath that she always thonght that only a part of the after-birth came away, she kept these views to herself till some sixteen or seventeen days had elapsed, and she had been shown what purported to be a portion of placenta by two other medical men, whom we will call Messrs. B. and C. But we are anticipating, so far, our story. This same witness (nurse and mother in one) also declared that there occurred some two or three distinct floodings, the first on the third day, and the rest between that and the ninth or tenth day. Mr. A. No. 2 confirmed her evidence as to the first flooding, but declared on oath that although he made inquiry he never heard of floodings No. 2 and No. 3. It is, however, only fair to the mother to say that her evidence was corroborated by the hnsband and others, as well as by the snbsequent medical evidence. As partially exculpating Mr. A. No. 2, we may consider the fact of his deafness, and this further consideration, that no one (not even the deceased herself) appears to have attached much importance to the hæmorrhage; and the poor woman paid, and it is said dismissed, Mr. A. No. 2, and moved, or was moved, into another room, and sat on a couch, in the company of several friends; this was about the tenth day.

But here comes the peculiarity of the case: there was an interval of a whole week, during which she does not appear to have been seen by any medical man, but during the whole of which she appears to have flooded more or less, and at the last to such an extent that even her somewhat lethargic friends grew alarmed, and, by the landlady's advice, called in Mr. B. He comes, and finds the patient blanched, bleeding, and collapsed. He introduces his hand, withdraws what he and Mr. C., his partner, who now arrives, call a portion of placenta, and otherwise attends to the case, by giving stimulants and support, in spite of which the woman dies at the end of six days; and at a post-mortem examination it seems clear, as far as we can judge from the evidence, that she died from loss of blood. It is alleged that Messrs. B. and C. made but a hasty examination of the so-called placenta, and that it might have been a blood-clot, or one of those supplemental placentæ which are sometimes, though not very commonly, met with. But all this is beside our object, and it is probable that the local jury, in dividing the blame between the poor woman's guardians and her actual attendant, and using the same words, "an error of judgment," were not far wrong in their own judgment of the case. Our own view is that the friends were far too eager to get her up, and that her medical attendant was too willing to believe everything was going on well without personally satisfying himself that it was so. The medico-legal bearings of the case appear to us to be these: —First,—How far could Mr. A. No. 1, who never appeared on the scene at all, although he appears on the Register and on a door-plate, be considered responsible for the acts of his assistants, Messrs. A. Nos. 2 and 3? Secondly,—Whoever may be considered the responsible medical attendant, not in this case, but in any other which may arise, can he fairly be held responsible for the *finale* of a case which he has ceased attending by the consent of the legal guardians of the patient, and it may be of the patient herself—when, as was somewhat crudely stated, he has been paid off,—and no further steps are taken by any one *quoad* medical assistance until a whole week of valuable time has been lost? Thirdly and lastly,—As this patient did not die till July 6, twenty-four days after her confinement, and as in the interim what the witnesses called an operation—viz., the introduction of the hand into the vagina, and more or less completely into the uterine cavity—had taken place, could her death be fairly charged at the door of her first medical attendant, he having ceased to attend her by general consent of all the parties concerned? We think the common sense of the jury has fairly answered the whole of these questions, because, the evidence tending to show that the engagement to attend the deceased was a direct bargain between herself and the assistant Mr. A. No. 2, they very properly ignored the existence of Mr. A. No. 1 altogether. How far they were right in law is another matter; but there was nothing in fact to show that any of the parties knew Mr. A. No. 1 at all. Secondly, whatever may be the local customs as to nine days or a month, or any other term, we hold that the original medical attendant must be held responsible, to the best of his skill and judgment, to do all that in him lies to secure the return of the woman who has been confined to as perfect a state of health as possible; and no woman can be safe as long as flooding is going on, or her pulse remains at or about 100, and her temperature on an elevated plane. But this responsibility, of course, involves the co-operation of the patient if in a state of sanity, and at all events of her friends; and this appears to have been wanting in this case. Thirdly and lastly,—the careful introduction of the hand into the uterine cavity, however dangerous in certain points of views, and however cautiously it ought to be undertaken, is no doubt less dangerous than the risks of hæmorrhage, and, provided it were indubitable that placenta or even large quantities of clot were left behind, the consultant should undoubtedly be held guiltless for endeavouring to substitute a lesser risk for a greater, and the first attendant must be held in a certain sense responsible. The medical evidence on both sides in this case, as it has been reported to us, was sadly defective. There were no certain data on either side of the condition of the patient or of the uterus on any given date. The description of the post-mortem appearances was vague, and in some matters self-contradictory; and none of the witnesses appeared to feel sufficiently the true bearings of the case. We do not insist upon the desirability of preserving in spirit or some other way the *corpus delicti* of so-called placenta, since the medical witnesses asserted that the inquiry was none of theirs; but it would certainly seem to us that the case would have been far more satisfactory to everyone if the post-mortem examination had been made by a disinterested person.

THE PHYSIOLOGY OF MENSTRUATION.

It is probably the general belief among physiologists and the profession in general that during menstruation one or more ova reach the uterus, and there either become attached to the surface of the mucous membrane or disappear, according as fecundation has occurred or not. If an embryo is developed from the ovum it will correspond with the menstruation immediately preceding—or, in other words, pregnancy will date from the menstruation which last occurred. Dr. Kundrat, of Vienna (Rokitansky's senior assistant), has just published an account of certain researches of his upon the anatomical condition of the uterine mucous membrane before, during, and after menstruation, which throws very grave doubts upon the correctness of this belief (*Medizinische Jahrbücher*, 1873, vol. ii., p. 135. Kundrat's investigations are all the more worthy of attention that they were of a purely anatomical nature. He examined the mucous membrane of the human uterus in the intervals of menstruation, immediately before the hæmorrhage, during the hæmorrhage, and again after it had ceased, and the results which he obtained are certainly in favour of the considerable modifications which he would introduce into the physiology of ovulation and menstruation as presently received. The mucous membrane of the human uterus in the "state of rest" has certain peculiarities, as pointed out by the author. There is no submucous tissue, and the mucosa comes into immediate union with the muscular layer. Its matrix is peculiarly rich in round or spindle-shaped cells. The glands, which it is known to possess in great numbers, are lined, like the free mucous surface, with ciliated epithelium. This condition is markedly altered at the monthly period of uterine activity. The mucous membrane is swollen, thick, loose, and almost diffluent, covered with a whitish or bloody mucus, finely injected at spots, and in many cases uniformly coloured of a deep red. A microscopical examination reveals increased abundance of the cellular matrix, especially at the surface, with great elongation and dilatation of the glands. So far there is nothing specially original in the description given by Kundrat, but new and important facts remain to be enumerated. He discovered in the first place, that the condition of uterus just described probably precedes the occurrence of the discharge of the ovum and—what is perhaps more striking—the menstrual flow by "several days." The author considers that this observation goes far to prove that the uterus is prepared for the reception of the ovum a certain time before the rupture of the Graäfian vesicle. Again, while the rough characters remain as described during the menstrual flow, with the addition of the oozing from the surface, and for a short time after it has ceased, careful examination reveals a very remarkable change in the microscopic appearances. The cells

of the stroma and the vessels, as well as of the epithelium of the glands and surface, are dull in appearance and filled with fat granules. The question occurs, What is the relation of the hæmorrhage to this fatty degeneration of the cells and vessels? Kundrat replies by stating his belief that the hæmorrhage does not cause the fatty change, but is caused by it. He refers to the fatty change which is known to occur at the end of pregnancy, and would consider the two phenomena homologous. He also points out the improbability of the cause of the flow being found in congestion, as this occurs so frequently without hæmorrhage. One fact he has ascertained is that the fatty change is most abundant at the surface of the mucosa, where the bleeding takes place. The anatomical sequence of events, therefore, according to Kundrat, at the monthly period of uterine activity is—swelling of the mucosa, fatty change in the cells and vessels, vascular rupture, and hæmorrhage. With the blood much altered epithelium is thrown off, but not the whole mucosa, as some believe. It is a short time after the cessation of the menses before the mucous membrane has returned to its "condition of rest."

In inquiring now into the physiological relations of the three processes—the swelling of the mucosa, the discharge of the ovum, and the flow of menstrual blood—Kundrat insists strongly upon the ascertained chronology of the events. The first mentioned of the three is the first in order of time, and it is almost certainly the preparation for the reception of the ovum. It is much more improbable that the uterus during the menstrual flow is in a condition suitable for this function—with a retrogressive process going on in the mucosa, its vessels ruptured, and its surface discharging blood. It is even more improbable that the mucosa in this state of degeneration will on the descent of an ovum take on a totally opposite process, and become highly developed. The type of the impregnated uterus is seen in the active uterus when the mucosa is swollen and menstruation has not yet commenced. If the bleeding does commence, it is a sign that the ovum has perished, and that the mucosa is returning to its state of rest. Thus we arrive at the highly important conclusion that a developing ovum, or growing embryo, belongs not to a menstrual period just past, but to one just prevented by fecundation. Löwenhorst has already expressed this opinion from a consideration of the clinical aspects of menstruation, and we believe that the method of calculating the duration of pregnancy suggested by the new facts is not altogether a new one among the gynæcologists and practitioners of this country.

THE ESTIMATION OF UREA IN URINE.

Few problems in practical medicine are at once so difficult and so desirable as a ready and accurate method of ascertaining the amount of urea in the urine passed by patients suffering from various diseases, such as diabetes, Bright's disease, gout, and others which will at once occur to the minds of our readers. The method of Liebig, though sufficiently accurate, is far too tedious and difficult to become popular, and Dr. John Davy's method, by the use of hypochlorite of soda, is hardly accurate enough. The substitution of a solution of hypobromite of soda or of baryta, as proposed by Knop and applied by Hüfner, is a considerable improvement on Dr. Davy's method, and is sufficiently rapid to be of clinical use. The *Gazette Hebdomadaire* of May 30 last contains a modification of this by M. Esbach, which gives results rapidly, and, although wanting in absolute accuracy, is one of the best we have seen for ward-work and also for private practice. M. Esbach uses a ureometer, or glass tube, closed at one end, 38 centimètres long (=15 inches nearly), with a cubic capacity of 28 cubic centimètres (rather less than one fluid ounce) graduated into tenths of cubic centimètres (1 cubic centimètre=15·44 grains nearly). He pours in 6 cubic centimètres of the bromated solution (made by mixing 130 parts of distilled water, 50 of liquor sodæ, and 2 of bromine, all by measure), and then adds pure water up to 10·4 cubic centimètres (rather more than one-third of the tube). To this he adds one cubic centimètre (15·44 grains nearly) of the urine, which should be filtered and freed from albumen. The thumb is placed over the top of the tube, the whole shaken briskly, and then plunged into a basin of water with the mouth of the tube downwards. The volume of gas is then read off, deduction being made, of course, for the air previously in the tube. The remainder is the volume of nitrogen evolved from the urine decomposed, and an easy calculation (on the same principles as Davy's method—viz., that every twenty-eight of nitrogen equal sixty of urea) will give the quantity of urea in the sample; and the daily excretion by the urine if the quantity passed per diem of the latter can be ascertained. In this method glycocoll, leucine, amido-benzoic acid, taurine, acetamide, ethylamine, aniline, conicine, and nicotine do not interfere, as they do not give up their nitrogen. Oxamide, however, is entirely decomposed; uric acid and creatine partially so; also guanine and caffeine slightly; and albuminous compounds are slowly split up.

We are glad to see that M. Boymond, the greatest living authority on urea, and author of the well-known monogram on the subject,(a) gives this method by the hypobromite his approval. He has recently published a note on the estimation of urea in the July number of the *Annales de Chimie et de Physique*, 1871, p. 351, from which we extract the following account of a less rapid, but more accurate, method founded by him on Millon's process. He says that the action of nitrous acid on urea has long been known. According to Gerhardt, Wurtz, Hoppe-Seyler, and others, the result was formulated thus—$C^2H^4N^2O^2+2NO^3=4HO+4N+2CO_2$. But Prevost and Dumas, in making analyses of urea with oxide of copper, have established the fact that urea, in splitting up, furnishes equal volumes of nitrogen and carbonic acid; or, according to Berthelot, the equation is as follows:—$C^2H^4N^2O^2+6O=4HO+2N+2CO_2$. The same thing takes place in Davy's process. [We may parenthetically remind M. Boymond that it was Dr. *John* Davy, not Sir Humphry, who invented the hypochlorite process for urea.] There is also a formation of ammonia; and the true reaction of nitrous acid on urea is most probably represented by the formula—$C^2H^4N^2O^2+NO_3=HO+NH^3+2N+2CO_2$; or $C^2H^4N^2O^2+NO_5HO+NO_3=HO+NH^3NO^5HO+2N+2CO_2$.

Liebig, Neubauer, and many others admit the formation of ammonia. If we express the preceding formulæ in words, the result is, that when nitrous acid reacts on urea, water, ammonia, and equal volumes of nitrogen and carbonic acid are evolved:

$$C_2H_4N_2O_2=2N+2CO_2$$
$$\overbrace{\qquad}^{60} = \overbrace{\qquad}^{28\quad 44\ =\ 72}$$

—or 60 grains of urea produce 72 grains of nitrogen and carbonic acid, or 100 grains represent 120 grains of gases. We can thus calculate the amount of urea by the loss of weight, if we take care to drive off the gases. For the purpose of doing so in urine, the apparatuses of Geissler and Alvergniat are used by M. Boymond. These weigh from 45 to 50 grammes when empty; when full (as used by him), they weigh from 80 to 90 grammes. 0·20 grammes of urea ought to produce a loss of weight of 0·240 grammes. In operating on urea dried at 100° C. (212° Fahr.), these figures were often obtained, and at other times very close approximations, such as 0·235, 0·238, 0·242, 0·244, etc. In the originals the apparatus used is figured, and an exact description of the *modus operandi* is given, which space compels us to omit. The actual reagent employed is a modified Millon's solution, made by

(a) "De l'Urée, Physiologie, Chimie, dosage." Par M. Boymond. Paris: MM. J. B. Baillière et fils. 1872. Pp. 167.

dissolving 125 grammes of mercury in 170 grammes of pure concentrated nitric acid, in the cold, or with gentle heat, and then adding an equal bulk of distilled water. The gases evolved are passed through a mixture of pure strong sulphuric acid and sulphate of iron, to absorb the water, and binoxide of nitrogen. The difference between the weighings or loss of weight serves to calculate the urea, x; since 120 of gas=100 of urea.

Now $\frac{120}{100}=\frac{P}{x}$; $x=\frac{P\times100}{120}$ or $x=\frac{P\times5}{6}$; or we may take as sufficiently accurate the co-efficient 0·8333; thus $x=P\times0{\cdot}8333$. According to Millon neither uric, hippuric, acetic, oxalic, lactic, nor butyric acids, albumen, diabetic sugar, nor biliary matters have any sensible effect in the result. To this list Bunsen adds milk, blood, muscular fibre, fat, saliva, nasal mucus, and phosphate of ammonia; and M. Boymond states that the same may be remarked of creatin, creatinin, xanthin, hypoxanthin, guanine, leucine, and tyrosine. It will thus be seen that none of the ordinary ingredients of urine are likely to interfere much with the result. It is true that ammonia salts would be decomposed, but our object as physicians is generally to find the total excretion of nitrogen by the kidneys; and in order to obviate the evolution of carbonic acid from ammoniacal urine, we can add tartaric acid, and warm gently, after filtering.

THE WEEK.

TOPICS OF THE DAY.

The results of the first Hospital Sunday in London are now before the world, and it cannot be asserted that the success of the movement has been startling. The total sum raised was £27,403 0s. 11d.—an amount £8000 short of the annual expenditure of one hospital—the London—alone. The tone of the speakers at the Mansion-house on Wednesday was generally apologetic. They promised better things next year, when the clergy and ministers of different congregations would have had time to prepare their flocks for the effort. But, whatever gain may be promised by this consideration, it cannot be denied that the novelty of the movement will have gone, and there is just the chance that people may come to regard it as an annual tax, to be met with grudging decorum. There is also the danger we have already pointed out—that persons may excuse themselves from subscribing in the ordinary way to medical charities, on the ground that they have already contributed to the hospital collection in church or chapel.

However, we will not prophesy even the partial failure of a movement which has undoubtedly been commenced and carried into effect with the best and most philanthropic intention. The distribution of the money seems in the main to have been founded upon a principle which we believe to be a good one—that of encouraging and supporting the institutions which provide in-door maintenance and relief for the sick rather than giving money to be expended on the far more doubtful benefit of furnishing medicine indiscriminately to out-patients. The Mansion-house Council have apportioned £24,571 13s. 4d. to hospitals, £967 18s. 4d. to dispensaries, and £881 13s. 4d. to other institutions, making a total of £26,421 5s.—the surplus having been chiefly expended in printing and other necessary expenses. Of the £24,571 voted to the hospitals, eight of the large hospitals take £15,966, as follows:—The London, £3833; St. George's, £2875; the Middlesex, £2300; University College, St. Mary's, King's College, and Westminster, each £1500; and Charing-cross, £958. Of the £8605 remaining, the City of London Hospital for Diseases of the Chest has obtained about £1000, and the remainder is divided amongst the fifty-four smaller hospitals, most of which are special, but a few—such as the Great Northern—are general. The Council have made their awards on a consideration of the income and expenditure of the charity, and, as we have said, the principle of supporting in-door rather than indiscriminate out-patient relief has been kept steadily in view. In proportion to the number of beds, St. George's and the Middlesex have obtained the greatest award—St. George's Hospital being one in which limits are placed on the number of out-patients. St. Bartholomew's, Guy's, and St. Thomas's, already amply endowed, receive no part of the fund. Of course, as may be supposed, the distribution of the fund has met with great disapproval from the representatives of the dispensaries and the supporters of the indiscriminate out-patient system. But the truth was told the meeting on Wednesday by Sir Anthony de Rothschild and Sir Charles Trevelyan,—the former of whom denounced the practice of distributing medicine gratuitously and without investigation, and stated it was found in the Jewish Dispensary at the West-end that "the medicine given annually was more than sufficient to supply the whole population of Whitechapel." If indeed, as Sir Charles Trevelyan believes, the effect of the movement will be "to prevent or give a powerful check to the great abuse of large numbers of persons availing themselves of those charitable institutions who were in no way entitled to do so," it will be difficult to over-estimate its benefits, both to the public and to the profession of medicine. The same speaker continued—"That was the real cause why medical institutions were more constantly in pecuniary embarrassment than any other. It was a great public evil that the medical profession should not receive the due reward of its pains; above all, the tendency of admitting all comers, without question and without payment, had a most mischievous influence in accustoming our people to pauper or dependent habits. Whatever the Council might have done this year, the administrative influence it would be able to exercise would be ten times more beneficial in the end."

The Medical Act Amendment (University of London) Bill has passed the Commons, and has been read a second time in the House of Lords. The Committee on the Bill in the Upper House was fixed for Thursday, July 24.

Dr. Curnow, a distinguished student of King's College and graduate of the University of London, has been elected to fill the Anatomy chair at King's College, vacant by the death of Professor Partridge.

A new extinct Struthious bird from Australia is described by Professor Owen in the newly issued part of the *Transactions of the Zoological Society*. The name proposed by the Professor for the extinct bird is *Dromornis Australis*.

MR. LE GROS CLARK.

It is always a subject of regret when a medical school loses the services of a teacher who has been connected with it for a lifetime, and while rising to the foremost rank in his profession has identified himself with his school; but there is no more honourable termination to such a connexion than that which we have to record this week. Mr. Le Gros Clark retires from the office of Senior Surgeon to St. Thomas's Hospital and Lecturer on Surgery in the Medical School, and he leaves with the regret of his colleagues and of the students, but with their warmest feelings of affection and esteem. There are few who have deserved this more thoroughly, for few have devoted themselves so unselfishly to their duties, and few again have commanded so much personal respect. It is not the lot of many to be endowed with the strength of will and moral fearlessness in addition to the wisdom, courtesy, and commanding appearance which we look for among the heroes of a past age; but we may learn a lesson from those who do possess them, and particularly when they are leaving their togas to another generation. Mr. Le Gros Clark entered early upon hospital work. He was apprenticed in 1827 to Mr. Travers,

and while an apprentice was selected to fill the office of Demonstrator of Anatomy at St. Thomas's. He became Assistant-Surgeon in 1843, upon the death of Mr. Tyrrell, and remained in this office ten years, during which time he gave the lectures on Anatomy single-handed. It was early in his career that the views of Marshall Hall were promulgated, and met with so much opposition; but Mr. Clark strongly supported Marshall Hall, and was one of the first, if not *the* first, of English authors who accepted the then heterodox views enunciated by that gentlemen. He was appointed Surgeon in 1853, and for many years delivered the entire course of lectures on the Principles and Practice of Surgery. In this he was joined, during the last few years by the late Mr. Solly, and recently by Mr. Sydney Jones. We understand that Mr. MacCormac will succeed Mr. Le Gros Clark, both as Surgeon and as co-lecturer on Surgery; and the School of St. Thomas's may be congratulated upon finding so able a successor, though until recently an entire stranger to it. Mr. Clark gave his farewell lecture on Thursday week. The largeness of the attendance and the attention with which his words were listened to were the best evidences of the affection and respect in which he is held. May he long live to enjoy the rewards of an honourable and useful life!

THE CHOLERA.

Cholera still continues to spread, but slowly. Since our last notice it has extended somewhat in East Prussia and on the Danube, but it presents none of those indications of rapid advance we have been accustomed to see in former epidemics, especially the great historical ones whose history is now sufficiently well known. In these the disease seemed to break out in isolated patches all over the country, apparently defying all attempts to account for its spread, though that is now known to be almost invariably along the lines of human communication and intercourse. From Vienna the latest accounts we have are only up to the 9th inst. In the week ending on that date upwards of 4000 cases of various forms of disease were treated in the military and civil hospitals. Among these were sixty cases of vomiting and purging (*Brechdurchfall*), but, as seen in the full report given by the *Times*, most of the cholera cases have occurred in hotels and among strangers. Vienna is at no time a savoury city, and its hotels are singularly deficient in sanitary arrangements. Moreover, it is in these we should expect to find the first indications of infection, as in these most likely will be found strangers from already infected districts. The name of cholera does not yet figure in the Viennese returns.

THE ASHANTEE WAR.

Notwithstanding the assurances conveyed in Parliament last week by Lord Kimberley, to the effect that the medical stores sent out from this country to meet the exigencies of the Ashantee war had not been lost in the two mail-steamers so unfortunately wrecked on the West Coast of Africa, we are very happy to be able to state that a further supply of those medicines most likely to be required was prepared and shipped by the packet of the 17th inst. The Medical Department at home would appear to be determined that no blame shall attach to it on the score of short-sightedness or want of forethought; and, without anticipating the worst, we much fear that the supplies now forwarded will be urgently required at Cape Coast Castle.

The last despatches received conclusively prove that, as everybody anticipated, the invading savages possessed but a scant chance of success when encountered by disciplined men; but we think the assumption that they will be chary of attacking us again after this last defeat, somewhat premature: the King of Ashantee has marched too far, and gained too many advantages over the tribes under our protection, to be convinced by one minor reverse; and the critical position of the handful of men opposed to him is doubtless well known to his sable majesty. If our rulers wish to put an end to the irritation arising from this petty annoyance, and prevent the recurrence of an outbreak which will cost us some money and many lives, they would do well to collect a force sufficient to break up the Ashantee power for good and all. Up to the present time we have only "scotched the snake, not killed it"; and if on the present occasion the authorities rest content with merely beating back the impudent invasion of our territory, without teaching a lesson the recollection of which will for years be fresh in the Ashantee mind, they may depend that so soon as our troops and vessels have left the Coast the same annoyances will recommence. Whatever course it may be considered the wisest to take, one thing is certain,—we must, in such a climate, be prepared for a considerable loss of life by disease. At the best of times the Coast is peculiarly fatal to Europeans, and by the last accounts, from a variety of causes, it would appear now to be at its very worst; therefore it will not be surprising if we find that for every soldier struck down in battle we have twenty rendered *hors de combat* by sickness. With this knowledge in our possession, it is reassuring to find that the Director-General of the Army Medical Department has taken every precaution which experience suggests to provide a supply of those remedies most likely to be urgently needed; and we can only hope that a short but decisive campaign will settle the present difficulty for ever, and save a multitude of those lives which will be sacrificed if we are likely to be engaged in a feeble and protracted struggle in such a pestilent spot.

DEATHS ON RAILWAYS.

A statement having recently been published as to the number of persons killed annually on the railways of the United Kingdom, and doubt having been expressed as to the accuracy of the figures which were given, we have, through the courtesy of the Secretary of the Board of Trade, obtained the official returns for the last five years. This information is of great public as well as of professional interest, and the numbers certainly support the representations of those who are endeavouring to obtain Parliamentary interference for the preservation of life and limb in railway travelling. The numbers, of course, throw no light as to the percentage of lives shortened by injuries received in railway travelling:—

Number of Passengers, Servants of the Companies, and other Persons Killed and Injured, and of Suicides, upon the Railways of the United Kingdom in each of the Years 1867, 1868, 1869, 1870, *and* 1871.

Year.	Passengers.		Servants of the Companies.		Suicides.	Other Persons.		Total.	
	Killed.	Injured.	Killed.	Injured.		Killed.	Injured.	Killed.	Injured.
1867 . .	36	697	105	90	6	62	8	209	795
1868 . .	62	525	83	65	8	59	10	212	600
1869 . .	39	1060	151	148	12	119	24	321	1232
1870 . .	90	1094	115	129	15	66	16	286	1239
1871 . .	57	896	*213	*323	16	118	42	404	1261

* The great increase of these numbers is to be attributed to the fact that previous to the passing of the Regulation of Railways Act, 1871, many railway companies did not make returns of accidents to their servants.

HEALTH IN THE LEAVESDEN SCHOOLS.

Dr. Rudyard, Medical Officer of the Leavesden Asylum, reported to the St. Pancras Board of Guardians, last week, that there was an almost entire absence of skin diseases at the schools. Ninety of the children were now ready to be returned to the schools quite cured.

PROVIDENT DISPENSARIES.

A MEETING of medical practitioners of Manchester and the neighbourhood was held at the Town Hall, Manchester, on the 18th instant, at which the following resolutions were passed. The meeting was largely attended. Mr. R. T. Hunt presided:—

Proposed by Dr. Noble, and seconded by Dr. Reed:

"That, in the opinion of this meeting, the institution of provident dispensaries, as hitherto proposed, is not calculated to remedy admitted evils, while the scheme would hardly be consistent either with the due interests or the proper dignity of the medical profession."

Proposed by Dr. Armstrong, seconded by Mr. J. Platt:

"That the formation of medical provident dispensaries, as now in operation, would tend to bring the great majority of the working classes of this country, their wives and families, under one vast system of medical and surgical relief; would enter into unfair competition with, and be ruinous to the best interests of, the great majority of the medical men of this country; would create a system which is even more liable to be abused, and that on a larger scale then the present generally admitted abused hospital charities are; and in addition to this, it is most likely they would cause a large falling off in the subscriptions to the present medical charities."

Proposed by Mr. Frank Holmes, and seconded by Mr. Henry W. Toyne:

"That as regards the medical profession the necessity for these 'provident dispensaries' does not exist, since by the poor-laws the really poor are provided with skilled medical and surgical relief free. The establishment of these dispensaries will bring them into competition with the existing friendly and other societies (originated and managed by the working classes) for relief in sickness and distress; and considering that it has been the invariable rule of the medical profession to charge the working classes according to their means, and to accept from them payment of their accounts by instalments, when necessary, this meeting is therefore opposed to the establishment of these dispensaries."

Proposed by Mr. Henry Winterbottom, seconded by Dr. John Watson:

"That the undermentioned gentlemen be elected from this meeting to form a committee of the general profession to watch any scheme which may be proposed, and, if necessary, report to any future meeting of the profession to be called for that purpose; and that this committee consist of Dr. Royle, Dr. Armstrong, Dr. John Roberts, Mr. F. H. Walmsley, Mr. W. Walls, Mr. Chas. Holmes, and Mr. Joseph Westmorland, with power to add to their number."

The meeting terminated after a vote of thanks had been passed to the Chairman for the able manner in which he had conducted the proceedings, which was proposed by Dr. Royle, and seconded by Dr. Armstrong.

This question is surrounded with much difficulty, and it is only by the full and free discussion of it that a just conclusion respecting it can be arrived at. It is well that meetings of the profession like the one in Manchester should be held in the various large towns throughout the country to discuss the subject.

PUBLIC ANALYSTS.

THE rumour gains ground (says the *English Mechanic and World of Science* of the 18th inst.) that some of the analysts appointed under the Adulteration Act are, to say the least, not fully competent. Bakers and others have been convicted of adulterating bread and flour with alum, while protesting their innocence. If an analyst says he finds alum in a loaf when both flour dealer and baker know they did not put any in, it will not be long before the confidence of the public in the ability of the chemical expert will be seriously shaken. It has been suggested to purposely adulterate loaves and samples of flour with known quantities of alum, and thus practically test the skill of responsible officers who should be above the shadow of a suspicion as far as the accuracy of their analysis is concerned. No doubt great care should be taken in the analysing of food for the detection of adulteration. Although mistakes may sometimes be made, and differences of opinion arise—consequences common to almost everything in life,—still we should be sorry to indulge a belief that our public analysts, as a body, are not above the shadow of a suspicion as far as the accuracy of their analyses is concerned. Great good has already been attained by the enforcement of this important Act.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

THE following changes have been effected in this School:—Dr. Basham and Mr. Holthouse have been appointed special Lecturers on Clinical Medicine and Surgery; Mr. Pearse and Mr. Cowell have been elected to the chairs of Surgery and Practical Surgery; and Mr. Davy has succeeded to that of Anatomy. Dr. Potter takes charge of the class of Forensic Medicine and Hygiene, Dr. Dupré the Toxicology; and Dr. Allchin gives the lectures on Pathology and Morbid Anatomy. In addition to the present special courses, Mr. Bond has been appointed to deliver a short course of lectures on Diseases of the Skin. Two entrance scholarships, and an exhibition in Anatomy and Elementary Physiology for first year's men, have been founded. Mr. Cowell is the new Dean of the School, and will deliver the introductory address on October 1.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE Directors of the Society held their usual Quarterly Court on July 9. The chair was taken by the President, Dr. Burrows. A legacy of £1000 from Miss Brackenbury was announced. There were two fresh applications from widows for assistance. Fifty-six widows and twenty-eight children applied for a continuation of their grants, and a sum of £1260 10s. was voted to be distributed according to the wants of the applicants. The expenses of the quarter amounted to £61 12s. 3d. The meeting heard with regret of the death of the late treasurer, Dr. Hamilton Roe, and directed a letter of condolence to be written to Mrs. Roe. It was resolved that Dr. Quain should be recommended for election as treasurer at the next general meeting.

MEETING OF POOR-LAW MEDICAL OFFICERS OF ENGLAND AND WALES.

IT is proposed to hold a meeting of Poor-law Medical Officers of England and Wales on Thursday, August 7, at 3.30 p.m., in one of the lecture-rooms of King's College, in connexion with the approaching annual meeting of the British Medical Association, under the auspices of the Poor-law Medical Officers' Association, and under the presidency of Dr. Lush, M.P., the President of that Association. The attendance of Poor-law Medical Officers is invited, to discuss the objects at which the Association should aim, and the best mode of furthering the same in the next Parliament.

DIFFERENCES OF OPINION.

A MR. GIBSON was summoned at the Glasgow Police-court some time ago for selling adulterated butter. Dr. Thorpe, the city analyst, gave evidence for the prosecution. Dr. Wallace, another chemical professor, gave evidence to the contrary for the defendant. Ultimately samples of the butter were sent to professors of chemistry in Edinburgh and Glasgow University. Last week their reports were laid before the Glasgow Police Board. They totally disagreed with the city analyst. A member of the Board said Mr. Gibson had been greatly injured by the prosecution, and that the public would have no faith in any decision in the police-courts in prosecutions for adulteration.

DEATH FROM CHLOROFORM AT SIR P. DUN'S HOSPITAL, DUBLIN—ACTION FOR DAMAGES AGAINST THE OPERATING SURGEONS.

At the Co. Wicklow Summer Assizes an action was commenced on Tuesday last, June 22, in the issue of which every member of the medical profession should feel a deep and even a personal interest. On February 12, 1873, a tradesman named Joseph Lamb was admitted to Sir P. Dun's Hospital shortly after an accident in which two of his toes had been broken by a flagstone falling upon them. Next morning it was considered necessary to amputate one of the injured toes, and accordingly Dr. John Barton, House-Surgeon to the Hospital, administered chloroform to the patient in the presence of Dr. Edward H. Bennett, surgeon on duty, and the operator on the occasion. The patient's pulse was felt, but no searching examination of the heart or lungs was made. All requisite caution appears to have been used in the administration of the anæsthetic, but in about five minutes from the inhalation of the first whiff the pulse and respiration ceased suddenly, and the man was dead. An action has been brought by the widow of the deceased for negligent administration of chloroform, resulting in loss of life, and damages are laid at £1000. The defence is a denial of the negligence, and also an assertion that death did not result from the chloroform. The case is still at hearing. *Pendente lite*, we shall at present refrain from making any special comments upon this particular case, but it appears to us that the bringing of such an action against a most able surgeon, whose acknowledged abilities have placed him in the position of colleague of such men as Professor Robert W. Smith, Mr. Butcher, and Professor Benjamin George MacDowel, is a proceeding calculated seriously to imperil the independence of the profession. The action is really one for want of skill in the treatment of an ordinary surgical injury, and involves the principle of liability of an attending physician or surgeon should his treatment of a given case unfortunately prove not successful.

Since writing the above a telegram has reached us stating that the jury found for the defendant before even counsel for the plaintiff was heard.

HOSPITALS FOR EPIDEMIC DISEASES.

Mr. Stansfeld stated in the House of Commons on Monday, in reply to an inquiry on the subject, that nine acres of land adjoining the New Cross-road at Hatcham had been bought by the Metropolitan Asylums Board for the purpose of erecting temporary hospitals in the event of small-pox or any epidemic fever again occurring in the metropolis. With reference to the opposition of the inhabitants of the district against the erection of another small-pox hospital at Hatcham, Mr. Stansfeld said it was necessary that such sites should be conveniently contiguous to the population which might use the hospitals, and sufficiently isolated to prevent the spread of the disease, and this site had been favourably reported on by one of the inspectors of the Local Government Board.

SIR CHARLES WHEATSTONE.

The vacancy caused by the death of Baron Liebig, as Foreign Associate of the French Academy of Sciences, has been filled by the election—almost unanimous, the voting being 43 out of 45—of Sir Charles Wheatstone. Sir Charles was for many years previously corresponding member of the Academy, but the honour now conferred upon him is the highest which the Academy can confer upon a foreigner.

YELLOW FEVER IN AFRICA.

The correspondent at Bonny, Bight of Biafra, writing to the *Liverpool Courier* under date of June 12, says that yellow fever was raging there with dreadful intensity. Young and old—whether acclimatised or unseasoned—all are prostrated by the scourge. The rainy season, now overdue, has not yet set in, and until it does there will be no abatement in the present sickly term. The death-rate has been awful, nearly three-fourths of the regular residents being dead. One firm alone lost eighteen out of twenty-three men. In all cases the course of the disease is rapid and virulent.

FOOD ADULTERATION IN PADDINGTON.

Dr. Hardwicke reported to the Paddington Vestry, last week, that during the past three months he had analysed about twenty articles of food, consisting of bread, milk, tea, and mustard. Alum was found in most of the samples of bread, and in two cases he advised a prosecution. The milk was very bad; scarcely any of the tea was pure leaf; and the mustard was not pure in any one instance. The Vestry decided that the delinquents should be prosecuted.

STUDENTS AT BERLIN UNIVERSITY.

According to the *Allgemeine Zeitung*, the number of matriculated students at the University of Berlin in the winter session of 1871-72 was 2603; in the summer of 1872, 1990; in the winter of 1872-73, 1918; and in the present summer only 1590. A continuous decline is therefore going on in the number of students.

FROM ABROAD.—ACTION FOR NULLITY OF MARRIAGE IN FRANCE—THE MORTALITY OF BERLIN IN 1872.

The *Gazette des Hôpitaux*, July 5, 8, and 10, has published the judgments in a recent suit for "nullity of marriage," a brief abstract of which will prove of interest as illustrative of the modes of procedure adopted in such cases in France.

In December, 1866, M. Darbousse, a landed proprietor, aged 23, married Justine Jumas, aged 25, and after cohabiting with her for more than two years, applied to the civil tribunal of Alas for a decree annulling the marriage, on the plea that his wife possessed none of the organs essential to a woman. The wife replied that however this might be the plaintiff must put up with it, as the code declares that a demand for nullity cannot be made after six months' cohabitation. The plea was overruled, and the plaintiff heard. He declared that his wife possessed neither breasts, womb, ovary, or vagina; that her pelvis was as small as that of a man, and that although twenty-seven years of age she had neither menstruated nor perceived any periodical lumbar or abdominal pains. This somewhat specific statement was derived from some statements which a midwife had spread about after having examined the defendant. The Court, not having much confidence in these, ordered her to be officially examined by the head midwife of the Montpellier Maternité. With her was to be conjoined Dr. Fabre, of Alas, who was not to examine the person himself, but to confer with the midwife both before and after she had done so, and then report for the information of the Court—a rather derogatory procedure on the part of a doctor of medicine in relation to a midwife! However, no examination or report was ever made, for Justine Jumas energetically refused submitting to these experts, and appealed to the Court at Nîmes.

When the case came on there, Darbousse had fortified his position by the production of the opinion of Dr. Legrand du Saulle, the well-known medical jurisconsult, who espoused his cause with almost indignant enthusiasm. What had to be decided, he said, was whether the defendant was a woman, a man, or of no sex at all. That a person could not be a woman who had never menstruated and was unprovided with breasts or any of the female external or internal organs of generation was plain enough. Without a clearer account than had yet been given he could not say that the person was not a man,

but the strong probability was that it was of no sex at all. "Brought up as a girl, it has assumed and maintained the vain appearance of one, exhibiting the timidity, gentleness, piety, and temper of such. Does not habit become a second nature? Wretched being, capriciously cast out of the normal channel, condemned to the isolation of a fatal celibacy, it can only take its place amongst the monsters! A blameless victim of a freak of nature, and married by mistake, this being should not condemn its conjoint to the indefinite horror of a union so cruelly unjust." However, the "wretched being" being possessed of considerable power of resistance, brings its expert into court—Dr. Carcassonene, of Nîmes,—to whom it had submitted itself for an examination. He rejects Dr. Legrand's theoretical stigma, and rehabilitates the defendant in her feminine characteristics, although he admits that these are somewhat limited. She has, he declares, a mons veneris, labia, clitoris, and meatus urinarius, but there is no vagina, or this is imperforate, so that copulation is impossible. This evidence seems to have determined the Court that it was really dealing with a woman, and it nonsuited Darbousse—the admitted fact of absence or imperforation of the vagina notwithstanding.

However, the cause did not stop here, for on some legal point, apart from the facts, the Cour de Cassation annulled the judgment, and ordered a new trial before the Court of Appeal at Montpellier. Darbousse reinforced himself with the opinions of two important personages—Professor Tardieu and M. Courty, of Montpellier. It is evident that "doctors differ" just as strongly on one side of the Channel as on the other. We have seen one witness declaring the defendant to be possessed of no sex at all, and another that she was a woman, but of faulty construction; and now we have so high an authority as Professor Tardieu stating that the Court was really dealing with a man. M. Courty could not confirm this view, but, while he admitted that there were some external appearances of the female sex, there was every reason to believe that the organs indispensable for characterising a woman were either absent or rudimentary. The person in question should be ranked amongst those beings which, properly speaking, have no sex at all, and to whom marriage with either sex should be prohibited. The Court rejected the appeal of the defendant against her being examined by experts, and referred the cause back again to the original tribunal at Alas. The President having summed up all the facts of the case and animadverted upon the refusal of the defendant to submit to examination, annulled the marriage, with costs. The litigation has been going on during the last four years.

Geh. Med.-Rath. Dr. E. Müller has just issued his report on the mortality of Berlin during 1872. During that year there were 35,723 births and 28,191 deaths. Comparing these with the census taken in December, 1871 (828,406 inhabitants), there was therefore 1 birth for every 23 inhabitants and 1 death for every 29, or 43 births and 34 deaths per 1000. Although the mortality is considerably less than it was during 1871, yet it still continues large in proportion to that of former years. This has, however, for the last ten years, and especially for 1872, been caused by the increase of the number of births. One birth for 23 inhabitants is a proportion that has never before been reached, this having varied during the last five decennial periods from 1 for 30 inhabitants to 1 birth for 25.

Of the 35,723 *births*, 18,320 were male and 17,403 female. Of these, 4993 were illegitimate—viz., 2529 male and 2464 female. There were 410 twin and 6 triplet births. The *marriages* in 1872 amounted to 11,234, being 2989 more than in 1871.

As in every other year, the maximum number of deaths took place during the summer months, this being due especially to the number of children carried off by diarrhœa and cholera. The proportion of deaths in different quarters of the town, which is always proportionate to the number of births in such quarters, varies so much as from 15·7 to 54·9 per 1000 inhabitants. The *ages* at which the deaths took place were as follows:—During the first year, the deaths were 399 per 1000; from one to ten years, 180; from ten to twenty years, 31; from twenty to thirty years, 83; from thirty to forty years, 81; from forty to fifty years, 64; from fifty to sixty years, 55; from sixty to seventy years, 50; from seventy to eighty years, 36; from eighty to ninety years, 12; from ninety to a hundred years, $\frac{1}{9}$th.

The number of infants *born dead* was 1570, or 5·5 per cent. of the entire deaths, the proportion in 1871 having been only 3·9 per cent. Still, the increase is only apparent, for while in 1871 the born-dead were 4·3 per cent. of the entire births, in 1872 they were 4·4 per cent. As is always the case, the male born-dead far outnumber the female—viz., 911 to 659. The proportion of illegitimate children born dead is far greater than of the legitimate, mounting up to 7·4 per cent. The death-rate from debility after birth is 6·9 per cent. in illegitimate, and only 3·4 in legitimate children.

Suicides.—These were 200 in number; 144 taking place in men, 54 in women, and 2 in boys. Among the females 61 per cent. of them were committed between the ages of twenty and thirty, while among the men only 28 per cent. were committed at those ages. Two boys, aged respectively ten and fifteen, were the youngest, and the oldest was a man more than eighty years old. The following were the modes of procedure:—Hanging in 68 men, 15 women, and 1 boy—84; shooting in 40 men and 1 woman—41; drowning in 24 men, 15 women, and 1 boy—40; poisoning in 9 men and 21 women—30; opening bloodvessels in 1 man and 2 women—3; and jumping from a window in 2 men. The various forms of accidents gave rise to 265 deaths; and the bodies of 38 dead new-born infants were found.

Of the causes of death, *variola*, which during the latter part of 1870, the whole of 1871, and the earlier part of 1872 had prevailed epidemically, in the second portion of this last year only occurred sporadically. The total number of deaths for the year was 1100—551 being males and 549 females. The greatest number of deaths occurred during the earliest years before vaccination had been performed, and the fewest in the later years of childhood up to the twentieth year. From *scarlatina* 309 deaths are recorded (154 in males and 155 in females), the greatest number taking place between the third and fourth year. From *measles* (186—males 97, females 89) most died during their first year. *Pertussis* caused 168 deaths (75 in males and 93 in females), which occurred especially during the first two years. The number of cases of *gastro-nervous* and *typhus fever* was large (1195—males 568, females 627), being 421 more than in 1871. The ages between twenty and thirty were those in which most cases occurred, the month of October being especially fatal. *Diarrhœa*, *cholera*, and *dysentery* only caused death in thirteen adults; but the deaths from these affections in children were very numerous—viz., 3705 (males 1933, and females 1772)—the greatest number occurring in July. From *inflammation of the brain* (1070—males 568, females 502), children during the two first years of life were also the chief victims. From *croup and diphtheria* there died 888 (males 461, females 427), almost all in early childhood. *Inflammation of the air-passages* caused 595 deaths (298 males, 297 females), most of them occurring during the first and next during the second year. *Inflammation of the lungs and pleura* caused 1206 deaths (703 males and 503 females), the greatly preponderating number being in childhood, and then after the twentieth year. Among the deaths from organic diseases there is nothing to distinguish them from other years, except the fact that the number of deaths from *pulmonary tuberculosis* is con-

siderably less than that of the preceding year; they amounted in 1872 to 3218 (males 1899, females 1319).

Notwithstanding that the proportionate mortality of the year is, upon the whole, more favourable, yet the infantile mortality still continues excessively high, although this is in a great measure due to the increased number of births; but the prevalence of diarrhœa, cholera, and emaciation of children, and the time of year at which these deaths principally occur, show that improper or defective nutrition of infants at the early periods of their lives is the chief cause of such mortality. The influence of illegitimacy is shown by the fact that while, including the born-dead, there is upon the total mortality a death-rate of 45 per cent. of children under fifteen years of age, this is raised to 59 per cent. for illegitimate children.

PROFESSOR HOLMES'S LECTURES AT THE COLLEGE OF SURGEONS.

Abstract of Lecture IV.

Continuing the subject of orbital aneurism, and especially that of arterio-venous aneurism in the cavernous sinus, Mr. Holmes remarked that the cases he had been able to refer to proved beyond any possibility of doubt that a wound or fracture may cause rupture of the internal carotid artery within the cavernous sinus, and that this rupture may be followed by the formation of an arterio-venous aneurism, with consecutive dilatation of the ophthalmic veiu; and that this affection is accompanied by all the symptoms usually attributed to orbital aneurism. It is in the highest degree probable, if not certain, that a similar rupture may take place spontaneously. Such cases as one from St. George's Hospital, described in Lecture I., show that a small crack may form in the carotid artery as the result of atheroma, and this may occur as easily in the curve of the internal carotid within the sinus as elsewhere.

The symptoms of many of the published cases certainly appear to lend probability to Dr. Delens' conjecture of their arterio-venous nature, and this explanation readily accounts for the great enlargement of the veins which is frequently present in orbital aneurism; but, on the other hand, we must admit that Dr. Delens' explanation appears to be refuted by indubitable evidence. Thus, in Mr. Nunneley's report of the post-mortem examiuation of his second case, he speaks of the tumour as a circumscribed aneurism of the root of the ophthalmic artery. Mr. Bowman's case, reported by Mr. Hulke, is another in which post-mortem examination excludes the idea of any rupture of the carotid artery. Dr. Delens suggests that in this instance, as in some others to which he refers, some minute fissure may have escaped observation; but this, Mr. Hulke asserts, was not the fact; and in another similar case reported by M. Aubry, Dr. Delens himself is fain to admit that no lesion could possibly have existed in the internal carotid artery, since this vessel was successfully injected so as to fill the ophthalmic artery without auy of the injection penetrating into the cavernous sinus.

Common aneurisms situated on the ophthalmic artery and on the internal carotid, both within the cavernous sinus and at its termination in the circle of Willis, have often been recorded, and Professor Holmes has himself described, and preserved in the Museum of St. George's Hospital, an aneurism of the interual carotid in the cavernous sinus, where there is certainly no communication with the venous system. The Museum of the College of Surgeons contains two specimens of a similar nature, showing the internal carotid artery on either side affected by aneurism in the sella turcica.

To sum up, then, our present knowledge of these tumours. Travers' original assumption that orbital aneurism is usually anastomotic has been conclusively refuted. Aneurism by anastomosis sometimes affects the vessels of the orbit, but the symptoms are quite different from those of the disease now in question. It has been also proved beyond denial that some of these aneurisms are of the arterio-venous form, and it is probable that a great number of the successful cases on record were so. But it is equally impossible to deny that in others the aneurism has been of the ordinary circumscribed form. Finally, it is not clear how we can avoid admitting that in some instances the usual aneurismal symptoms have been produced by the pressure of enlarged and consolidated veins upon the arteries of the orbit. The character of the bruit is the main point in the diagnosis of the arterial from the arterio-venous form. A clear, intermittent, blowing murmur can hardly proceed from an arterio-venous communication, which has, on the contrary, a soft, continuous murmur interrupted by the intermittent arterial whiz, and this latter is exaggerated occasionally, according to Dr. Delens, into a piping or whining sound. The difference in the bruit may suffice, then, in some well-marked cases to exclude the idea of ordinary arterial aneurism.

But the more important question is, whether it is possible to recognise those cases in which no arterial disease whatever exists, and this is much more difficult. There are at least two carefully recorded cases in which all the symptoms of orbital aneurism were present—viz., Bowman's case, recorded by Hulke, and Aubry's case; and on reading over these one does not find one symptom absent which is usually taken as decisive of the pressure of aneurism. In both there were pulsation and bruit, exophthalmos, and the dilatation of the venous system of the orbit. Another case, in which the post-mortem evidence of arterial lesion was at any rate very unsatifactory, was under Mr. Berkeley Hill's care. Neither Dr. Ringer nor Mr. Hill could satisfy themselves of the existence of any aneurism.

Mere coagulation of blood in the cavernous sinus without dilatation of the veins of the orbit will not cause the symptoms of orbital aneurism, as Knapp's cases of thrombosis of the cavernous sinus show; nor will mere dilatation of the orbit unaccompanied by coagula in the sinuses. It is possible that we may hereafter learn the diagnosis of these affections, and the more so since the attention of surgeons has been forcibly called to the subject, not only in this country, but in America by Dr. Morton, and in France by MM. Demarquay and Delens; but at present all that we can say is, that the symptoms of orbital aneurism are in some cases exactly imitated by cases in which only the venous system is affected. But this fact, though only a negative one, forms obviously a very powerful motive for caution in undertaking operative treatment.

Another and a very curious feature in these pulsating tumours of the orbit is the occasional transference of the symptoms from one side to the other. Velpeau has made the following remarks in connexion with this subject:—"We have had two patients affected with erectile tumours of the orbit. One of these persons had a tumour in both orbits. He ascribed the origin of these tumours to a blow on the nape of the neck. I hardly see what connexion there could have been between the blow and the existence of the tumours. However this may be, the curious point about this patient was that the compression of the right carotid caused the immediate cessation of the pulsation in the tumour of the left orbit, and that of the left carotid stopped the pulsation in the right orbit. This phenomenon appears inexplicable to me. I tied the right carotid— the left tumour subsided; that on the right side diminished a little, but soon appeared as large as before the ligature, and presented the some characters. I proposed to the patient the ligature of the left carotid, but he would net consent, and left the hospital having obtained no other benefit than what resulted from the ligature of the right carotid. I saw the patient again a short time ago. The erectile tumour on the left side was perfectly cured, but continued to grow on the right. The thing is hardly explicable, for the carotid has no anastomoses which could account for such a phenomenon."

Mr. Busk and Mr. Curling long ago solved Velpeau's first difficulty—viz., how to account for aneurism, which he called "erectile tumour," in the orbit following on a blow on the head or nape—by referring it to a fracture of the base of the skull traversing the ophthalmic or internal carotid artery; and a case of M. Nélaton's is an interesting anatomical proof of the correctness of their opinion; so that at the present day we are not much surprised to find the disease so often commences after injury. But the transference of the disease from one side to the other—the fact that the pulsation in one orbit is controlled by pressure on the other carotid—is far less easily accounted for. Dr. Delens has invented an ingenious hypothesis to explain this curious fact. He supposes that the right internal carotid was divided inside the cavernous sinus so as to be severed into two parts; that the sinus became

obstructed by coagula separating its posterior from its anterior portions; that the blood-stream from the right internal carotid, thus barred from finding a passage into the right orbit, made its way through the anastomosing sinuses (circular and transverse) into the left cavernous sinus, producing the usual symptoms of arterio-venous communication there, while the anastomoses between the left and right arteries brought back the blood into the anterior part of the right cavernous sinus, and thus occasioned the symptoms of arterio-venous aneurism in the right orbit. This idea is certainly in harmony with many of the facts of the case: it explains why the disease was less marked on the left side than on the right, since the anastomoses of the sinuses are less direct and less dilatable than those of the arteries; why the symptoms in the left orbit were under the direct control of the circulation in the right artery and *vice versâ*. But to Professor Holmes this hypothesis is a little too elaborate, and he is not sure that all the symptoms may not depend on the mere fact of the clot having extended from the sinus of one side to that of the other through the circular and transverse sinuses.

There are other cases besides Velpeau's in which the crossing of the symptoms has been noticed. Such cases harmonise with the general conclusion to be drawn from published records of the more ordinary cases of orbital aneurism, so far as to show that many of the phenomena of the so-called "aneurism" must be due, not to any arterial disease, but to some lesion or some unnatural condition of the venous channel of the cavernous sinus, which unnatural condition has in the instances last quoted extended to the opposite side from that on which it originated.

This examination of the pathology and of the various theories which have been adopted as to the nature of this remarkable disease is a necessary prelude to the consideration of its surgical treatment. If we admit that the symptoms may be caused by coagula in the sinus pressing upon the artery without any disease of the latter, surely we ought to do all in our power to avoid so serious an operation as the ligature of the common carotid. If we admit, with Mr. Erichsen, that the disease may probably enough disappear spontaneously, the same conclusion is irresistible.

If we agree in Dr. Delens' teaching, that a very large proportion of these cases are arterio-venous, we know that the ligature of the vascular trunk at a distance from the opening in the artery is a very uncertain remedy in arterio-venous aneurisms. We know also from the experience of arterio-venous communications in the neck and elsewhere that this injury does not necessarily involve any fatal symptoms. After attaining a certain extent many such cases have remained stationary for an indefinite period. If even we could adopt the old idea, that the tumour was due to a cirsoid dilatation of the arteries of the orbit, we know how nugatory the ligature of the trunk vessel usually proves in that disease.

Finally, if we adopt the opinion of Mr. Busk, Mr. Curling, and Mr. Nunneley—which is the prevalent opinion at present,—that these tumours are of the nature of true aneurisms of the ophthalmic or internal carotid, we should reasonably expect success by milder methods than the ligature in a tumour so small as this must be, and in a disease the symptoms of which are confessedly due more to dilatation of the veins than to arterial lesion. The records of practice speak plainly to the same effect.

It is quite true that by statistics the operation of tying the carotid for orbital aneurism is made to appear a very successful operation, but this method of viewing the subject can hardly be employed either for or against the treatment until we know the natural progress of the disease, and the results of other kinds of treatment. As to the natural progress of the disease, though certain cases prove that there is no occasion for hurry, and that a natural cure is not impossible, the same cannot be affirmed generally. If the exophthalmos is rapidly increasing, the loss of motion of the eyeball advancing so as to threaten disintegration of the nerves traversing the cavernous sinus, and the loss of sight testifying to pressure on or stretching of the optic nerve, no good surgeon would probably refrain from active treatment. But then compression of the artery, either digital or instrumental, undoubtedly deserves trial before a patient is exposed to the danger to life which the ligature of the carotid involves. Cases of successful compression of the carotid in this affection have been recorded by Gioppi and Scaramazza, and of direct compression by C. Freeman.

Another method which has been practised twice in three cases, and twice at least with success, and which deserves renewed trial, is the injection of coagulating fluid into the tumour. These cases afford much encouragement for the repetition of the practice in appropriate cases—*i.e.*, cases in which the venous tumour is large, fully developed, and growing, and where the compression of the carotid has failed after a full trial. The other local measure which has been tried is electro-puncture; of this only two instances are on record, in one of which it failed, and in the other it proved fatal.

The recorded experience of milder modes of treatment justifies the conclusion that the ligature of the carotid should never be used in so-called orbital aneurisms until after a patient trial of the less dangerous measures. But when these have failed, and the disease is advancing, we are justified in employing the ligature, and that, too, although on the one hand the disease has not been observed to run on to a fatal termination, while several patients have recovered spontaneously, and on the other, the ligature of the carotid has by no means universally exercised a curative effect.

Some surgeons, as Demarquay, prefer the ligature of the internal to that of the common carotid, but there seems no good reason for this preference, nor is there any objection to tying the external along with the common carotid.

In connexion with carotid aneurism, and especially in connexion with orbital aneurism, it is worth while to mention cases of arterio-venous communication in the neck between the carotid arteries and the veins lying in contiguity with them or in their neighbourhood. We shall find—a fact which is not very easy of explanation—that the existence of a traumatic arterio-venous aneurism in the neck is very often harmless, and, as far as published cases enable us to judge, does not usually prove fatal if left alone.

As regards the surgical treatment, it is useless and improper to interfere in those cases of arterio-venous aneurisms in the neck where there are no dangerous symptoms; but in others the gradual advance of the symptoms points strongly to the necessity for some interference, if possible, before it is too late to save the patient's intellect or life. In these instances, if the foreign body which caused the wound is lodged, an incision must be made down upon the tumour, the circulation being controlled below, and if possible above also, the tumour opened, the foreign body removed, and the artery and vein tied. Where there is no evident lodgment of the foreign body it is possible that the combination of direct with indirect pressure might be successfully employed which Vanzetti has introduced in the treatment of varicose aneurism of the brachial artery. If the venous thrill and murmur could be suppressed by direct pressure on the tumour it would be a proof that the venous orifice was controlled, and in that case simultaneous compression of the lower part of the artery might be trusted to complete the cure.

THERAPEUTIC MEMORANDA.

Butter-Milk in Typhoid Fever.

Sir,—Although it may be thought by some of your readers that the evidence in favour of a new or modified treatment, obtained by the observation of only two cases in which it has been exhibited, is insufficient to bring it before the notice of the profession, yet the immunity from this class of disease that we enjoy in Guernsey is so great that it may be years before I have the opportunity of again treating enterica. A gentleman who has enjoyed a large and varied practice here for upwards of thirty years, and on whose word and skill in diagnosis I can confidently rely, informed me that although he was parish surgeon for ten years before our town was drained, and fever necessarily more prevalent than now, he did not think he had treated more than fifty cases of typhoid fever.

The first case that I have to record was in an anæmic girl aged 17. The diarrhœa was severe when I first saw her—from twelve to fifteen stools a day, their character being typical of the disease; there was also considerable tympanites, the belly being tense and greatly swollen. I placed the patient on milk. This decreased the number of stools to four or five per diem, but the tympanites remained unchecked, and resisted all the usual forms of treatment.

On the sixth day of my attendance, and the sixteenth of the disease, the patient requested to be allowed to take butter-milk, as she thought sweet milk increased her thirst. On reflecting that butter-milk contained all the protein matter of the milk, and that that was the most important in cases of

fever, which always involve a great loss of nitrogen, I gave my consent.

The beneficial effect of the change was most marked. On arriving the next day I found that the tympanites had quite disappeared, and the belly was soft and fallen; the patient expressed herself as feeling "much better." The number of the stools was reduced from this time to one, and sometimes —very rarely—two per diem; the temperature and the pulse remained unchanged.

The patient made a good recovery, and was far less emaciated when the disease had run its course than would be expected in a delicate girl. The convalescence was shorter than usual.

The other patient was a young woman, aged 22, who had lately married; she generally enjoyed good health. I placed her on butter-milk diet from the first, but as she did not like it unless it was fresh, I allowed her to take sweet milk during two days in the week, when she was unable to obtain fresh butter-milk. The change to sweet milk always increased the number of stools, which on the butter-milk days rarely exceeded one, but on the sweet milk days the patient passed her motions five and six times a day. In this case, as in the other, the convalescence was short, and the patient made a good and quick recovery.

I account for the stools being reduced so considerably in number by a change from sweet milk to butter-milk from the fact that from the latter the fatty matters have been removed; and it is well known all oleaginous substances have a somewhat purgative action. The shortness of the convalescence I am inclined to attribute to the lessening of the number of the stools, thereby removing one of the many depressing causes that manifest themselves in this disease, rather than to any increase in the amount of nutriment obtained from the use of butter-milk. The mild acidity, also, of the butter-milk renders it most grateful to thirsty fever patients: this is one great point in favour of its recommendation. I am, &c.,

Frederick Irving de Lisle, L.R.C.P.,
Medical Officer of the St. Peter Port Hospital, Guernsey.

REVIEWS.

Memoir of Sir James Y. Simpson, Bart., M.D., D.C.L. Oxon., etc., etc. By J. Duns, D.D., F.R.S.E., Professor of Natural Science, New College, Edinburgh. Edinburgh: Edmonston and Douglas. 1873. Pp. 544.

The life of Sir James Young Simpson, however unskilled the relator, could not be degraded to the level of ordinary biography. Whether viewed as a history of effort crowned by success romantic in its completeness, or regarded in its bearing upon the relief of human suffering and its influence on the healing art, or dissected as a study of character of a man of remarkable intellectual ability and activity, excelling qualities of heart and head, yet displaying sufficient of the foibles of our common nature in his mental composition to raise the interest of close kinship in more ordinary mortals,—however contemplated, a life of Simpson if only it were a plain unvarnished tale of what he did and said and thought,—of his struggles, his work, his success—could not but constitute a narrative of surpassing interest. Dr. Duns' memoir is such a narrative. It is moreover a well-written and well-arranged book, creditable in its literary workmanship, and not the less interesting to members of Simpson's profession inasmuch as it is a non-medical retrospect of his life and character.

The fact that the biographer is not a physician is throughout patent. The book is in many respects a better book on this account; in some perhaps the reverse. We think that there are certain passages in the life which a medical admirer of Simpson would probably not have handed down. Such are the stories of some of his squabbles with professional brethren, and the evidence of some pardonable weaknesses which his remarkable success brought to light and excused. But then on the other hand we have a truer, fuller picture—a more faithful delineation of the man, his contemporaries, and his surroundings—a life-history painted with an admiration and a fidelity worthy of a countryman of Boswell.

James Young Simpson was the son of David Simpson, a small baker at Bathgate, in Linlithgowshire, who at the time of his birth was in struggling circumstances. Both his father and mother, however, were persons of excellent character, with a good share of intelligence. Simpson's mother especially seems to have been a woman of great energy. Dr. Duns relates that "when James was born the household circumstances were at the worst. The small cash-book in which the shop drawings for the day were marked bears this entry—'7th June, 1811. Drawn 8s. and 3d.' Hoping that things might mend and take a turn for the better, David Simpson had carefully concealed the true state of affairs from his wife; but a crisis seemed at hand, and he was forced to acquaint her with their condition. She had previously given her undivided attention to the care of her children, leaving business matters wholly to her husband; but now she took prompt steps to help him. Means were found to meet a pressing debt of £100, credit was restored, and under her wise and energetic management business speedily began to prosper. The lowest entry in the cash-book was on the day of James's birth. Up to that event matters had been steadily getting worse. With his appearance sunshine broke in upon the household."

An entry in the visiting-book of Dr. Dawson, the local practitioner, proves that the celebrated accoucheur was himself ushered into the world with little aid from art, and that the modest fee paid to the doctor on the occasion was half a guinea. Simpson lost his excellent mother when he was a child of nine years; but to the last he cherished her memory. Amongst the many incidents related which endear Simpson to the reader of his biography we may quote the following:—"But he had homelier memories of his mother. When in the height of his fame I heard a lady tell him of an industrial school for girls which she had set up in a village near Bathgate. 'And what does your schoolmistress teach the girls?' he asked. 'Some fancy work,' was the answer, 'and plenty of plain sewing and darning.' Shortly after he said to me, 'Do you know, the mention of "darning" a little ago recalls a very very old and precious memory? One day, when a child, I came into the house with a big hole in the heel of my stocking, and my mother sat me on her knee, darned the stocking, and, as she drew it on, said—"My Jamie, when your mother's away, you will mind that she was a grand darner." I remember the words as if they had been spoken yesterday. I would like to give a prize to the best "darner" in the school.'"

Although his birth was sufficiently unpretending, he, like all Scotchmen, had a pedigree. He was on his mother's side related in some distant degree with the Clelands of that ilk. A Cleland had married the grandfather of William Wallace, and the Clelands had fought at Flodden. The name of Simpson, however, is destined to outlive that of Cleland.

We must pass over the account of Simpson's childhood; "a rosy bairn wi' laughin' mou' and dimpled cheeks" when he went to the parish school at four years old, and afterwards took round his father's rolls—his boyhood early showing signs of a bent for natural history and an interest in local antiquities—and his entrance at the University of Edinburgh at the age of fourteen. In his second session he obtained a Stewart Bursary of the value of £10, tenable for three years. He joined his friend John Reid, also a Bathgate bairn, who afterwards became Professor of Anatomy at St. Andrews, and they lived with Dr. Macarthur, who had formerly been assistant in the Bathgate parish school. Simpson during his first years at the University studied classics, mathematics, and moral philosophy. Macarthur had graduated in Medicine, and seems to have exercised great influence over Simpson and Reid. His mode of training was heroic. "When they had been a short time with him, he said to Mr. Simpson's brother, Alexander, 'I can now do with four hours' sleep, John Reid can do with six, but I have not been able to break in James yet.'" Simpson did not make a remarkable figure in the classical and mathematical schools, but it is evident that he worked steadily, and that he lived with an economy and self-denial rarely to be found amongst lads except north of the Tweed. As a medical student Liston was one of his favourite teachers. His notes of Liston's lectures are free from queries, these signs of dissent or doubt being not unfrequent in the notes taken in other classes. Simpson's sensibilities, however, like those of many another young medical student, were sorely tried by what he witnessed in the operating theatre. Dr. Duns relates that "after seeing the terrible agony of a poor Highland woman under amputation of the breast, he left the class-room and went straight to the Parliament House to seek work as a writer's clerk; but, on second thoughts, he returned to the study of Medicine, asking 'Can anything be done to make operations less painful?'"

Simpson passed the Edinburgh College of Surgeons at nineteen years of age. He went home to his brother in Bathgate, who throughout his early struggles behaved to him with true

fraternal kindness, and spent his time in assisting the local practitioner, and in botanising amongst his native hills. About this time he tried to get an appointment as surgeon to a ship, but this scheme not succeeding, he returned to Edinburgh, and became assistant to Dr. Gairdner in dispensary work, and also re-entered at the College. He proceeded to graduate in the University, and after unsuccessfully applying for the situation of parish doctor at Inverskip, he became assistant to Professor John Thomson (who had been attracted to him by the ability displayed in his graduation thesis) at a salary of £50 a year. From that time he made Edinburgh his home, and commenced the career which left his name a household word in every country in the civilised world. It was by Thomson's advice that Simpson applied himself to the study of midwifery, and resolved to become a teacher in that department. One of his earliest papers which attracted attention was that on "Diseases of the Placenta." He worked late and early, became President of the Royal Physical Society of Edinburgh, and began to form a museum. In 1835 he visited London and Paris in company with Professor Douglas Maclagan. His diary during the tour forms one of the most interesting chapters in the early part of the memoir. He goes to the London University and sees Carswell in his museum, notes that Liston is treating cases of iritis without mercury, "and none of them go wrong." They go with Dr. Lee to the Royal Society, where they see Bostock, Paris, Brande, Stanley, Earle, Owen, and Clift, with the last-mentioned of whom they take tea in the library-hall. At Guy's they go round the wards with Mr. Bransby Cooper, who "appears to be a great mercurialist and promoter of the business of the apothecary." Tyrrell and MacMurdo at the Moorfields Eye Dispensary show a wonderful degree of the *visus eruditus*. One evening they are taken by Spence, the entomologist, to a meeting of the Linnæan Society, when the President, the Duke of Somerset, goes to sleep during the reading of the paper, and has to be woke by the Secretary. In Paris they see Lisfranc (a French reprint of Liston), Louis, and Andral in their cliniques at La Pitié, and they go off to Charenton to see Esquirol, and are struck at the degree to which coercive treatment is discarded. Then they visit Namur and Liege, where they see Professor Fohman, who is the victim of *tremblement metallique*—from having worked for years in making mercurial preparations. Home once more in Edinburgh, Simpson is elected Senior President of the Royal Medical Society, his colleagues being Dr. Martin Barry —"one of the manliest of Quakers and most endearing of men,"—Dr. J. H. Pollexfen, and Dr. John Reid. He soon after became a Fellow of the Royal College of Physicians, and an extra-academical lecturer. At this time he got up to write papers at two or three o'clock in the morning, and was beginning to get practice. He had formed an attachment to a young lady, Miss Grindlay, whom he soon afterwards married, and was pushing his fortunes with marvellous pluck and energy. In 1839 the Midwifery chair became vacant by the resignation of Professor Hamilton. Simpson became a candidate, and, as it is well known, was opposed by Dr. Evory Kennedy, who was especially backed by Syme and the other leading professors of the University; but Simpson was elected by a majority of one. From that time his success was uninterrupted.

We have so lately reviewed the volumes of Sir James Simpson's collected medical works, and the facts in connexion with his great discovery of the anæsthetic properties of chloroform, and his other labours on the subjects of acupressure, hospitalism, etc., are so fresh in the minds of the profession, that we feel we may not unfairly leave our readers the pleasurable task of following Sir James Simpson's career, after he obtained the Professorship in the University, in Dr. Duns' pleasant pages. Simpson's letters—written with childlike simplicity to the members of his family, for whom he always cherished the warmest affection—show him in all his amiable qualities, not above displaying some tincture of honest pride at the success which had placed the baker's bairn at the tables of the noblest in the land, but always good, kind, and genial. With regard to the clouds which so frequently floated over the medical horizon, it is only fair to the memory of Simpson to say that he was never the one to raise the tempest,—although, as those who knew him will well remember, he was perfectly capable of taking his own part. Another generation, knowing the high class of men to which Simpson, Syme, and their colleagues belonged, may well wonder at the squabbles which so frequently ruffled the calm of the learned society of Edinburgh. But we are bound to add that Simpson seems never to have been the aggressor.

We have not in this notice referred to the religious character of the latter part of this volume. Such subjects, we think, are not best suited for discussion in our pages. It is enough to say that Sir James Simpson passed from this life as he had lived—a firm believer in the religion and a humble follower of Him who, since His sojourn upon earth, has been known amongst men as the Great Physician.

"Sir James Simpson's death is a grievous loss to the nation: it is truly a national concern." Such was the just tribute paid by the present Prime Minister to the physician whose life we have reviewed.

The Causation of Sleep. A Physiological Essay. By James Cappie, M.D. Edinburgh: J. Thin. Pp. 76.

This short essay is divided into two portions. In the first the author deals with the causation of sleep entirely from his own point of view; in the second he is more controversial. Briefly, his views are these:—By pressure the functions of the brain can be arrested, as in sleep. Pressure is possible by alteration in the size of the cerebral vessels, especially the veins. During functional activity the capillary circulation of the brain is most active, consequently the cubic contents of the capillaries at their greatest variation in one part of the cranial cavity cause variation in another, the cubic space being a constant quantity. When the brain rests, therefore, and its circulation grows languid, the space left vacant by decreased capillary flow must be filled somehow, and Dr. Cappie thinks this is done by increased fulness of the cerebral veins; but increased fulness of the cerebral veins implies pressure on the cerebral surface—a condition incompatible with mental exertion,—and so sleep follows. Such is Dr. Cappie's argument, stated, we hope, fairly, if boldly; but the boldness of the statement we fear only tends to show that it is hardly tenable. We do not say it is wrong; we do not attempt to disprove it; but, in Scotch fashion, we are entitled to return a verdict of "not proven." However, Dr. Cappie's essay is ingenious and interesting, and well worthy of perusal.

The Physical Basis of Mental Life: A Popular Essay. By R. R. Noel. London: Longmans. Pp. 74.

This is an essay on phrenology of a kind superior to those we commonly encounter, yet, as usual, delusive. Broadly speaking, everyone is agreed that the brain is the organ of thought, and that, very roughly indeed, the size of the head may be taken as an index of mental power,—still more roughly, perhaps, that the shape indicates certain mental characteristics; but no mapping out of the brain, still less of the head, into organs of special function is possible. By careful and enlightened study much has been done, but much more remains to be done. We are not of those who deny that Gall and Spurzheim did good service; but their writings were also very mischievous, and the bad continues to predominate over the good.

Notes on the Pharmacopœial Preparations. Specially Arranged for the Use of Students Preparing for Examination. By W. Handsell Griffiths, Ph.D., L.R.C.S.E., Librarian Royal College of Surgeons of Ireland, etc. London: Baillière, Tindall, and Cox. Pp. 110.

This is an attempt to deal with the Pharmacopœia from a purely pharmaceutical point of view. Neither the substances whence the preparations are derived nor the uses or actions of these preparations are considered. But as an attempt to introduce the student of medicine to subjects which are hardly technical as regards his art, the notes are fairly successful. Much information is condensed within these pages, and in the limited fashion already indicated they are worthy of every praise. We have noted one or two small inaccuracies, but they are not of great importance.

The Retford Board of Guardians, who had previously postponed the appointment of a medical officer of health for six months, have again postponed doing so for three months, on the score, principally, of the unsatisfactory state of local taxation. During the discussion several guardians said the Public Health Act was unnecessary in rural districts.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, July 14.

Hospitalism in Paris—Gangrene—Typhus and Typhoid—Enlargement of the School of Medicine—The Shah in Paris.

The insanitary condition of the Paris hospitals is proverbial, but just now as the weather gets warmer they are simply intolerable. The wards, which are always overcrowded, stink to such a degree that an English physician on a visit to Paris observed to me that he always felt squeamish in walking through them, and that the smell from them reminded him more of a dead-house than a place intended for living people. This applies particularly to the surgical wards, where the air is more contaminated, not only from the emanations of the body, but from open suppurating wounds, ulcers, abscesses, etc. Add to these the dejections of bedridden patients in different stages of putrefaction, the poultices and other dressings undergoing decomposition, and your readers may form an idea whether the chances of recovery are in favour of the inmates. No wonder, then, that erysipelas, hospital gangrene, and kindred affections should be almost endemic in the Paris hospitals. As for pyæmia and septicæmia, these are so common that the physicians and surgeons almost look upon them as natural consequences; whether they have the power to remedy such a state of things I am not prepared to say, but the facts remain, and have done so since the existence of these hospitals. In conversation with some of the hospital staff on the subject, I have always had the same traditional reply from all: that they were powerless in the matter; that they were there to treat the patients, and had nothing to do with the internal administration of the hospital. But surely the "administration" do not prevent the opening of the doors and windows to renew the foul air of the wards, nor do they stint the patients of what may be necessary or conducive to their recovery; and yet it is a well-known fact that proper ventilation and good nursing are the great desiderata, and the absence of these constitutes the principal cause of the frightful mortality in the Paris hospitals. This is so true that most surgeons in performing the simplest operation are always in dread of the case turning out a bad one, and there are times when they will hardly venture to open a small abscess, much less perform an amputation. I have a case fresh in my mind, where, some years ago, a man was admitted into one of the modern or model hospitals with a bit of glass under the skin just below the elbow, which was there lodged for several years. This did not much incommode him, but he nevertheless was anxious to have it removed. The glass was cut out, and the patient, being in good health, did not wish to remain in the hospital, but the surgeon persuaded him to do so to watch the case. In a week after the operation (an incision about half an inch), inflammation and suppuration having set in, large incisions were made to relieve the tension and give vent to the pus. In another week the arm sloughed and looked gangrenous, and amputation was performed to save the patient's life; but, alas! in another week he was no more, as he died from purulent infection. This case is a fair sample of what occurs almost every day in all the hospitals in Paris, and which I might multiply *ad infinitum*. But while on the subject of hospitalism, I shall take the opportunity of giving one or two examples more of its pernicious influence on the sick which also came under my own observation. A woman, aged about fifty, was lately admitted into M. Richet's ward in the Hôtel-Dieu with contraction of the right leg, and as there was no confirmed anchylosis nor appreciable disease of the knee-joint, M. Richet performed tenotomy, and, having afterwards forcibly extended the limb, put it up in splints to keep it in that position. Soon, however, mortification set in, amputation above the knee was performed, and the patient was carried off in less than six weeks from the first operation. M. Richet's explanation as to the cause of the accident that had supervened was very plausible, which was that the internal coat of the femoral artery was most probably ruptured, which gave rise to embolism, and thus, preventing the due supply of blood, caused the death of the limb. This, however, was not borne out by the post-mortem, but, with all deference to the learned Professor, I should attribute the accident to the unhealthy state of the ward, blood-contamination, and the consequent debilitated condition of the patient. In the same Professor's ward may be seen to this day a lad, aged 18, who was admitted on March 1 last with gangrene of both his feet, with which he was affected under the following circumstances:—A cook by profession, he was going home late at night, when he was waylaid by three or four men, who attacked him with the intention of robbing him. He was then left almost senseless on the ground, where he lay till the break of day, when he was picked up by a police agent and conveyed to the hospital with his feet in a gangrenous condition. They went on from bad to worse, and the process of separation was all but achieved, when, on April 27, M. Richet completed the spontaneous amputation just above the ankle. In three days after the operation both the stumps were affected with hospital gangrene, which was arrested by the application of lemon-juice, followed some time after by a pure solution of the perchloride of iron. The patient was going on well, healthy granulations had sprung up, and the stumps were nearly healed, but he is now affected with erysipelas of the face, which, of course, is a serious complication.

But if the surgeons and physicians are powerless in the matter, they can surely protest against the overcrowding, or do as some surgeons do—send the patients to their own homes as soon as circumstances permit, or have them removed to tents or wooden huts. No amputation or suppurating cases ought, in my opinion, be left in the wards in summer unless the patients have a cubic space of at least 1200 feet, whereas in reality in many of the hospitals they have scarcely 800 cubic feet; and in one ward of the Hôtel-Dieu the cubic space allotted to each patient is only 500! but when the bed-curtains are taken into account the cubic space falls far short of this amount.

As there were several cases of gangrene in the wards, M. Richet took occasion to give a lecture on the subject, and, after having gone through the etiology of the affection, he said that alcoholism was one of its most prolific causes; but, without attempting to deny the pernicious influence of alcohol on the system, I think that this substance as a potent agent in the pathogeny of disease is much abused. One has only to turn to the British hospitals, whose inmates are for the most part of the same class that are admitted into the Paris hospitals, and are accustomed to stronger drinks than the French, and he will learn that such affections as hospital gangrene, erysipelas, and pyæmia are far less common in the former than in the latter hospitals. The cause must therefore be sought elsewhere. As to the question of amputation of gangrenous limbs, M. Richet adheres to the old rule of waiting till the line of demarcation is formed, as, if done before, the chances are that the disease will continue its course and ultimately kill the patient. Out of eight cases of traumatic or surgical gangrene in which he had amputated *before* the limitation of the disease he had five deaths; in eleven cases *after*, only one death occurred.

The discussion at the Academy of Medicine as to the identity or non-identity of typhus and typhoid fever, in which Briquet, Bouchardat, Fauvel, and Chauffard were the principal speakers, was considered as having been closed when M. Briquet, who looks upon these affections as identical, differing only in degree (the absence of intestinal lesions in typhus being a fortuitous circumstance), reiterated his arguments. M. Chauffard, who with Bouchardat and Fauvel is for their non-identity (M. Chauffard differing from these latter Academicians only as to their etiology), replied in the following terms:—"There may be certain analogies or affinities between the two affections; but analogy is not identity. They are perfectly distinct from each other; and if pathological anatomy has any real value, the post-mortem appearances rather disprove than confirm their identity." He concluded by adding that the doctrine of the identity of typhus and typhoid fever is a superannuated one, and cannot be any longer entertained by those who would keep pace with the progress of science.

The reconstruction—or rather the enlargement—of the Paris School of Medicine is all but decided upon; for, whatever may be the political opinions of Ministers of Public Instruction who have succeeded each other for a series of years, all have been unanimous as to the insufficiency of the building to meet the requirements of scientific research, and of the increasing number of the students, who now muster

about 4000 in different stages of their curriculum. M. Batbie, the present Minister of Public Instruction, not only promises, but means earnestly to have these defects removed as soon as possible; and if the plan of the architect be carried out he will deserve great credit, as the space and material with which the alterations are to be effected had already tried the capacity of other architects, who had to give it up as impracticable. It is estimated that the School with its dependencies will cost nearly 4,000,000 fr.; and in order to prevent any inconvenience to students and professors, the work will be effected piecemeal, and will not be completed before the next five years. But Ministers propose and Governments dispose; and whether the present Government or any succeeding one will give effect to the growing wants of the Faculty is another question. Here, as in Great Britain and elsewhere, the interests of the medical profession are but of secondary importance to the powers that be. There is no lack of examples of the disfavour in which the profession is generally held; we need only refer to the recent decision of the French National Assembly on the proposition of M. Naquet for the amelioration of the present state of medical education in France, which was thrown out by a great majority. The present School of Medicine, which is situated in the Quartier Latin, stands on the site of the old College de Bourgogne, and is only about a century old, and those of your readers who have visited the building will remember the splendid amphitheatre from which have issued some of the most eminent men of the medical world. It is capable of holding 1400 students at a time, and when the place is full it is really an imposing sight. This part of the building is well adapted for its purpose; its acoustic arrangements are almost perfect, and the seats go up in gradation. It is lighted by a skylight, and contains a large painting by Matout, representing Ambrose Paré practising for the first time the ligature of an artery after amputation. The lectures here are gratuitous and open to the public, and every facility is afforded even to foreigners for attendance on them.

The Shah of Persia is, of course, the lion of the day in Paris, as indeed he is of all Europe for the present. Fêtes, reviews, and sight-seeing are the order of the day, and notwithstanding the intense heat the review on Thursday last was a great success, not only as a magnificent military display, but as a proof of the powers of endurance of the French soldiers; for out of about 62,000 of all ranks that were under arms for nearly the whole day there were only twenty-five men who fell out and had to be taken to the ambulance tents erected for the purpose. The crowd of spectators was also dense. Owing to this cause, coupled with the intensity of the heat, several persons fainted. There were only a few cases of insolation, far less indeed than might have been expected under the circumstances. The *fête de nuit* and the pyrotechnic display got up last night for the Shah are beyond description. The whole of the Champs Elysées to the Trocadero was in a blaze, but the enjoyment of the sight was marred by a strong wind and a slight shower, which, however, were otherwise welcomed, as owing to the myriads of lights and the density of the crowd the atmosphere was stifling; but I have not heard of any accidents. The whole was concluded hard upon midnight by a magnificent *retraite aux flambeaux*, the torches, Bengal lanterns, and the national and Persian flags being borne by regiments of soldiers headed by their own bands, told off for the occasion. The Shah is very active in visiting the different monuments and public buildings of this great city, not even disdaining the Christian places of worship; but the hospitals do not seem to have any great attraction for him, as I have not heard of his having as yet visited any since his arrival among us. Should, however, the Shah have any intention of doing so, it is to be hoped that timely notice will be given in order that the wards may be thoroughly disinfected before the arrival of the august visitor. The following anecdote *àpropos* of the visit to Notre-Dame is related of the Persian sovereign:—Among the sacred objects that were exhibited to him the chalices seemed to have most attracted his notice. In being told of the office of these vessels, the Shah, through his interpreter, asked the canon present whether Christ permitted the use of wine, to which the priest replied, He not only permitted it but used it Himself. The Shah then inquired whether Christ had always made use of wine, to which the reply was in the affirmative, the priest adding that if Christ permitted the use of wine He condemned the abuse of it; that it was Mahomet who unreservedly forbade the use of it. So you see the teetotalers may claim for their patron the head of the Mussulman faith.

GENERAL CORRESPONDENCE.

WATER SUPPLY TO MARITZBURG.

Letter from Surgeon-Major Black.

[To the Editor of the Medical Times and Gazette.]

Sir,—In reference to the subject of the connexion between the production of typhoid fever and the nature of the water supply of towns abroad, I may adduce the instance of Maritzburg, the capital city of Natal, with its garrison of Fort Napier. Here a healthy station to all appearance, in a very salubrious climate, is converted into one of very doubtful sanitary reputation, both amongst the civilian and the military populations, owing to the prevalence of typhoid fever more or less constantly every year.

This city lies in an upland country, on a sloping ridge, open to all aspects but the north, with ample means of drainage down each side to the streams below, and is fully exposed to the ozoniferous sea breezes from the south-east.

Fort Napier, where the troops are stationed, is still better located—on the top of a hill, at the western end of the town, open to every breeze and view all round. Both town and fort lie on the horizontal strata of the lacustrine sandstone, which, being fully jointed, allows perfect permeation of rainfall through its cracks, and therefore the sites are dry.

Now, the inhabitants of Maritzburg and the troops at Fort Napier have been generally subject to typhoid fever prevailing more extensively at one time than another, according to the nature of the season. All sorts of conjectures floated about for some time as to the cause. At one time it was thought to be the heat, at another the fruit, and so on, till experience has eventually drawn attention to the defective nature of the plan of its water supply.

Graham Town, of English origin, the next city of any size on the southern coast of Africa, has its water carried for its inhabitants by pipes from reservoirs in the neighbouring hills, and is reported to be a very healthy station. Maritzburg, on the other hand, was planned by the Dutch originally, and they adopted the open sluit or channel system for their waterworks, which suited them both for irrigation and house purposes.

These sluits or open ditches came down from a valley between the Town Hill and the Twent Kop Hill where the head springs are, and through fields under cultivation and pasturage, where manure is extensively used and also deposited by the cattle. The sluit supplying Fort Napier runs on a higher level than that for the town, but passes through the same sort of arable land and meadow, which has a gradual slope down at right angles to the watercourses.

Now, when rains take place, as they do in the summer chiefly, they come down like tropical showers with thunderstorms, and therefore the waters run rapidly off all sloping grounds, washing light and loose material down with them. What tends to render the whole matter more insalubrious is that these sluits are simply dug as channels in the earth, and are not lined by brickwork or masonry, which would prevent soakage into the earth and permit them to be properly cleaned out. In consequence, therefore, the sewage matters of these meadows all get washed into the two sluits above named, and supply the inhabitants and troops with excellent solutions of manure. When parts of these ditches are required to be cleaned out occasionally to remove obstructions, the detritus deposited in them is found as black and offensive as that out of any horsepond in a farmyard.

Though this glaring sanitary defect has been often pointed out by professional men, yet, as far as I am aware, no new system of waterworks has been constructed on the European plan of reservoirs and pipes and cisterns.

These sluits on arrival at the town are divided and subdivided down the sides of the different streets, and run past the doors of the houses and gates of the gardens, and are therefore further liable to be contaminated by the washings of ordure and filth from the traffic. When the servant then dips her pail into this water-sluit for a domestic supply opposite her master's door towards the lower end of the town, it may be easily conceived what a disgusting solution it must be.

It may also be conjectured what must be the nature of the subaqueous deposition going on in the ditch daily, and that there is therefore a well-grounded fear of cleansing them all out, in case of stirring up a foul source of disease. This sluit system has been gradually eliminated by the English

colonists from other large towns in South Africa designed by the original Dutch settlers, and it is surprising it has been allowed to remain so long in the capital of Natal. In the meantime, all the water used for drinking and culinary purposes imperatively requires the constant use of filtration as the only available preventive at present against the sewage poison entering the blood of the inhabitants and producing the fever recorded in civil and military Blue Books.

Extracts from Army Medical Reports.

1859, p. 98.—Fevers of the continued type have been thrice as prevalent at Natal as on the Eastern frontier.

1860, p. 86.—In January and February the admissions for continued fevers in Natal were much above the average.

1868, p. 101.—The corps which furnished the highest proportion of cases (of continued fevers) was the 20th Regiment in Natal.

1867, p. 96.—The former 99th Regiment was quartered in the early part of the year at Natal, where fever is stated to be endemic in January and February (in the summer).

1865, p. 79.—The 11th Regiment, at Fort Napier, furnished the highest number of cases, etc., of continued fever.

I am, &c., W. T. Black, Surgeon-Major.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 27.

Dr. C. J. B. Williams, F.R.S., President, in the Chair.

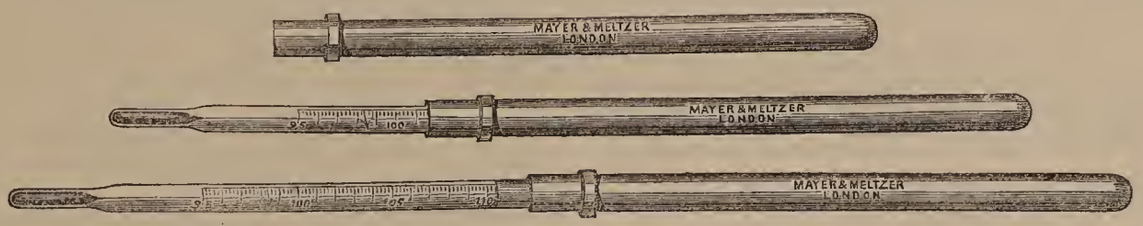
Dr. Wilson Fox read a paper entitled "Analysis of Observations on the Temperature, Pulse, and Respiration in Phthisis and Acute Tuberculisation of the Lungs." In this paper the author gives an account of an analysis of the morning and evening observations on the temperature, pulse, and respiration of eighty cases of phthisis made at University College Hospital. The cases are divided by him into five classes—viz., (1) acute tuberculosis; (2) acute tubercular phthisis; (3) chronic phthisis; (4) cases with high temperatures not ending fatally; (5) cases with comparatively low temperatures not ending fatally. The phenomena relating to temperature are considered under the following heads:—1. The maximum and minimum temperatures. 2. The maxima of the morning and evening. 3. The mean temperatures of the morning and evening. 4. The exacerbations and remissions occurring from evening to morning and from morning to evening. 5. Circumstances influencing the degree of pyrexia. In the cases analysed by the author the highest temperatures were most frequently attained in acute tuberculosis, but temperatures exceeding 104° were found in all classes except in the cases categorised as "low temperatures not ending fatally." The highest temperatures were, as a rule, met with in the fatal cases, but in chronic phthisis the temperatures are lower than in other classes, with the exception of the last named. In chronic phthisis high degrees of pyrexia (exceeding 102°) are for the most part due to pneumonic complications. The mean temperatures of the cases not ending fatally fell considerably below those of the other classes, owing to a gradual fall in temperature being observed in many during their stay in hospital. The mean morning temperature may fall within normal limits in certain cases in all classes. This, however, is due in some instances to the extent of the remissions which occur from evening to morning, and which may reach subnormal degrees. Such low averages of the morning temperature are, however, more common in chronic than in acute phthisis. Averages of the evening temperatures not exceeding 99° were only met with by the author in cases of chronic phthisis and the class of low temperatures not ending fatally; he, however, alludes to the fact that these have been recorded by other observers in cases of acute tuberculosis. They are in some cases due to a large proportion of the remissions taking place from morning to evening. The maximum temperature is usually attained in the evening, but by no means invariably. In 10 per cent. of the cases the maximum temperature of the morning and evening observations was equal. In 23 per cent. of the cases the maximum morning temperature observed was higher than the maximum evening, and in 15 per cent. the means of the morning temperatures were higher than those of the evening. High morning temperatures were more common in the class of acute phthisis than in any of the others. Exacerbations from evening to morning occurred with greater or less frequency in 90 per cent., and remissions from morning to evening in 92 per cent. of 75 cases examined; and these variations were pretty evenly distributed through all classes of cases, being, however, least common in the cases of acute tuberculosis analysed. A morning temperature higher than that of the evening may be found also when the temperature does not exceed normal limits. In a few cases the morning temperature may, throughout nearly the whole series of observations, be found to be higher than that of the evening. Usually, however, these variations occur irregularly throughout the course of the cases. As the author's analysis is founded solely on morning and evening observations, he thinks it probable, from some cases which he has observed where the temperature has been more frequently recorded, that the apparent remissions from morning to evening may be interrupted by a midday exacerbation; but nevertheless, in a fair proportion an actual rise takes place from the evening to the ensuing morning. Equality also between the evening and morning is sometimes maintained, though rarely during long periods. It may, however, extend over thirty-six or forty-eight hours. It may exist both for febrile and for non-febrile temperatures; and, as regards individual mornings and evenings, may form a large proportion of the observations in any given case. Such approximative equality between the mornings and evenings is usually associated with high pyrexia and with severe forms of the disease. The order of the remissions and exacerbations is thus frequently interrupted by the conditions now described, when the usual course of exacerbations from morning to evening and of remissions from evening to morning is inverted or neutralised. Severe exacerbations are, however, commonly attended with equally great remissions; the maxima of each of those observed being an exacerbation from morning to evening of 8·8°, and a remission from evening to morning of 8·4° Fahr. The remissions and exacerbations do not, however, precisely correspond: 10 per cent. had remissions, and 8·4 per cent. had exacerbations exceeding 5° Fahr. The larger exacerbations and remissions are nearly equally distributed among the fatal cases and among those not fatal, but presenting in some part of their course high temperatures. The author, from an analysis of the remissions and exacerbations observed, considers that Prof. Niemeyer's statement that acute tuberculosis is distinguished by continuity of high temperature is not borne out by facts; for a greater proportion of large remissions and exacerbations is observed in the highly pyrexial cases of this class than in any others. Although the morning temperature is not unfrequently higher than that of the evening, yet the exacerbations from evening to morning, and the remissions from morning to evening, are usually less great than those following the converse order. In some cases, however, they are greater. Severe exacerbations are sometimes traceable to extension of the disease, sometimes to intercurrent inflammations, but neither of these conditions is always discoverable. Great remissions are most commonly due to exhaustion, and are an unfavourable symptom. Sweating is perhaps not the cause, but the consequence, of the remission. It may exist when the temperature is high, and remissions may take place without its appearance. Hæmoptysis has no necessary connexion with any peculiarity of temperature. Lardaceous disease has no necessary connexion with any peculiarities of fever. The fever of phthisis is most closely allied to suppurative fever. The observations on the pulse in relation to the temperature and respiration are analysed in respect of the quickest and slowest pulses observed in the morning and evening of each case, and also of the means of all the observations on the pulse as compared with the mean temperature and the mean number of respirations. The author on these points comes to the following conclusions:—1. That the pulse stands, in respect of rapidity, in the majority of cases, in tolerably definite relations to the intensity of the disease and to the severity of the fever, but that a rapid pulse and a high temperature are not always simultaneously present. 2. That the morning pulse is commonly more rapid than that of the evening, thus confirming Dr. Edward Smith's observation on this point. Exceptions, however, were not uncommon, and the rule chiefly applies to the quickest pulses observed; for in the slowest pulses, and also in the means of the pulses in each case, the reverse condition appears to prevail in the periods during which these observations were taken (9 to 11 a.m. and 8 to 10 p.m.) The respirations are also accelerated, but their frequency bears no proportion to the intensity of fever in the averages of the cases; but this correspondence may be occasionally

observed. The relation of the respiration to the pulse is, in respect of frequency, more constant than that to the temperature, but quick respiration may be associated with a slow pulse; or, more commonly, the pulse may be rapid when the respiration is very little accelerated, and the rise of the pulse is commonly greater than that of the respiration. In the more rapid pulses, and also in the means of the pulse and respiration, the ratio of respiration 1, pulse 3 to 4, is commonly maintained; but in the slower pulses the most common proportion is respiration 1, pulse 2 to 3, and occasionally the respiration may be more rapid than the pulse. The pulse-respiration ratio is but little influenced by the temperature; but, as the pulse is commonly slower when the temperature is low, a high ratio of the respiration to the pulse is sometimes found under these circumstances. Great variations, however, exist in individual cases in the relation both of the pulse and respiration to the temperature on different days. Either the pulse or the respiration may be singly accelerated or not both when the temperature falls or rises, or any one of the three may fall while the others rise in frequency or degree of temperature. The absence of correspondence between the rate of respiration and the degree of temperature is probably due to the variations in the amount of respiratory surface remaining as compared with the requirements of the system. Severe pyrexia may, however, be excited by a comparatively small area of disease in the lungs. Pyrexia, however, *per se*, tends, as noticed by Traube, to increase the frequency of respiration.

NEW INVENTIONS.

THE UNIVERSITY POCKET CLINICAL THERMOMETER.

This little instrument consists of the usual pocket clinical thermometer, enclosed in an outer case, to the end of which it is attached firmly by a clip. This admits of opening to fix a new tube in case of breakage. By a simple screw arrangement the thermometer can be projected from the case or returned to it at will, while the clip fastening enables any person in case of loss or breakage to fix a new tube without the trouble, uncertainty, and annoyance of cement. An octagonal collar on the case prevents it rolling. The arrangement is patented, and can be applied to caustic-holders, or any instrument requiring easy and expeditious elongating or retracting. It is invented and manufactured by Mayer and Meltzer, 59, Great Portland-street, London.



MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 21st inst., viz.:

Atkins, Francis Thomas, L.K. & Q.C.P. Ire., Plumstead, Kent, student of Guy's Hospital.
Barrow, Frederick, L.S.A., Holloway, of King's College.
Bennett, William Henry, Chilmark, near Salisbury, of St. George's Hospital.
Berry, William, L.R.C.P. & S. Edin., Wigan, of the Glasgow School.
Brodribb, Charles Aikin, L.S.A., Newton-road, W., of St. Mary's Hospital.
Cash, Alfred Midgley, M.B. Edin., Edinburgh, of the Edinburgh School.
Clarke, George Mouat Keith, L.S.A., Gerrard-street, Soho, of the Charing-cross Hospital.
Counsellar, William Parkinson, L.K. & Q.C.P. Ire., Whalley, Lancashire, of the Manchester School.
Daniel, James, L.K. & Q.C.P. Ire., Harpurhey, Lancashire, of the Manchester School.
Dobson, Joseph, L.S.A., Leeds, of the Leeds School.
English, Thomas Johnston, L.S.A., Fulham-road, of St. George's Hospital.
Gunn, Robert Marcus, M.B. Edin., Sackville-street, of the Edinburgh School.
Hallett, Henry Arthur, M.B. Aberd., Banchory, of the Aberdeen School.
Jelley, Richard, L.S.A., Elton, Northamptonshire, of the University College.
Jennings, William Oscar, L.S.A., Bedford-row, of Guy's Hospital.
Joynes, Francis James, L.S.A., Chipping Norton, of King's College.
Kitcheu, Charles Frederick Hewick, L.R.C.P. Lond., Manchester, of the Manchester School.
Lee, Edmund, L.R.C.P. Edin., of the Manchester School.
Leftwich, Ralph Winnington, M.B. Aberd., Holloway, of St. Bartholomew's Hospital.
McKay, Henry Kellock, L.S.A., New Kent-road, of Guy's Hospital.
Martin, Richard Johnson, L.S.A., Atherton, near Manchester, of the Manchester School.
Mears, Robert, L.R.C.P. Edin., Atherstone, Warwickshire, of the Edinburgh School.
Packman, Augustus Tenasserim Vance, L.S.A., Sheffield, of the Sheffield School.
Penny, William Lowry, M.B. Cantab., Bridgefield, Lancashire, of the Middlesex Hospital.
Williams, Trevor William Wynn, L.S.A., Montagu-square, of St. Bartholomew's Hospital.
Young, Ralph, L.M. Durham, Bishop Auckland, of the Newcastle School.

Admitted Members on the 22nd inst., viz.:—

Archer, Edmond Lewis, L.S.A., Highgate, student of St. Bartholomew's Hospital.
Balding, Mortimer, M.B. Cantab., Barkway, near Royston, of the Middlesex Hospital.
Bindley, Philip Henry, Birmingham, of University College.
Booth, Philip Lancashire, Manchester, of the Manchester School.
Burn, George Wilson, L.S.A., Fleet-street, of St. Bartholomew's Hospital.
Craven, Robert Musgrave, Southport, of the Liverpool and Edinburgh Schools.
Eales, Henry, Yealmpton, Devon, of University College.
Fenn, Charles Draper, L.S.A., Newmarket, of Guy's Hospital.
Gould, Alfred Pearce, Norwich, of University College.
Hutchings, Arthur Carey, Alderbury, near Salisbury, of King's College.
Kershaw, Alfred, Bolton, Lancashire, of the Manchester School.
Kershaw, Robert, Hampstead, of the London Hospital.
Parkinson, Richard Thomas, Manchester, of the Manchester School.
Paul, Frank Thomas, Pentney, Norfolk, of Guy's Hospital.
Reckless, Alfred, Sheffield, of the Sheffield School.
Skerritt, Edward Markham, Wokingham, of University College.
Smith, James, Newcastle, of the Newcastle School.
Stansfield, George Sutcliffe, Bacup, Lancashire, of the Manchester School.
Stericker, William, L.S.A., Bromptou, Yorkshire, of Guy's Hospital.
Wear, Arthur Taylor, Newcastle, of the Newcastle School.
Wilson, John Smith, Aberdeen, of the Aberdeen School.

Admitted Members on the 23rd inst., viz.:—

Baly, William, Exeter, student of St. Bartholomew's Hospital.
Cassan, Theodore, Lewisham, of King's College.
Greenwood, John William, Preston, Lancashire, of St. Thomas's Hospital.
Harricks, John Hugh, Liverpool, of the Liverpool School.
Hewetson, Henry Bendelack, Leeds, of the Leeds School.
Howe, Lucien, M.D. New York, Louisville, Kentucky.
Jennings, John Downes, Tamworth, of the Birmingham School.
Johnson, Cottingham Greaves, L.S.A., Rectory-grove, Clapham, of St. Thomas's Hospital.
Keer, George Edwardes, L.S.A., Wickham Market, Suffolk, of Guy's Hospital.
Messiter, Matthew Ardun, Repton, near Burton-on-Trent, of the Birmingham School.
Page, Herbert Markant, Birmingham, of the Birmingham School.
Pickles, John Jagger, Shelf, near Halifax, of the Leeds School.
Riding, Edwin, Liverpool, of the Liverpool School.
Sparrow, William Christopher, Dublin, of the Dublin School.
Torbock, William Hall, M.D. Philad., Darlington, of University College.
Vawdrey, Theophilus Glascott, St. Austell, of University College.
Verdon, Henry Walter, Eccles, near Manchester, of St. Thomas's Hospital.
Wherry, George Edward, Bourne, Lincolnshire, of St. Thomas's Hospital.
Wilson, Samuel, L.S.A., South Shields, of the Newcastle School.
Wilsou, William Teasdale, L.M. Dur., Newcastle, of the Newcastle School.
Wreford, Samuel, Exeter, of the London Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, July 17:

Burn, George Wilson, Fleet-street, E.C.
Hooper, Alfred, Burton-on-Trent.
Joseph, George William, Liverpool.
Pilkiuton, William Binns, University College.

The following gentlemen also on the same day passed their primary professional examination:—

Burtonshaw, Thomas, London Hospital.
Henbeck, Frederick Emanuel, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BRUCE, WILLIAM, M.D., L.R.C.S. Eng., J.P.—Parochial Medical Officer for Reay, Caithness.

CASS, HENRY, M.R.C.S.—Attending Medical Officer at the Provident Medical Institution and Lying-in Charity, 20, Pimlico-road, S.W., *vice* Dr. O'Neil.

CAVAFY, JOHN, M.D., M.R.C.P.—Physician to the Victoria Hospital for Children, Gough House, Queen's-road, Chelsea.

CLARKE, LOCKHART, M.D., F.R.S., M.R.C.P.—Consulting Physician to the Provident Medical Institution and Lying-in Charity, 20, Pimlico-road, S.W., *vice* Dr. C. J. B. Aldis, deceased.

DIXON, JOHN, M.B., L.R.C.P. Edin., C.M.—House-Surgeon at the London Temperance Hospital, Gower-street, W.C.

EDMUNDS, JAMES, M.D., L.R.C.P. Edin., M.R.C.S. Eng., L.S.A.—Visiting Physician to the London Temperance Hospital, Gower-street, W.C.

GRACE, HENRY, L.R.C.P. Lond., M.R.C.S. Eng., L.M., L.S.A.—Medical Officer of Health for the St. George's Urban Sanitary District, Bristol.

LYNES, EDWARD, M.D.—Certifying Factory Surgeon for the City of Coventry, *vice* Edmond Waters, L.R.C.P. Edin., deceased.

MOORE, SAMUEL W., L.R.C.P. Edin., L.R.C.S., L.S.A., F.C.S.—Visiting Surgeon to the London Temperance Hospital, Gower-street, W.C.

PLETTS, JOHN MENHAM, M.R.C.S.—House-Surgeon at the Royal Isle of Wight Infirmary, Ryde.

RIDGE, JOHN JAMES, M.D., M.B., B.A., and B. Sc. Lond., L.R.C.P. Lond., M.R.C.S. Eng.—Visiting Physician to the London Temperance Hospital, Gower-street, W.C.

NAVAL APPOINTMENTS.

ADMIRALTY.—Thomas L. Bickford, Staff Surgeon, 2nd class, to the *Royal Adelaide* for temporary service; H. A. Close, Staff Surgeon, 2nd class to the *Duke of Wellington;* John B. Nicoll, Staff Surgeon, 2nd class, to the *Pembroke;* John P. Courtenay, Staff Surgeon, 2nd class, to the *Nankin.*

BIRTHS.

EVANS.—On July 15, at The Cottage, Drumcree, Westmeath, the wife of Usher W. Evans, M.D., Deputy Inspector-General, of a son.

HOOD.—On July 19, at Bletchingley, the wife of D. W. C. Hood, M.B., L.R.C.P. Lond., L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., of a daughter.

HOLLIS.—On July 18, at 13, New Cavendish-street, W., the wife of W. Ainslie Hollis, M.D., of a son.

IMAGE.—On July 20, at Westgate-street, Bury St. Edmunds, the wife of Francis E. Image, M.A., M.B., L.R.C.P., L.R.C.S., M.R.C.S. Eng., of a son.

MCDONALD.—On April 28, at Hamilton, Tasmania, the wife of Wallis McDonald, M.R.C.S., L.R.C.P. Edin., of a daughter.

PURVIS.—On July 19, at Royal-hill, Greenwich, the wife of John Prior Purvis, M.R.C.S., of a son.

WORKMAN.—On July 17, at 1, Clarendon-terrace, Teignmouth, South Devon, the wife of C. J. Workman, M.D., of a son.

MARRIAGES.

HUGHES—WOODFORDE.—On July 15, at the Church of St. Mary Magdalene, St. Leonard's-on-Sea, the Rev. Geoffrey Hughes, fourth surviving son of the Rev. Henry Hughes, of All Saints, Gordon-square, to Gertrude Mary Cardew, second daughter of Francis Henry Woodforde, M.D., of Amberd House, near Taunton, Somerset.

NEWSTEAD—POPE.—On July 17, at the Church of St. Mary Magdalene, Stoke Bishop, James Newstead, M.R.C.S. Eng., to Louisa Anne, younger daughter of George Pope, Esq., of Stoke Lodge, near Bristol.

RUSSELL—LANE.—On July 17, at Christ Church, Clifton, Bristol, Philip Cecil Crampton, youngest son of the late Christopher Russell, M.D., of Enniskerry, Ireland, to Lucilla Mary Elizabeth, only daughter of the late Odiane Coates Lane, Esq., of Clifton.

STEPHENSON—HORWOOD.—On July 16, at the parish church, Esher, Heathfield Harman, son of the late Charles Thomas Stephenson, M.D., of Esher, to Maria Willbee, eldest daughter of John Horwood, Esq., of Esher.

DEATHS.

PIRRIE, JOHN MILLAR, A.B., M.B., M.D. Dub., L.R.C.S.I., of Belfast, at the residence of his brother, Washington Pirrie, Esq., 139, Cumberland-terrace, Upper Parliament-street, Liverpool, on July 16, aged 48.

RALFE, MARY HOWARD, wife of Charles Henry Ralfe, M.A., M.B., at 26, Queen Anne-street, Cavendish-square, on July 18.

SHILLINGFORD, RICHARD SHORTLAND, eldest son of Isaac Shortland Shillingford, M.R.C.S. Eng., L.S.A., 124, Hill-street, Peckham, S.E., on July 20, in his 18th year.

SIMPSON, VIOLET JULIA, only child of Thornton G. Simpson, L.R.C.P. Edin., L.M., L.S.A., at Fairlie House, King Edward's-road, South Hackney, on July 16, aged five months and a fortnight.

WRIGHT, ALEXANDER BRYAN, only child of Dr. D. Wright, Residency Surgeon, at Katmansoe, Nepaul, on June 17, aged 18 months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Medical Committee, Children's Hospital, Steelhouse-lane, on or before August 4.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Candidates must be legally qualified. Applications, with testimonials, to the House Governor and Secretary, on or before July 26.

BOURNEMOUTH DISPENSARY.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

BRADFORD INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to W. C. Woodcock, Secretary, 65, Market-street, Bradford, on or before August 4.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

COVENTRY PROVIDENT DISPENSARY.—Surgeon. Candidates must be M.R.C.S. of London, Dublin, Edinburgh, or Glasgow, and possess a licence from one of the Royal Colleges of Physicians, or from the Society of Apothecaries. Applications, with testimonials, to the Honorary Secretary, on or before August 2.

DERBY COUNTY ASYLUM.—Assistant Medical Officer. Candidates must be duly qualified in Medicine and Surgery. Applications, with testimonials, to John Barber, County Lunatic Asylum, Mickleover, Derby.

DERBYSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Applications, with testimonials, to the Secretary, 4, Victoria-street, Derby.

KING'S COLLEGE, LONDON.—Chair of Anatomy. Applications, with testimonials, to the Council.

KNIGHTON UNION.—Medical Officer for the Llanbister District. Candidates must be legally qualified medical practitioners. Applications, with testimonials, to Edward Hooper Deacon, Clerk to the Guardians, Knighton, Radnorshire, before August 2.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 24, Friar-lane, Leicester, on or before August 4.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to R. Harrison, Registrar (of whom particulars may be obtained), before August 13.

LOYAL UNITED BRETHREN BENEFIT SOCIETY.—Surgeon and Apothecary. Candidates must be M.R.C.S.E. Applications, with testimonials, to the Secretary, Mr. S. Emmanuel, 24, High Holborn, W.C., on or before August 4.

NORTH BIERLEY UNION.—Medical Officer of Health. Applications, with testimonials, to W. Lancaster, Esq., Solicitor, Bradford, Yorkshire, on or before August 4.

NORTH RIDING INFIRMARY, MIDDLESBRO'-ON-TEES. — House-Surgeon. Candidates must be Fellows or Members of one of the Royal Colleges of Surgeons of the United Kingdom, and possess a medical qualification recognised by the Medical Council. Applications, with testimonials, to the Secretary, on or before July 30.

SUFFOLK GENERAL HOSPITAL, BURY ST. EDMUNDS.—Physician and Surgeon. Candidates for either appointment must send testimonials to the Committee on or before July 29.

WANDSWORTH AND CLAPHAM UNION.—Resident Medical Officer for the Workhouse and Infirmary. Candidates must be duly qualified. Applications, with testimonials, to John Sanders, Clerk to the Guardians, New Wandsworth, on or before July 26.

WOBURN UNION, BEDFORDSHIRE.—Medical Officer for the Aspley Guise District. Candidates must possess both a medical and surgical qualification, and be registered under the Medical Act of 1858. Applications, with testimonials, to the Clerk to the Board of Guardians, Woburn, on or before July 31.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Physician's Assistant. Candidates must be graduates in Medicine of a British University, or be possessed of such medical qualifications as are satisfactory to the Medical Committee. Applications, with testimonials, to the Chairman of the Medical Committee, on or before August 9.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. For particulars, apply to Mr. J. G. Buckton, Secretary, 9, High-street, Wrexham.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bakewell Union.—Mr. Wm. Cantrell has resigned the Cromford District; area 2662; population 2895; salary £15 per annum.

Martley Union.—Mr. Samuel Lloyd has resigned the Leigh District; area 11,266; population 4703; salary £85 per annum.

Pocklington Union.—Mr. John E. L. Macdonald has resigned the Second Pocklington District; area 25,555; population 2500; salary £20 per annum; —the Bishop Wilson District; area 21,580; population 2478; salary £28 per annum;—and the Workhouse; salary £20 per annum.

APPOINTMENTS.

Abingdon Borough.—Mr. Wm. F. Donkin as Analyst.

Bethnal-green Parish.—Frank Argles, L.R.C.P. Edin., M.R.C.S. Eng., to the Schools at Leytonstone.

Bideford Union.—Joseph R. Dowman, M.R.C.S. Eng., L.S.A., to the Hartland District.

Buckingham Union.—John Cheesman, M.D. St. And., M.R.C.S. Eng., L.S.A., to the First District; and Robt. De'Ath, M.R.C.S. Eng., L.S.A., to the Second District and the Workhouse.

Maidstone Union.—John Walter Bury, L.R.C.P. Edin., M.R.C.S. Eng., to the Sixth District.

Whittlesey United Parishes.—Charles N. Elliott, M.B. and M.C. Dub., to the Southern District and the Workhouse.

Wisbeach Union.—David C. Nicholl, M.R.C.S. Eng., L.R.C.P. Edin., to the Seventh District; and George Mason, M.R.C.S. Eng., L.S.A., to the Ninth District.

Worksop Union.—Christopher Fleming, L.R.C.S. Ire., L.K. & Q.C.P. Ire., to the Harthill District.

SEVERAL deaths from sunstroke have occurred in Constantinople since the present hot weather has set in.

THE EARL AND COUNTESS OF DUDLEY have consented to open the new Birmingham and Midland Counties Middle Class Idiot Asylum, recently erected at Knowle, on August 30.

THE HUNTERIAN MUSEUM—His Imperial Highness the Grand Duke Cesarewitch, accompanied by Colonel Tecsdale, paid an unexpected visit to the Royal College of Surgeons on Tuesday last, the 22nd instant, where he was received by Messrs. Trimmer and Stone, and conducted over the whole of the museums, library and examination rooms, and, after remaining two hours, took his departure, expressing the great pleasure he had derived from the visit.

WE have just received from Messrs. Barraud and Jerrard two admirable photographic portraits of the late Bishop of Winchester, which were taken on the day before his death. Those who wish the last portrait of the Bishop, who was the subject of universal admiration and esteem amongst all classes, will no doubt hasten to obtain one of these photographs.

DISEASE AMONGST INDIAN SOLDIERS.—It is reported from Bombay that sickness is so prevalent in the 40th Regiment that 100 men are away at the hills and eighty in the hospitals.

FOUNDERS' DAY AT EPSOM COLLEGE, JULY 17.—An unusual and melancholy interest attaches to this anniversary by the presence of the late Bishop of Winchester, who took part in the ceremonials of the day, presiding during the speeches, and previously in the chapel, confirming upwards of thirty of the boys. All present during the chapel services, which, it is believed, were the last engaged in by the Bishop, were particularly impressed by his more than ordinary solemn admonitions. His words, pregnant with holy aspirations and suggestive of the beginning of a new life in Christ, fell from his lips and rich-toned voice with an accent never to be forgotten! He strongly urged the necessity of resisting impurity, and of beginning from this moment the new life. Truly, they were words worthy of being spoken by one (as he proved to be) on the verge of another world. The Council were represented by Drs. Jonson, Carr, and Hogg, and Messrs. F. Hird and Bransby Powys. The general company included Rev. Dr. Hessey, Professor Key, Dr. Webster, of Dulwich, and Dr. Price, of Deptford, in addition to a large gathering of ladies. The Carmen Gratulatorium Latinum was well pronounced in the new style by Mr. Bannister, and all the speeches were well received. The day was a great success, and augurs well for the future of the Medical College.

EXAMINATIONS.—The following were the questions in writing submitted, on Friday last, to the candidates who are now going through the oral portion of their examinations for the diploma of Membership of the Royal College of Surgeons of England, viz.:—1. Under what circumstances may blood be passed by the urethra? By what signs would you distinguish its probable source? State the treatment which you would adopt. 2. What is carbuncle? State in what conditions of the general health this disease usually occurs. Describe its course from its commencement to its termination in a favourable case. 3. Describe, in the order in which they appear, the parts met with in a dissection from the skin to the peritoneum, of that region of the abdominal wall which is bounded, below by Poupart's ligament, and above by a horizontal line drawn from the anterior superior spine of the ilium to the median line. 4. How does dislocation of the head of the humerus into the axilla usually occur? What are the chief signs upon which you would rely to distinguish this injury from others in the same region? 5. In what cases, and under what circumstances, may tracheotomy be required? Describe the operation, and point out the difficulties and dangers that may arise in the course of it. 6. What fluctuating or fluid swellings may present themselves in the popliteal space? Describe their characteristics; and state briefly the treatment appropriate in each. The following were the questions on the Principles and Practice of Medicine at the written examination on Saturday last, viz.:—1. A person suddenly becomes more or less unconscious, and falls down, and on recovery is found to have lost the use of the left arm and leg. What are the conditions on which the seizure may depend, and the other symptoms which the patient may present? 2. What are the different kinds of worms which infest the human body? where are they chiefly found? and how do they probably gain access to the system? Mention the chief remedies which may be employed for their expulsion or destruction, and the doses and modes in which they should be given. 3. Mention the chief preparations of mercury and opium contained in the British Pharmacopœia; state the uses to which they are applied, and the doses in which they should be given.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Howard Smith, M.D.—If you have a qualification from a good university you can be examined on this side; but you can obtain a qualification only by examination.

L. D. S.—Liston's "Elements of Surgery," second edition, page 786.

E. I.—1. No. 2. Next week.

Iota.—The Hygienic Tract Society has been started: its object is to print and distribute tracts and leaflets on sanitary subjects, written by qualified men.

M.D.—According to the evidence given before the Civil Service (in Ireland) Inquiry Commission, just issued, the incomes of successful medical practitioners in Ireland vary from £800 to £1000 a year, and sometimes, but rarely, reach £5000.

A. N. O.—"Foods," by Edward Smith, M.D., vol. i. This volume gives an account of the chemical elements of food and drink and their effects on the health.

Wickland.—See Lectures on the Bones and Joints, delivered before the College of Surgeons, by James Wilson, 1820.

Gregory, W.—Albayn Hyll, a physician of the sixteenth century, studied at Oxford, and afterwards took a doctor's degree on the Continent. He died in London in 1559. Some call him a native of Wales, others of Scotland.

Spes.—Lord Houghton has accepted the office of President of the Social Science Congress, to be held at Norwich on October 1.

An Australian Correspondent says that "there is too much cramming nowadays among students, and anatomy is not sufficiently attended to. You are sending out far worse surgeons than they were twenty years ago. I feel astonished at some of the men that come out, calling themselves Fellows of the College; I sometimes think what had been crammed into their brains had been washed out on the voyage!"

THE "PRÆDIUM RUSTICUM" OF JAMES VANIER, S.J.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Do your readers know the "Prædium Rusticum" of Jacobus Vanierius, a didactic poem on country life, published in the last century? It is full of the quaintest advice and shrewdest axioms. To me the estimate it gives of the value of medical advice is quite charming. What it says of manure is Liebig anticipated; and the judgment on wine is perfect wisdom.

I send six extracts to amuse your readers, and have subjoined a translation done by one of my sons, an Oxford man, in English hexameters. I like to see a little flavour of "humanities" in the *Medical Times and Gazette*.

I am, &c., VALETUDINARIAN.

Jacobi Vanierii, Soc. Jes., "Prædium Rusticum." Ed. Nov. Abrincæ Numatianæ, 1782.

I.

Elige vicinos magnis aut urbibus, agros
Aut grandi pago, vel (quò ratis ambulet) amni;
Ditat enim villam facilis vectura; colendo
Nec desunt operæ ruri, nec agrestibus armis
Artifices, nec prompta tuis obsonia mensis.
Nec medicus, tibi qui subitis in casibus ægro
Præsentem nisi prestet opem, solantia, saltem
Verba ferat; sic urbe tamen distabit ab alta
Fundus, ut hospitio non infestere perenni.—Lib. i., p. 7.

II.

Sudoribus omnia vendunt
Di superi, et magno stant optima quæque labore.—Lib. ix.

III.

In nitro vis omnis humi est, multaque gravitem
Fertilitate, sales signis absumit, amica
Restituas ope; quæ ruris mihi summa colendi est.—Lib. vi.

IV.

Mucor si qua fides amenti lumina vitro.—Lib. vi.

V.

Sed nulla est hausto potior medicina Lyæo.—Lib. vi.

VI.

Sinæra ruentem
Vina fovunt stomachum; pellentes corpore morbos
Et fraudes animis et edaces pectore curas
Fœdaque vaniloquis abigunt mendacia linguis
Et retegunt mentes dubia sub fronte latentes,
Illinire vetant ora, refert frons vitreus uudam.—Lib. xi.

[Translation.]

Hard by some city large, or near to some prosperous hamlet,
Choose thee thy site, or else by some stream which is open for traders;
So shall thy house be enriched, being easy of access. For tillage
Thus neither tools will be wanting, nor yet for the implements workers;
Thus due supplies of provisions thou'lt have close at hand for thy tables;
Thus, too, a leech thou can'st have, who (if by some sudden misfortune
Sickness should seize thee), e'en if he no remedy present can think on,
Words full of comfort at least may pronounce. But see that thy villa
Stand just so far from the walls of the city that thou, by thy neighbours
Coming too oft, undisturbed may'st remain.
The climate should be mild, and breezes soft
Should blow more oft than gales. The fertile land

Should slope a little toward the show'ry west.
Let neither vales too deep encumber it,
Nor mountains rough, nor stagnant poisonous lakes.
A hill that faces north is vext with storms,
And corn that grows on flats is spoilt by rain.
A house that's hid in valleys deep both lacks
The light of heaven and rots with stagnant damp;
And frequent fogs, in watery clouds condensed,
Destroy the crops of grain and blooming grapes.
A meagre yield of fruit,
With stunted shoots and little sap, will show
If fault lies in the soil; but of unhealthy climes,
The cause of wasting sickness, tokens sure
Are these: But few old men are seen; the lip
Is thin and bloodless; sight grows dim, and breath
Grows short; the sufferer's mind is also dulled.
With healthy climate water should combine—
'Tis best when from a beetling rock it falls;
If not, then such as easy fills thy wells;
Or choose a cistern. Worst is that which creeps
With sluggish stream along the silent fields;
If mixt with marshy reeds it stagnant lies,
One draught will poison those, who thus must die.
The ground gives stores for walls; the grove gives trees
Unbought for roofs and carpentry; green boughs
And timber fit to hew it also gives,
With which to burn thy tiles and lime; the sand
Is either dug, or from the neighbouring stream
Is brought in carts. These things do thou provide
Before the springing walls begin to rise.
The oxen strong through winter's rest draw stones;
Let many a plane in neighbouring glades lie low,
And oaks of fearful weight by axes felled,
And fir trees, lasting long when kept well dry.

COMMUNICATIONS have been received from—

Dr. Eustace Smith; Mr. A. F. McGill; Dr. Russell; Dr. C. Handfield Jones; Mr. J. Chatto; Dr. Aveling; Mr. G. Gaskoin; Mr. Scoones; Mr. Vulpy; Mr. Blackett; Mr. J. H. Thomas; Mr. Cowell; Dr. Howard Smith; Dr. Druitt; Dr. Bakewell; Mr. J. W. Young; Dr. Rogers; Mr. T. M. Stone; Mr. Venman; H. C. C.; Dr. D. Campbell Black; Dr. Lynes; Dr. Lawson Tait.

BOOKS RECEIVED—

Hammond's Insanity in its Relations to Crime—Norris's Contributions to Practical Surgery—Schroeder's Midwifery, translated by Carter—Fractures of the Elbow-Joint, by Walter Ela—Lecture on Sanitary Science in Ireland, by Dr. W. Stokes—Aerztlicher Bericht aus dem Mayer von Rothschild Hospitale in Jerusalem, vom Jasse 1868 und 1871—Report of the Derbyshire County Lunatic Asylum—Liveing on Megrim and Sick-Headache—Grimshaw's Report on Small-pox Epidemic, 1871-73, as observed in Cork-street Fever Hospital, Dublin—Annual Report of the Coventry Provident Dispensary—Annual Report of the Provident Medical Institution and Lying-in Charity, Pimlico-road, S.W.—Quarantaines, par M. le Dr. Léon Colin—Walford's Coroners: their Office and Duties considered.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Pharmaceutical Journal—L'Union Médicale—Gazette Médicale—Le Mouvement Médical—Tribune Médicale—La France Médicale—Le Progrès Médical—Guy's Hospital Gazette—Gazette Hebdomadaire—Revue des Sciences Médicales, July—Berliner Klinische Wochenschrift—Centralblatt für die Medizinischen Wissenschaften—Allgemeine Medizinische Zeitung—O Correio Medico de Lisboa—New York Medical Journal—Gazette des Hôpitaux—Philadelphia Medical Times, June 28 and July 5—Le Bordeaux Médical—Manchester Daily Examiner and Times—Dublin Daily Express—Canada Medical Record—Canada Medical and Surgical Journal—Medical Notes and Queries—London Medical Record—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

July 26. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

28. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

30. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

31. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

August 1. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 19, 1873.

BIRTHS.

Births of Boys, 1190; Girls, 1052; Total, 2242.
Average of 10 corresponding years 1863-72, 2009·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	726	655	1381
Average of the ten years 1863-72	780·3	719·9	1500·2
Average corrected to increased population	...	...	1650
Deaths of people aged 80 and upwards	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	5	...	1	5	...	3	1	19
North ...	751729	...	1	5	...	15	...	4	...	41
Central ...	334369	...	2	1	...	9	...	1	...	24
East	639111	1	6	2	...	17	...	2	1	78
South	967692	...	17	3	...	18	1	6	2	43
Total	3254260	1	31	11	1	64	1	16	4	205

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·737 in.
Mean temperature	59·4°
Highest point of thermometer	75·6°
Lowest point of thermometer	46·4°
Mean dew-point temperature	52·7°
General direction of wind	S.W.
Whole amount of rain in the week	1·21 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 19, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending July 19.	Deaths Registered during the week ending July 19.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2242	1381	75·6	46·4	59·4	15·22	1·21	3·07
Portsmouth ...	118280	12·4	101	33	71·4	47·2	58·6	14·78	...	...
Norwich	81677	10·9	40	33	72·5	45·0	57·3	14·05	1·09	2·77
Bristol	18964S	40·4	124	91	70·1	49·2	56·8	13·78	2·75	6·98
Wolverhampton ...	70084	20·7	52	30	71·8	44·1	57·6	14·22	0·83	2·11
Birmingham ...	355540	45·4	253	136	71·8	47·7	57·9	14·39	1·31	3·33
Leicester	102694	32·0	69	36	73·7	42·5	57·8	14·33	1·29	3·28
Nottingham ...	89557	44·9	69	34	71·2	44·2	56·5	13·61	1·05	2·67
Liverpool	505274	95·9	336	241	...	...	...	...	...	...
Manchester ...	354057	78·9	219	175	74·0	45·5	58·0	14·44	1·84	4·67
Salford	130468	25·2	101	68	72·4	43·4	55·3	12·94	1·06	2·69
Oldham	85141	20·4	71	26	69·0	...	...	...	1·43	3·63
Bradford	156609	23·8	115	65	71·8	50·2	56·4	13·55	0·76	1·93
Leeds	272619	12·6	127	117	75·0	49·0	58·2	14·55	0·76	1·93
Sheffield	254352	11·1	205	114	...	...	..	...	...	...
Hull	128125	35·9	86	54	73·0	46·0	57·3	14·05	1·10	2·79
Sunderland ...	102450	31·0	63	31	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	80	62	67·0	49·0	55·6	13·11	0·78	1·98
Edinburgh	208553	47·1	121	73	70·4	45·3	56·6	13·66	0·73	1·85
Glasgow	498462	92·5	324	240	65·4	42·0	55·0	12·78	1·34	3·40
Dublin	314666	31·3	178	102	75·5	43·0	58·7	14·83	0·82	2·08
Total of 21 Towns in United Kingd'm	7507575	34·5	4976	3142	75·6	42·0	57·2	14·00	1·19	3·02

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·74 in. The highest was 30·02 in. on Saturday at noon, and the lowest 29·21 in. Sunday, the 13th inst.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture V.—Endo- and Myo-carditis.

Endocarditis, like pericarditis, is very rarely an idiopathic affection, but occurs during the progress of the same diseases with which pericarditis is connected. It is the most frequently seen in connexion with rheumatism, and, so far as my own observations apply, is about as frequent as pericarditis in that affection. I have met with it in 16·7 per cent. of the cases treated, or in one case out of 5·9. I have also remarked that it is especially apt to occur in cases of severe rheumatism, while pericarditis more usually arises in the slighter cases. The general symptoms by which its presence is indicated are yet more indecisive than those of pericarditis. There may be some uneasiness at the region of the heart, or even decided pain; the action of the heart may be quickened and irritable, and the breathing may be laboured and rapid; but all these symptoms are often absent or very slightly marked, and do not generally exist to a marked degree unless the endocarditis has been some time in existence, and has led to serious interference with the functions of the heart. Generally, however, the temperature becomes more or less elevated so soon as the cardiac disease sets in. The diagnosis of endocarditis could not, however, be effected by the general symptoms alone, and must be deduced from the physical signs. These consist of a soft blowing murmur, heard with the systole of the heart towards the base or apex, according as to whether the valves affected are the aortic or mitral. In the former case, the murmur, which is due to thickening or the presence of vegetations on the valves, is most distinctly heard at the base, and is propagated in the course of the aorta or up the right side of the sternum. In the latter, the mitral valve is thickened or its surface the seat of fibrinous exudations, and the murmur is heard at the apex and is transmitted towards the left axilla. If the mitral valve be simply thickened, or the fibrinous deposits be situated on the auricular side of the valve, the murmur should, as I shall have again occasion to remark, precede the systole; but the sound heard seems to be generally systolic, and must therefore be supposed to be due either to the slow closure of the valves or to their being imperfectly adjusted, so as to admit of regurgitation. If the disease go on, the valves may be softened, and may break down and become incompetent, and thus there may be a diastolic regurgitant sound at the base or a systolic at the apex.

The diagnosis of an endocarditic murmur is not generally attended with much difficulty—the only errors which could be committed would be to mistake it for an exocardial murmur, or for one dependent on anæmia. The deeper seat of the affections of the endocardium is generally very obvious, though occasionally a valvular murmur, and a murmur dependent on lymph in the pericardium which is becoming organised, are very similar in character. The former murmur is, however, also propagated in the course of the circulation, while the exocardial is limited to the pericardial space. The anæmic murmurs and the blowing valvular murmurs are also often very much alike, but the former would almost certainly be also heard in the pulmonary artery and in the arteries of the neck, and might probably be attended by a venous murmur in the neck; and these circumstances would form very distinguishing peculiarities. The greatest difficulty sometimes occurs in distinguishing these murmurs when (as not unfrequently occurs) an anæmic murmur becomes superadded to one dependent on an organic cause, towards the end of an attack of rheumatism.

I have refrained from speaking of the prognosis in cases of peri- and endo-carditis; for the two affections are so closely allied that it is difficult to speak of the prognosis of each separately. When either form arises in the course of advanced renal disease or in pyæmia, it must be regarded as of very serious import, for such affections almost always prove rapidly fatal. Rheumatic peri- and endo-carditis are, however, if unconnected with old disease of the heart or other complication, rarely a source of immediate danger, and are in a large proportion of cases recovered from, though with more or less damage to the heart, which may entail serious results at a more distant period. The probability of the entire removal of all the signs of cardiac disease, when it arises during the progress of rheumatic fever, depends very much on the time after the commencement of the symptoms at which the patient came under treatment, and especially on the particular form which the disease assumes,—pericarditis being certainly a more curable form of disease than endocarditis. Thus, of the cases referred to in the last report, seven uncomplicated cases of pericarditis were all entirely cured, though in two some increased dulness on percussion remained. On the other hand, in seven cases of combined peri- and endo-carditis the cure was complete in only two cases, and in five there remained some signs at the time of discharge. One case in which there was endocarditis only was cured. The general inference is that when a case of rheumatic fever is complicated by simple pericarditis the local disease will probably be recovered from without leaving behind it any obvious defect in the heart. When, on the contrary, there is endocarditis, either alone or with pericarditis, and especially if the local disease is fully established before the patient comes under treatment, there is great risk that some marked defect in the heart will remain. Such injury in a large proportion of cases probably lays the foundation of future cardiac disease, but the immediate danger to life is not very serious. Thus, of seventy-one cases of recent rheumatic heart affection—pericarditic and endocarditic—only three proved fatal at the time, and in all three there was pericarditis, with pre-existing disease of the heart and other serious complications. I have, however, reason to believe that the physical signs do ultimately disappear in some of the cases in which they remain at the time of the discharge of the patient from the hospital; and the frequency with which the white or milk spots on the surface of the pericardium and adhesions between the vessels at the base are found in persons who die from causes entirely independent of the heart, is confirmatory of the view that in many cases an entire and permanent cure is effected. When the adhesions between the two surfaces of the pericardium are general or occupy a large portion of the heart, the movement of the organ must be seriously interfered with, and hypertrophy of the heart seems an almost necessary result.

If pericarditis prove fatal, it may be by the organ becoming compressed by the accumulating effusion; and in cases of endocarditis only, or where peri- and endo-carditis co-exist, by the destruction of the valves, by thrombosis of the cavities and orifices producing obstruction, or by embolism of the smaller vessels of the brain or other organs or of the extremities, and by the implication of the pleuræ, lungs, and kidneys in the disease.

The morbid appearances in cases of pericarditis consist in the presence of lymph of harder or softer consistence on the surfaces of the attached and reflected pericardium, and of a yellowish serous or sero-purulent fluid in the cavity. The solid exudation generally has a peculiar velvety or honeycombed appearance, and occasionally it has a deep bloody colour. Sometimes, and especially in cases of pyæmia, there is distinct pus in the cavity, and the amount of effusion may be very large—I have seen upwards of two pints. When the patient dies at a later period, the liquid effusion may have been wholly absorbed, and the pericardium may be covered by distinct layers of solid and firmly adherent membrane. When the pericarditis is connected with tuberculosis, there may be either liquid effusion in the cavity or the surfaces may be adherent, and in some cases of chronic pericarditis connected with this cause the deposits between the two surfaces of membrane may be very thick—fully half an inch,—and the inner layers may have a peculiar yellowish colour and a friable cheesy character much resembling the so-called tuberculous infiltration.

In cases of fatal endocarditis there is at first only opacity and thickening of the endocardium, with the exudation of lymph on the surface of the membrane or beneath it; the fibrine of the blood also becomes deposited on the roughened surface, forming vegetations in larger or smaller masses. In this way the valves become sources of obstruction to the flow of blood from or into the ventricle; they may also be softened so as to break down under the pressure of the blood, and so allow of regurgitation. In the aortic valves the thickening may either involve the edges or the portion of the fold which is exposed when the segments come in contact, and in either case when the thickened tissue contracts the valves become small and their sacs shallow, so as ultimately

to be incompetent. The folds of the mitral valve may also become united together, or the attached fold may be adherent to the walls of the ventricle, and so great obstruction may be caused; or the chordæ tendineæ may give way, and the valves may fall back so as to allow of regurgitation.

Myocarditis.

Myocarditis is probably always seen in connexion with inflammation of the investing or lining membrane of the heart or of the two combined, and seems especially prone to occur when these affections arise in persons of dissolute and intemperate habits. In severe cases of peri- and endo-carditis some affection of the subjacent muscular structure not unfrequently occurs; the muscle has a peculiar yellow colour, and is softened so as to be very friable. Occasionally these changes involve a large portion of the substance of the heart. This is especially the case at the apex when the pericardium is affected, and at the base when the aortic valves and endocardium are diseased. If during the first or acute stage the muscular substance beneath the endocardium be much involved, it may break down under the pressure of the blood, and an aneurismal tumour may result—constituting the false consecutive aneurism of Breschet or the acute aneurism of Rokitansky. If, on the other hand, the condition be partially recovered from, the muscular substance may become atrophied and be replaced by fibroid or fibro-cartilaginous tissue, which being, as explained by Cruveilhier, less resistant than the natural structure, may become dilated and form a true aneurismal sac, according to Reynaud, or the chronic aneurism of Rokitansky. In some cases the inflammation of the muscular substance runs on to suppuration, so that the tissue becomes infiltrated with pus, or, the matter being circumscribed, a true abscess is formed. Of the latter condition a small number of cases are on record. I have myself seen one such case, which occurred in the Edinburgh Infirmary in the practice of Dr. Craigie, and has been described by that gentleman. In that instance the abscess occupied the septum of the auricles, and was bilocular, each portion being sufficiently large to have lodged a cob-nut. One portion of the abscess had opened into the origin of the aorta, and another was on the point of bursting into the cavity of the pericardium. The disease coexisted with pericarditis, and with extensive recent disease of the aortic valves. The subject of the affection was a female aged 35, of irregular habits, who had suffered from rheumatic pains for some weeks, and in whom the right knee was swollen and tender. While in the hospital she was in a state of great agitation and alarm, but was intelligent when spoken to. She had occasional attacks of dyspnœa, but at other times was able to lie down on the back or on either side. No notes were taken of the case during life, and, indeed, the existence of heart disease was not suspected, her excited condition being ascribed to her habits of intemperance. There are not, indeed, any means by which inflammation of the muscular structures of the heart could be diagnosed during life—though the cases have generally, as in the instance just referred to, been characterised by hurried and tumultuous action of the heart, feeble and irregular pulse, urgent difficulty of breathing, and great distress and agitation of mind, and sometimes delirium with rapid prostration of strength.

It only remains for me to speak of the treatment I have been in the practice of adopting in cases of inflammatory affections of the peri- and endo-cardium. When the disease is developed in a person previously in good health, and commences with active symptoms, leeches may be applied over the region of the heart, or the patient may be cupped. Cases of this kind are, however, comparatively rare; and generally, in those which we so often meet with in the course of rheumatic fever, such active measures do not seem to be needed, while in many cases depending on other causes they would be inapplicable from the state of the patient. In rheumatic peri- and endo-carditis I do not generally make any material change in the remedies which the patient is taking. I usually, indeed, order the region of the heart to be blistered, and, regarding the occurrence of the internal disease as an indication that it is desirable to arrest the rheumatic symptoms as soon as possible, I very freely blister the affected joints, directing warm poultices to be persistently applied over all the blistered surfaces. With this treatment calomel or grey powder with Dover's powder is cautiously given. If under this course the disease be not arrested, and the effusion in the pericardium ensues, I usually give small doses of iodide of potassium. During the treatment suitable nourishing food must be allowed, and when the patient's strength begins to give way, stimulants—wine or brandy—must be cautiously exhibited. There are, indeed, no forms of disease in which, when had recourse to at the proper period, a greater amount of benefit is derived from the use of stimulants.

After the attack has passed off it is of the greatest importance that perfect rest should be enjoined, and the patient be retained in the recumbent position for a long time. It is impossible, also, to be too particular in impressing on the patient and his friends the necessity for his long refraining from any active exertion and avoiding all excitement of mind. Neglect of these precautions might keep up an irritable state of the heart, and lay the foundation of subsequent disease. The greatest care must also be observed by suitable clothing and other means to protect the patient from cold, for if he should have another attack of rheumatism, there is the greatest risk that the heart would again be involved.

COMMENTARIES ON DISEASES IN CHILDREN.

By EUSTACE SMITH, M.D. Lond.,

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Physician to the East London Hospital for Children,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest.

IV.—Pleurisy.

(*Continued from page* 61.)

Empyema causes great interference with the nutrition of the patient. The child wastes more and more, becoming daily thinner, paler, and weaker. His appetite is lost, he is restless and irritable, and sleeps badly at night. The circulation is feeble; the fingers become clubbed at the extremities; and the hands and feet are often cold, although the general temperature of the body is slightly raised towards the evening, and the child perspires profusely in the night. There is often much tenderness of the affected side, and the child shows great distress when a physical examination of the chest is made.

If no operation is performed for the evacuation of the purulent fluid, this may become gradually absorbed, and the child may eventually recover. In other cases the fluid points at some part of the chest; a swelling appears at one of the interspaces, becomes red, and after a few days bursts, and the fluid slowly drains away. When this takes place the child may recover, the opening closing after several weeks; or the perforation may remain open, and the child die, worn out by long-continued suppuration. Instead of opening externally, a perforation may take place into a bronchial tube, and the fluid be evacuated in the form of profuse expectoration. These cases also often end fatally. In a third class of cases the presence of purulent fluid in the pleura seems to be a determining cause of a general formation of tubercle, and the patient dies from acute tuberculosis.

In the following instance spontaneous perforation of the fluid took place through the wall of the chest, and the recovery was surprisingly complete:—

Anne B., aged 6, a thin child, rather small for her age, very pale and weakly-looking, had been suffering, it was said, from "low fever" for a considerable time. Her illness had begun in the middle of February with fever and cough, and she had ever since been getting paler and thinner, although the fever had in a great measure subsided. Her cough was still troublesome, but was loose, and gave her no pain.

When seen on June 4 she complained of pain in the left hypochondrium, and this part was said to swell at times. On examination the left side of the chest was seen to be almost motionless in respiration. There was no fulness at the seat of pain, but that spot seemed tender on pressure. The whole left back was completely dull from apex to base, with increased resistance. The breathing was loud and almost cavernous over the whole dull area, and the vocal vibration was annulled except at the supra-spinous fossa, while the resonance of the voice was everywhere increased. In front of the same side percussion was dull and the breathing blowing, although weaker than at the back. The heart was displaced slightly to the right.

A few days afterwards a swelling the size of a hen's egg formed in the left nipple-line, the centre of which was over the eighth interspace. This was very tender to the touch, and

fluctuated freely. As the mother objected to any operative procedure, she was directed to apply a succession of hot linseed-meal poultices. In the course of the week a second swelling appeared higher up on the same side, just below the nipple. This also fluctuated. The superficial veins of that side, both of the chest and belly, were very well marked. The skin over the abscesses became very red and tense, and on July 3 the lower one burst, and discharged a considerable quantity of thin purulent fluid. After this the upper swelling subsided without opening. The child seemed at once very much relieved; her appetite, which had been quite lost, returned; her spirits improved, and she began at once to regain flesh.

On July 26 the following note was taken:—Looking much fatter and stronger; runs about, and her spirits are good; eats heartily. Cough loose, and very troublesome at night. Perspires very much, especially when in bed. The abscess is still discharging, and about an ounce of thin watery fluid comes away from it in the day. There is much flattening under the left clavicle, and the left front of chest does not move in inspiration; laterally, however, the intercostal spaces sink in a little in inspiration, and the ribs move slightly. Spine curved laterally, with convexity to right. Shoulder and lower angle of scapula on the left side rather depressed. Percussion is dull all over left half of chest—both front and back. In front no respiration is heard at all, but over the whole left back it is loud and blowing. Vocal resonance there is slightly stronger than natural.

After this report the child was not seen again until the following February, six months afterwards. The improvement then was very remarkable. The abscess had continued to discharge for six weeks. It had then closed, and the child had been ever since constantly improving. She now coughed very little, and only in the morning or after exertion, and then sometimes expectorated a little thick yellow phlegm. She was fat, and looked strong and healthy.

On examination of the chest some slight retraction was seen at the lower part of the left side, but the deformity was scarcely noticeable; the left shoulder was not depressed, the spine was straight, and the nipples were on the same level. The apex of the heart beat one inch below the nipple in the nipple line. No dulness was found at any part of the left side, and the respiration was generally healthy, although towards the upper part of the left back it was rather loud and slightly blowing. Vocal vibration was felt faintly as far as the extreme base.

This case affords a very good illustration of the extraordinary readjusting power possessed by childhood. The left lung had been exposed for a considerable time to great pressure from the effused fluid, but it had notwithstanding been able, on the removal of this fluid, again to expand, and to do this so effectually as almost entirely to remedy the deformity at first noticed, and which threatened at one time to become permanent.

The retention of purulent fluid in the chest-cavity is always attended with considerable risk, for not only is the general nutrition of the child seriously affected while such fluid remains, but there is also a direct danger that its presence may lead to the development of general tuberculosis, as in the following case:—

Charles B., a little boy, aged 2 years and 9 months, sixteen teeth, was admitted into the East London Children's Hospital on September 17.

Little information could be gained as to the history of his attack. The mother could only say that he had been healthy two or three months previously; that he had then begun suddenly to cough and to lose flesh, and that during the last month his bowels had been relaxed five or six times a day, causing him to waste very rapidly.

State on Admission.—Child greatly emaciated; eyes hollow; cheek-bones project; complexion rather earthy; head square-shaped; fontanelle size of a shilling, depressed; veins of forehead full. Abdomen rather swollen, and feels hot to hand; abdominal veins full; no enlarged glands felt in belly on deep pressure; spleen and liver appear to be of normal size. Ends of long bones not large; fingers slightly clubbed. Tongue clean and red. Stools yellow, slimy, and offensive. Has a frequent cough. Temperature in rectum 100·6°; pulse 130; respiration 40.

Physical Signs.—Very little respiratory movement comparatively on right side. Intercostal spaces not bulged, and can be seen to sink in to a slight extent on that side at the lower front; but on the left side they sink in deeply at each inspiration. Heart's apex beats on the left side in the fifth interspace in nipple-line. The chest measurement at the level of the nipple is on the right side $8\frac{7}{8}$ inches, and on the left $8\frac{5}{8}$ inches. No vocal fremitus felt either side. Percussion dull all over right side, back and front. Behind, the dulness is complete, with extreme sense of resistance. In front, the dulness is more tubular, especially under the clavicle, and does not reach quite to the middle line. Still, the percussion-note at the right edge of sternum is not quite resonant. Respiration all over right lung is loud and bronchial, with intense resonance of voice and cry. Between the scapulæ the breathing is cavernous. Here and there dry rhonchi are heard, but there is no friction or crepitation. The left lung is apparently healthy.

A lead and opium mixture was ordered to check the diarrhœa, and ten drops of brandy every three hours. For his diet, bread and milk. The diarrhœa ceased at once, and the child's appetite began to improve. He continued still very thirsty, and the temperature remained high, varying from 100° to 102°—generally one degree of difference between the morning and evening temperature.

September 24.—Child seems weaker. The bowels act twice a day; motions not offensive. Physical signs as before. The right side seems tender, and the pressure of the stethoscope causes pain. Cough loose and rather frequent; if the child coughs violently all the veins swell up, even down to the wrists; jugular veins then much distended. Temperature in evening 102·4°; pulse 120; respiration 30. He was ordered ol. morrhuæ ʒ ss. ter die, with a mixture containing tinct. ferri perchlor. Some meat and broth on alternate days were added to his diet.

On October 4 the respiration on the right side in front was covered by a grating rhonchus, and at nipple a coarse crepitation was heard. These, however, had disappeared by October 9. On this date the two sides of the chest were measured with cyrtometer, when at the nipple level the right side was found to measure $8\frac{7}{8}$ inches, the left $9\frac{1}{8}$ inches. The temperature remained high at night, varying from 101° to 103°, or even 104°, and sinking to 100° in the morning; pulse 130 to 140; respiration 44 to 48.

22nd.—Child wasting more and more. Physical signs much the same on right side. Over lower part of right front fine bubbling is heard at the end of a deep inspiration. On the left side percussion is rather dull in the supra-spinous fossa, and generally over the left back is too high-pitched. Respiration in supra-spinous fossa is bronchial; below, harsh, with a little dry rhonchus. Over left front respiration is harsh, with a little sonorous rhonchus. Temperature in evening 104°; pulse 120; respiration 48.

On October 25 the child had an attack of diarrhœa. The temperature then fell to 100° in the evening, and remained low till October 29, when the thermometer again marked 104° in the rectum.

On November 5 the percussion signs were unaltered, but under the right clavicle the loud bronchial respiration was accompanied by a large metallic bubbling rhonchus, which was also heard downwards as far as the extreme base. At the nipple the breathing was blowing, almost tubular. The same bubbling rhonchus was heard also in the right infra-axillary region and at the back, but posteriorly the bubbles were smaller and less metallic. After a violent cough the rhonchus partially disappeared at the front and side. On the left side some fine crepitant râles were heard at the end of inspiration. Temperature in the morning 102°; pulse 130; respiration 44°. In the evening, temperature 103°; pulse 132; respiration 56. On the previous evening (November 4) the temperature had been as high as 105°.

From November 5 to November 19 the temperature continued exceedingly high in the evening, the thermometer marking 104 to 105°, and on one occasion (November 15) 106° in the rectum. There was always a great fall towards the morning, and the heat of the body was almost uniformly 99° at 10 a.m. There was usually a difference of about twenty beats between the morning and evening pulse, and the respiration was also always higher at night, ranging at that time from 42 to 60. The subsidence of the fever in the morning was always accompanied by a marked change in the behaviour of the child. In the morning he would sit up in bed and play with his toys, eat a hearty breakfast, and sometimes cry out for cake. In the evening he lay with flushed face and parched lips, completely indifferent to all that passed around.

On November 18 the bubbling rhonchus was universal on

the right side, and at the left back the breathing was harsh and was accompanied by a rhonchus coarser than before, and mixed here and there with a finer crepitation.

On November 20 patches of dulness were discovered at the left back, and there was greater resistance to the finger; the breathing on that side was bronchial, and everywhere it was accompanied by a coarse bubbling rhonchus as on the right side. On this date the temperature suddenly became lowered; in the evening it reached no higher than 99·2°. On the following morning it was 97°, and fell in the evening to 95·2°. A few hours afterwards the child died. The temperatures were taken throughout the case in the rectum, and with great care.

Autopsy.—Body extremely emaciated. Right lung almost entirely adherent to chest wall; the adhesions with difficulty broken down, especially at apex, where they are so firm that the lung is torn in bringing it away. A little purulent fluid—about one ounce—is found in right pleura at the base. Right lung smaller than left, tough, and firm. Scattered through the substance, and forming nodules projecting on the surface under the pleura, are yellowish-white non-friable tubercular masses, varying in size from a pin's head to a pea. These have not the granular appearance of cheesy masses, and do not appear to be softening. With them are more pellucid small bodies, evidently grey granulations. In many places, where the tubereles are collected closely together, the intermediate lung tissue is the seat of quite recent broncho-pneumonia. Left lung not condensed, but presents the same masses. It was firmly adherent to the pericardium, which could not be detached from it. The same masses are found in the spleen, which is thickly studded with them. They are also present, although to a less amount, in the kidneys, and on the upper surface of the liver are some grey granulations. There are no tubereles in the meninges.

The diagnosis in this case was not difficult. The complete dulness over the whole of the right half of the chest, both at the back and at the front, combined with the extreme sense of resistance; the breathing, which was everywhere loud and piercingly bronchial; the intense bronchophonic resonance of the voice and cry; the absence of liquid rhonchus or crepitation,—these signs occurring, without any contraction of the side, at so late a period of the disease (for the child had been ill two or three months at the time of his admission) could only be the result of pleurisy. Inflammation seldom affects the whole of a lung from apex to base, and pneumonic consolidation, if extensive, does not long remain indolent. Small pneumonic deposits may remain unchanged in children for many months, and may eventually be removed; but large deposits soon begin to give evidence either of commencing absorption or of degeneration and decay, leading to destructive disease of the lung in which they are situated. Again, the sense of resistance to the finger on percussion is very much greater when fluid is present, or in the case of a lung solidified by pressure, than where the consolidation is owing to pneumonia; and this alone is a very important element in the diagnosis. The heart, again, was slightly displaced to the left, and the apex was found to beat in the fifth interspace in the nipple-line. It had been probably pushed farther to the left, but was being drawn back into its normal position as the effused fluid became gradually absorbed.

The dulness in the right front did not reach quite to the middle line, but this would not contra-indicate the presence of even a considerable effusion; for the fluid might be prevented by adhesion from touching the mediastinum. At the time of admission there was probably little fluid left in the diseased pleura, for the intercostal spaces on the affected side were not prominent, and were even seen to sink in slightly at each inspiration.

In the after progress of the case the continued wasting, the high evening temperature, combined with the occurrence of dry and crepitating rhonchi on the diseased side, and eventually in the opposite lung, made it evident that tubercular formation was taking place. The variations in the temperature are worthy of notice, for the difference between the heat of the body in the morning and in the evening was more marked than the ordinary course of a case of pulmonary tuberculosis would lead us to expect.

The pleurisy was here evidently the primary disease, occurring, as it did, suddenly, while the child was in his ordinary health; and the tubercle was a secondary formation. In many cases, however, tuberculosis is the primary disorder, and itself gives rise to a secondary pleurisy. The pleurisy is then generally of the fibrinous variety, a plastic exudation being thrown out, which is seldom attended by liquid effusion, and gives rise to but few symptoms, pain in the side being as a rule the only thing complained of.

The ordinary serous pleurisy is always accompanied by a certain amount of fibrinous exudation, and when this is extensive it may lead to secondary results after the fluid which was first thrown out has become reabsorbed. These cases form a special variety of basic lung disease, to which, as occurring in the adult, attention has been directed by Dr. Andrew Clark. The pathological alteration consists in an excessive formation in the base of the lung of fibroid tissue, which causes a loss of elasticity of the part, so that it no longer contracts and expands as in health. If present to an extreme degree, the part attacked shrinks, the bronchial tubes become dilated, and the heart may be drawn towards the affected side. At first, however, there is no contraction of the base of the chest, and this contraction may even be absent throughout if great dilatation of the bronchial tubes be present.

The following case furnishes a good illustration of the early stage of this condition before the occurrence of contraction:—

Martha B., aged 8 years, a thin but not unhealthy-looking girl, was admitted as an out-patient under my care at the Victoria-park Hospital in February, 1873. She had been out of health for twelve months. Her illness began in January, 1872, with cough and pains about the body. At first she was an out-patient at the London Hospital; but after three months she ceased to attend, although she still coughed a great deal, and was losing flesh. Ever since, she had continued to cough, and had slowly wasted. In the autumn the child passed some weeks in Suffolk, and seemed to derive benefit from the change.

When I first saw her on February 6 the cough was said not to be very frequent, and to be dry. Her appetite was good, the bowels regular, and she slept well at night. Skin quite cool, and not rough or dry to the touch. The right shoulder and angle of scapula were on rather a lower level than the left; and there was a slight curvature of the spine, with concavity to the right. The right nipple was, however, rather higher than the left. The edge of the liver could just be felt below the false ribs. The chest expanded pretty well superiorly, and equally on both sides; laterally the chest was rather flattened at each base, and the movement was limited,—the right base not expanding at all. The intercostal spaces were well marked inferiorly at each side—perhaps more so at the right than the left,—and they certainly sank in more at the right side during a deep inspiration. The heart's apex beat close to the left nipple, just below it on the inner side.

The chest measured, at a point one inch below the nipple-level, on the right side 11 inches, on the left $10\frac{7}{8}$ inches. At the level of ensiform cartilage the right side measured $10\frac{7}{8}$ inches, the left $10\frac{5}{8}$ inches.

Vocal fremitus was stronger on the right side than on the left, from above downwards as far as the nipple in front and the angle of the scapula behind. Below these points it could not be detected on the right side, although on the left it could be felt faintly as far as the extreme base. On the right side percussion was resonant from the apex as far as one finger's-breadth below the nipple in front, and the angle of the scapula behind. Below these points it was completely dull, with considerable sense of resistance. The change, however, from clearness to dulness was not abrupt; at the upper level of the dulness the percussion-note had a tubular quality all round the right side from front to back. There was no change in the percussion-note on change of position. Over the dull area the respiration was everywhere very weak, but distinctly bronchial, without friction or rhonchus of any kind, and the vocal resonance was completely annulled. Elsewhere in the same lung, and also in the left lung, respiration was loud and healthy.

After a few days the cough became looser, and the child expectorated a little phlegm. In the morning the cough was rather prolonged, and on one occasion after coughing for some time she brought up some frothy phlegm with retching efforts.

On February 28 the girl was transferred as an in-patient to the East London Children's Hospital, and there, in order to be able positively to exclude the presence of fluid, I requested my colleague Mr. Reeves to make an exploratory puncture into the right base with a fine trocar. This was accordingly done, but no fluid was found.

This case was a very interesting one, and simulated very closely a pleurisy of the right base; but there were certain distinguishing points to be taken into consideration. In the

first place, the intercostal spaces on the right—the diseased—side were as well marked as at the corresponding part of the left side, and during inspiration sank in, if anything, rather more deeply. Then, the transition from dulness to resonance was not abrupt; at the upper limit of the dull area a tubular note was found. If fluid be present this is seldom the case, the change from a dull to a clear note being then usually immediate and complete. Again, no alteration of the percussion-note was found on change of position, the dulness still persisting when the child was made to stoop forwards so as to bring the back into a horizontal line. This sign was one of very great importance, for although in an early stage of pleurisy it is not uncommon to find that changes in position produce no corresponding change in the physical signs, yet later on in the disease, after absorption has begun, it is comparatively rare to find the physical signs absolutely unaffected by position, as in this case. Lastly, the exploratory puncture made by my friend Mr. Reeves furnished a complete proof of the absence of fluid; the canula penetrated to a sufficient depth to insure the escape of fluid had any been present.

The child was last seen in the month of May, 1873. She was then fat and looked very well, but still coughed occasionally. On examination of the chest the physical signs were found to be unaltered.

The case was no doubt one of fibroid induration of the base of the right lung, without contraction, consequent upon an attack of pleurisy. The prolonged fit of coughing which is mentioned as having occurred on one morning, ending in retching efforts and the expectoration of frothy phlegm, is characteristic of this condition, and is due to the loss of elasticity of the smaller bronchial tubes. If these are much dilated, the secretion usually accumulates in them and putrefies, so that the expectoration is very offensive. In such cases a faint fine bubbling is often heard at the seat of disease.

(To be continued.)

ORIGINAL COMMUNICATIONS.

OPERA CLINICA.

ON ARTIFICIAL RESPIRATION AFTER THE OPERATION OF TRACHEOTOMY.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

At the conclusion of a lecture published in the *Medical Times and Gazette* on December 4, 1869, in which was described the double-acting elastic hand-bellows I have invented for artificial respiration, I took occasion to point out that in various cases of acute disease—such as cases of bronchial spasm or of failure of respiratory power,—when death is at hand, the practice of artificial respiration, by the bellows, might prove of service. The following clinical history, briefly told, illustrates forcibly the truth of this proposition:—

A child, aged 4 years and 4 months, was under the care of my friend and neighbour Dr. Neale. She had shown for ten days some obscure symptoms, varying in intensity, of irritation of the throat, with intermittent pyrexia. On Sunday, the 20th of last month (July), on his morning visit, Dr. Neale found the child breathing heavily, and again feverish. On examining the throat, he discovered a diphtheritic patch on each tonsil; he detected also a croup-like respiration. A little later in the day I was called to meet Dr. Neale in consultation. We agreed as to diagnosis and treatment, and all progressed well until Tuesday morning, the 22nd, at three o'clock. At that time the symptoms changed, food and medicine were refused, and in a few hours the respiration was embarrassed from obstruction in the larynx. Severe paroxysms of spasmodic breathing also occurred at frequent intervals.. An emetic gave great temporary relief; but the symptoms afterwards increased, and at 2 p.m. were so urgent that the question of the performance of tracheotomy came under consideration. At half-past six, at a consultation between Dr. Neale, Mr. Christopher Heath, and myself, the operation was determined upon as a necessity. I administered methylene bichloride, which acted promptly and effectively, and Mr. Heath operated.

Recovery from the anæsthesia was rapid, and the little patient soon began to breathe freely through the tracheal tube. Dr. Neale having to leave, I undertook to remain until his return. About an hour after the operation the child was suddenly seized with an attack of severe spasmodic breathing, followed by the escape of tenacious frothy mucus through the tracheal tube. I cleaned the tube freely, and drew up the mucus through the tube, but the paroxysm continued; the features became livid; there was a sharp convulsion; the natural respiration ceased; the pulse ceased; and, to all appearance, there was death. At this moment, affixing an inner tracheal tube to the double-acting bellows, I thrust the inner into the outer tracheal tube, and commenced steadily to keep up artificial respiration. I confess I had no great expectation of useful results; but to my relief, after sustaining the artificial respiration for a period of three minutes, the patient recommenced to breathe independently, and by the time Dr. Neale, who had been sent for, returned—about ten minutes,—she was quite conscious, warm, and breathing freely. We watched alternately through the night, and the night was passed comfortably. Food was freely taken, sleep was natural, the pulse was firm and regular, never exceeding 120, while the respiration, though at times quick (36 per minute), was not laboured. At 8 a.m. on Wednesday, the 23rd, Mr. Lovell and Mr. J. E. Neale being now in attendance, a paroxysm of very severe dyspnœa and spasm recurred, but was quickly relieved by the use of the bellows, and on Dr. Neale's arrival, later in the day, the recovery was so complete that the child was playing at "catch ball" with a sponge. She progressed favourably until 8 p.m. of this day, the 23rd, when from a sleep of about twenty minutes she awoke with another violent paroxysm of the dyspnœa. *In extremis*, Dr. Neale again set up the artificial respiration, and in two minutes the natural respiration was restored. After this there was natural action of the kidneys, and milk was freely taken: At 9 p.m. another extreme attack of the dyspnœa supervened, relieved in the same manner after the use of artificial respiration for five minutes.

At 9.30 I rejoined Dr. Neale, and we found now, for the first time, moist crepitation from exudation or condensation of fluid in the upper surfaces of both lungs. Relief in removal of some of this fluid was afforded by a device of Dr. Neale's of making a Higgins syringe act as an aspirator, and there followed a period of gentle and hopeful breathing. But at 10.30, on the occurrence of another of the extreme paroxysms of dyspnœa, the respiration ceased altogether, the pulse ceased, the countenance assumed the lividity of death, and death, indeed, once more appeared complete. The tracheal tube was removed, the tube of the bellows was inserted into the tracheal opening, artificial respiration was established, and after an interval, as far as we could measure, of five to six minutes, the natural respiration was restored.

From this time, unhappily, the pulmonary lesion increased; the obstruction to the breathing passed from a local to a general condition; the bronchial passages became closed from accumulation of fluid; and absolute death, without return of asphyxia and without a struggle, occurred at 1.30 of the 24th.

To have to record the ultimate fact of death in this case, after such restoration from apparent death, is indeed a painful duty. Yet the one particular process for restoration—artificial respiration—is thereby, in no degree, lessened of its value. It gave a renewal of thirty hours of life, during which if we had known more respecting the removal of those fatal conditions which so commonly commence in the extreme or peripheral parts of the pulmonary organs, we might have made the temporary safety complete and permanent. Step by step, and with that agony of experience which ever attends the highest efforts of the human mind, we shall attain one day even to this perfection. We shall acquire a still more perfect method of maintaining artificial respiration; we shall learn to introduce, with good effect, other gases and vapours with the common air; we shall regulate pressure on the pulmonary surface; we shall sustain, by some simple means, the muscular force; and we shall supply to muscle the stimulus it has lost from the exhausted nerve. In a word, we shall hold mastery of conditions in the presence of which the sick person cannot die. This, the *summum bonum* of medical science and art, may be afar off; but he is no physician who does not live for it, and the history I have written above demonstrates that one of the most important steps towards it is laid for our advancement.

CASES OF PNEUMONIA, WITH CLINICAL REMARKS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

Case 1.—*Physical Signs but little developed.*

C. P., AGED 9, admitted May 5, was taken ill on the 3rd with shivering and vomiting, having been quite well the evening before. On the 4th he was feverish and thirsty, and during the night was semi-delirious, calling out in his sleep. Has a considerable eruption of herpes labialis, which appeared this morning. Temperature 104°; pulse 120, small and weak. Heart's sounds normal. The left lung was acting well, except quite at the base posteriorly, where the resonance and breathing were slightly impaired. In the right front there was some dulness (comparative), and some harsh breath-sound, with (at times) prolonged and harsh expiration. At the posterior base there was also dulness, or rather impaired resonance, and harsh breathing. He was ordered an aperient, as the bowels were confined—Pot. bicarb. ʒ ss., tinct. cinchon. ʒ ss., aq. ℥j., 4tis horis; chloral gr. x., liq. opii sed. ♏v., aq. ℥j. o.n.

May 6.—Both lower backs notably dull in their lower thirds, but the breathing is quite audible and pretty full, and there are no râles. The child was cheerful and placid. Temperature 103°; pulse 112.

7th.—Less dulness in both lower backs; breathing heard fairly well, though rather harsh. Temperature 103°; pulse 120. Urine, which the day before had been very thick with lithates, was now clear and light-coloured.

8th.—More resonance and better breathing at both lower backs. Temperature 100°; pulse 100. Was very weak this morning. Tinct. cinchon. ʒ ss. quater die, wine ℥ij.

9th.—Seems much better. Temperature 98·6°; pulse 108. Breathing quite good in both backs and fronts.

The temperature on the 10th was 97·16°, and the same on the 12th, when good full clear breathing was heard at both lower backs. The herpes presented an abundance of thick scabs. After this he convalesced steadily, with the exception of a few days during which he seemed to have a slight attack of measles, and left the hospital well.

When I saw this boy's herpes labialis, and heard of his high temperature, I could not but think of pneumonia, and was surprised not to find more positive signs of its existence. I expected that they would be present next day, but they were not, nor did they ever appear in a well-marked manner. The dulness and weak breathing at the lower backs, which scarcely lasted more than two or three days, were occasioned, I believe, by some fluid effusion in the pleuræ. The absence of bronchial breathing and of râles affords pretty good evidence that there was little intra-pulmonary affection. It is possible that hepatisation did take place, but too deep-seated and limited to produce evident physical signs. This, however, does not seem very probable. I am much disposed to regard the case as an exceptional one in respect of the local disorder being slightly developed, while the general was well marked and severe. About the same time I saw in consultation a girl, aged 6, who had been ailing some days, but was taken with so severe a fit the day before my visit that she was thought for a time to be dead. She was very feverish and thirsty when I first saw her—temperature 104°; pulse 150; wandered occasionally, so that she did not know her mother always, but in the intervals was rational. There were no lung signs, except a slight impairment of resonance and rather increased expiratory sound in the right lower back. No typhoid spots; no herpes. There was a good deal of doubt as to the nature of the case, but after some time the usual physical signs of pneumonia became well marked, and the disease ran its usual course. Now, if the local lesion be a-wanting, or nearly so, as in the first case, or if it be posterior in time to the general disorder, as in the second case, it seems quite certain that it cannot be regarded as its cause. In other words, the inflammation of pneumonia is not the cause of the fever, which must therefore be regarded as primary. I have often made the remark that pneumonia by its abrupt mode of termination approximated much more to typhus than to true inflammation. The same held true in these cases of its commencement. If, then, pneumonia, as we see it nowadays, is a fever and not an inflammation, it is clear that the object of treatment must rationally be, not to arrest it, but to conduct it to a safe termination. This view is very generally acted on, and is strongly supported by Dr. Bennett's experience, who makes it his aim to conserve the patient's strength. There is, however, no inconsistency in our using various means for the mitigation of special symptoms.

Case 2.—*Ergot employed.*

J. D., aged 21, messenger, admitted May 19. Health generally good. Was taken ill on 16th, about noon, with pains in chest and back, but has had no shivering. He brought up, by coughing, much blood on the 16th, and has continued to do so till now; has brought up, he thinks, a pint. A little herpes at left corner of mouth. Temperature 104°; pulse 96, pausing completely now and then; respiration 47; cheeks flushed. Good resonance in both fronts. Breath-sound harsh and rather weak under left clavicle, normal in third space; below right clavicle the breathing is also weak and harsh, and attended with prolonged expiration. Good resonance and breathing in all right back and upper third of left; in lower half, or more, of left there is marked dulness, bronchial breathing, and bronchophony. He has had pain in left side, but has not much now. Lies down flat. Slept very badly last night. Had only some dry cough before this illness; did not spit anything; had not lost flesh. He is of spare make, and his chest is narrow. His family, he states, is healthy; no phthisis among brothers and sisters. Spoon diet, milk; turpentine stupe to backs. Liq. ergotæ ʒ j., mist. ammon. acet. ℥j., quater die.

May 20.—Sputa mucous, mixed with red blood. Temperature 102·9°; pulse 102; respiration 48. A well-developed tracing taken with 28 grammes pressure, not with 56. Beef-tea, two eggs. Pil. hyd. e. coloc.

21st.—Sputa still much blood-stained. Pulse 86; temperature 100·7°; respiration 33.

22nd.—Temperature 98·6°; pulse 78, distinct; respiration 44. Sputa almost quite free from blood, quantity less; appetite better; left lower back decidedly more resonant; bronchial breathing ceased; some vesicular sound heard.

23rd.—Temperature 97·9°.

24th.—Temperature 97·9°; pulse 66; respiration 34. Scarce any sputa; what there is is only clear mucus. Ate fish to-day, and enjoyed it. Fairly good breathing in lower left back. Liq. ferri muriatis ♏xx., spt. chlorof. ♏xv., aq. ℥j., ter die.

27th.—Doing well; tracing taken with pressure of 84 grammes shows a normal form. He is up and about. Some time after went out. The breathing below both clavicles remaining somewhat weak and harsh.

In this case defervescence was complete by the seventh day, and, what is remarkable, resolution was somewhat advanced. The administration of ergot was suggested by the rather copious hæmoptysis, and it seemed to be beneficial in checking the hæmorrhage; but whether it had any effect in promoting the defervescence and resolution remains uncertain. It seems, however, a rational procedure to give such a drug with the view of checking local hyperæmia. The weakened condition of the heart on the fifth day of the disease was very markedly shown by the low pressure necessary to be employed before a proper tracing could be obtained. On the twelfth day a threefold greater pressure was requisite, the patient being convalescent. It is noteworthy that, though the upper parts of the lungs were in all probability the seat of tuberculous deposit, yet the pneumonia avoided those parts, and kept to its usual locality at the base.

Case 3.—*Delirium Ferox—Opium and Chloral used freely.*

J. G., aged 28, admitted March 25, 1873. Ill a month with a bad cold; went out on 21st, got cold again, and pain in right side came on. Has slight cough and tinged expectoration. Temperature 104°; pulse 153, weak; tongue pretty natural; respiration 36; urine red, turbid with flocculi, contains albumen in some quantity. Is rational now, but says he was light-headed last night. Lower half of right back dull. Some breathing in upper right back; in lower two-thirds no normal breathing, but marked bronchial and bronchophony. Left back resonant; breathing pretty good in most of this region, except at base, where it is weak; no râles. Left upper front more resonant than right, and breathing more natural. Is a very large, broad-chested man; face pale; manner rather excitable. Spoon diet: beef-tea, milk. Pot. bicarb. ʒ j., m. e. ℥j., 4tis horis, opii. gr.j. ter die.

March 26.—Pulse 105, small, weak; temperature 103·3°; respiration 36; sputa watery and tinged; urine pale, clearer, contains no chloride, is albuminous. Some moist râle in lower left back. Pupils of medium size. Two eggs, brandy ℥iv.

27th.—Was rather troublesome in night; but this morning got out of bed, upset the nurses, and forced his way downstairs

into the street. Is now talking in an excited, rambling way. Tongue rather dry in middle; pulse 120, very weak; temperature 102·2°; face pale; pupils quite of medium size. Liq. opii sed. ℥x., subcutan.; chloral gr. xx., p.r.n. Brandy ʒviij. Omittur mist. alkalin.

28th.—Pulse 102, larger; temperature 102·2°. Has had six doses of chloral since yesterday at 2 p.m.; has been much quieter. First sound of heart weak; tongue dry along a median stripe; takes food well; bowels open three times in night.

29th.—Pulse 90, quieter, very weak; temperature 98·9°; tongue moister. Not delirious, but restless; face pallid; a little tinged expectoration. Reptr. pil. o.n.

31st.—Pulse 84, exceedingly weak; temperature 98·6°. Dulness still in right lower back; there is a good deal of large mucous râle, and also well-marked fine crepitation. In left lower back breathing is weak, and there is a good deal of half-dry small tube-râle. He convalesced steadily after this, and went out on April 20.

The danger in this instance was not at all from apnœa depending on extensive blocking up of the air-cells, but from asthenia resulting partly from the morbific agency, and partly from the exhausting delirium. To calm the latter, opium first, and afterwards opium and chloral, were given freely; and to sustain the strength, nourishment and brandy. These remedies proved efficacious. There can be little doubt that the delirium would have produced before long fatal prostration had it not been checked, and that its arrest was mainly due to the calmatives. The pneumonia probably began on the 21st, and defervescence ensued on the ninth day.

Case 4.—*Continuous Delirium—Fatal Issue from Asthenia.*

J. H., aged 32, inspector of police, died February 24, 1873. Was taken ill on the 20th with rigors, which lasted for three-quarters of an hour on getting up in the morning; he had also vomiting for about half an hour. Went back to bed again, and got slightly warm. Lost appetite, and became thirsty. Pain came on in left hypochondrium and over left lower ribs. Is very delirious at night, and seems now on the verge of delirium; does not always answer pertinently. Pulse 112, small and weak; temperature 102·9°. Tongue red, dry, and coated, except at edges; expectoration like white of egg, sometimes yellow. Both fronts resonant, and breathing there is pretty good. Right back fairly resonant; air enters the lung in this region fairly well, but at base some small crepitation is heard, and distant tubular breathing—probably communicated from left. In left back there is breathing in the upper third, but in the lower two-thirds there is dulness and marked tubular breathing with bronchophony. No typhoid spots. Continuous poultices to left back. Ammon. carb. gr. v., tinct. cinchon. ʒj., dec. cinchon. ʒj., 4tis horis; brandy ʒvj.; pulv. Doveri gr. x. o.n. Simple diet, milk, beef-tea, eggs.

25th.—Was very delirious in night towards the morning. Is now, at 2 p.m., only half-conscious. Pulse 138, weak; respiration 36; temperature 103·3°.

26th.—Has been removed to a separate ward; seems not to have been so delirious as the night before. Looks very ill. Pulse over 120; temperature 103·6°; respiration 38. Has had since yesterday twelve ounces of brandy.

27th.—Pulse very weak, cannot be felt for subsultus; temperature 104·7°. Is very delirious now, but not noisy; was quiet in night, only rambling. Fumbles much with bedclothes. Takes plenty of milk and brandy. Died next day.

This was a case which impressed me a good deal. Here was a well-conditioned, respectable man, in the prime of life, free, I believe, from renal disease, taken with one-sided pneumonia and dying on the ninth day of exhaustion. I have usually considered that such a case under reasonably good care ought certainly to recover. But here treatment availed nothing. The temperature rose progressively day by day, the delirium persisted, and the patient died of exhaustion in spite of all efforts to sustain him. I do not think the stimulants were improper: the state of the heart and general system called for them. But I suspect I ought to have used calmatives more freely. Subcutaneous opiates or chloral should have been employed to calm the delirium, and if this could have been accomplished the result might have been better. Continuous active delirium—not mere rambling—is a very evil sign, and under it I am sure the vital power runs down very rapidly. Here opium and other like drugs may be of immense use by conserving force. This they seem to have accomplished in

CASE OF EXTRA-UTERINE FŒTATION.

By LAWSON TAIT, F.R.C.S.,

Surgeon to the Birmingham Hospital for Women and Lying-in Charity, Consulting Surgeon to the West Bromwich Hospital.

On July 16, 1872, I was asked by Dr. Call Weddell, of Bloomsbury, to see in consultation with him Mrs. T., aged 32, who had been suffering for some time from anomalous and perplexing symptoms. She had had one child, nine years previous to the above date, and for some months had been under the impression that she was again pregnant. For some days before I saw her she had been suffering from feverish symptoms, and her condition had evidently become very critical. A crescentiform tumour occupied the pelvis and iliac fossa, giving no special indication of its nature from above, save that at one spot less than half an inch in diameter, and situated about an inch below the umbilicus, there was a distinct bruit, which was much intensified when the pressure of the stethoscope was increased. Vaginal examination revealed a tumour behind the uterus, occupying the whole available space, immovable, and with a peculiar boggy feeling to the touch. The uterus was open, four inches in internal measurement, and presenting very much the characters as if a miscarriage at the third or fourth month had recently occurred. It was movable over the front of the tumour to a limited extent, the fundus being anteverted and readily felt over the pubis. On examination by the rectum I felt what I believed to be the knee of a child and the edge of the placenta. The total absence of any history which could lead us to believe that we had to deal with a case of pelvic hæmatocele, confirmed me in the belief that it was a case of extra-uterine gestation.

On July 17 the condition of the patient was manifestly much worse, and admitted of no further delay. We therefore placed her under chloroform, and I passed the needle of an aspirator into the retro-uterine tumour and evacuated a few ounces of fluid, which was undoubtedly liquor amnii. The diagnosis being thus placed beyond doubt, I followed the needle with a knife, and came at once on the knee of a fœtus. I enlarged the incision, and had no difficulty in delivering a fœtus of about the eighth month, which had evidently been dead for some time. As soon as the child was born I passed my hand through the aperture and searched for the placenta, which I found situated in front. I also found that the cyst had been ruptured above, and that some intestine was extruded into the sac. There was no difficulty in removing the placenta, and no hæmorrhage seemed to result from its separation. It weighed when put together nearly three pounds, and was very hard and fleshy. The patient rallied from the chloroform, but sank in a few hours.

I am indebted to Drs. Sawyer and Weddell for notes of the post-mortem examination.

There was a considerable amount of clotted blood among the coils of the intestine. The uterus was enlarged and displaced, being carried so much to the left that its right margin corresponded to the middle line, and so much forward that its fundus projected over the symphysis pubis. The cyst was large enough to contain two clenched fists, and was situated between the uterus and vagina in front, and the rectum and sacrum behind, the greater portion of it being to the right of the middle line. The cyst was extensively ruptured inferiorly, and the small intestines freely protruded into its cavity.

The lessons derived from this case and its failure are three—first, that we should not delay interference after the child has come to the term or after it is dead; second, vaginotomy should invariably give place to abdominal section as being more scientific and less risky; and third, that the placenta should not be interfered with, but should be left to separate. I have profited by these lessons, and have since been able to operate on a case successfully.

Birmingham.

New Sydenham Society.—The annual meeting of the New Sydenham Society will be held in King's College on Friday morning, August 8, at 9 a.m.

The salary of Mr. George Borlase Childs, Surgeon to the City Police force, has been increased from £500 to £600 a year.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

BIRMINGHAM GENERAL HOSPITAL.

FINAL ISSUE OF EXTREME CURVATURE OF THE SPINE IN MECHANICAL INTERFERENCE WITH RESPIRATION — DIMINUTIVE LUNGS — EXAGGERATED ORTHOPNŒA—QUESTION OF PERICARDIAL EFFUSION.

(Under the care of Dr. RUSSELL.)

THE following case exhibits a vivid picture of the ultimate result of extreme contraction of the chest through spinal deformity, in impeding the respiratory function until the impediment becomes inconsistent with life. The obstacle opposed to the necessary growth of the lungs, by the unfavourable condition in which these organs were placed, is distinctly announced by their small size, as discovered after death. It seemed matter of surprise that life had been prolonged through twenty-two years under such unfavourable circumstances, for although the patient was much emaciated, his growth was not greatly stunted otherwise than by the change in the direction of the spine. Probably the chest attack to which the patient referred the beginning of his troubles was responsible for producing the general adhesion of both lungs, which would then occasion further lessening of their capacity, if not also atrophy, by exposing them still further to suffer from the pressure of the heart. To the same date may perhaps be referred the change in the mitral valve, which must have constituted a grave addition to the pulmonary troubles; and, moreover, the valvular incompetence must have combined with the pulmonary insufficiency to lessen the chest-space in an ever increasing ratio, by adding to the size of the heart through increase in the size of the right ventricle. But the chief interest to myself lay in the question of the existence of pericardial effusion, which was brought in a very urgent manner under our notice by the gravity of the patient's symptoms; and in the solution which the question received at the post-mortem. It might have been supposed that in this case physical examination would have furnished a satisfactory reply, but it was not so. I may just notice in passing that about the time to which the present case refers we had two or three similar cases in the Hospital. In one of these I was called upon, in the absence of a colleague, to decide on the propriety of venesection in consequence of sudden and urgent dyspnœa with cyanosis. The operation was attended with complete but temporary relief. The man died with effusion in the chest and in the pericardium. Like my patient, he had albuminuria. In another case of my own the pericardium was not uncovered by the lung, and there was not much orthopnœa. The young woman had a trifling attack of bronchitis, which much increased her trouble. She left cured of the bronchitis, but soon returned with the renal symptoms, which she had previously presented, much increased, and of these she died, the chest symptoms remaining quite subordinate.

C. D., aged 22, was admitted in a state of pitiable distress from dyspnœa, the result of extreme spinal deformity. Not only could he not lie down, but he was unable to endure even the erect posture. During the first six days of his residence in hospital, he passed the whole time, day and night, half dressed, standing by his bed and leaning forwards with his arms resting on the pillow, raising himself with a weary air when addressed. For six weeks he had been compelled either to lie on his belly or to relieve himself by a change of posture on his elbows and knees, and both elbows and knees were severely excoriated from friction. An attempt to place him on his back, even for a moment, occasioned such alarming dyspnœa and so much increase of lividity that we were compelled to conduct such examination as was possible by placing ourselves flat on the bed, the patient bending over us. He narrated his history in short broken sentences, bending over the interrogator, who lay beneath him on the bed. The face was leaden; the lips and nose deeply cyanosed; the hands and feet and even the legs were livid, and at times even purple; the ends of the fingers were expanded, but not clubbed; the pupils were of medium size and contractile. Throughout the patient was remarkably intelligent, and was easily roused from his sleepy condition. There was considerable anasarca of the lower extremities, and some effusion in the abdomen. The upper extremities were much attenuated. The urine was densely albuminous; specific gravity 1030; the first two days alkaline, and acid on the fourth. Respiration was at times rapid—from 32 to 44,—entirely diaphragmatic, the chest walls being immovable.

The ultimate cause of the patient's distressing condition was extreme antero-posterior curvature of the spine, dating from early childhood, and consequent crowding and immobility of the ribs, with great contraction of the chest. The neck was sunk between the shoulders, the tips of the scapulæ were only two inches and a half from the pelvis, and the distance between the spine of the scapulæ and the iliac crest was but six inches and a half. The largest circumference of the chest, measured over the projecting vertebræ and the prominent tip of the sternum, was thirty-three inches.

The patient dated his trouble chiefly from a chest attack twelve months ago. During three weeks he never lay down, but passed his time stretched across a table, and at night knelt on a sofa, the elbows resting on the raised end. He has never since been able to stand fully erect, and œdema of the legs, which formed at that time, has continued ever since. At first, after his recovery, he was carried to his work, which merely involved sitting at a desk. He could not stay in the house, he said, from dread of the monotony of his life; but for this change he would have gone melancholy mad; but this resource soon failed him, and the last six months he has been at home entirely. He has employed himself in reading, and when tired of reading could do nothing but think. He has hardly been properly in bed during the whole of this period; if he tried to sleep in bed his night was so wretched that for some time he feared to repeat the experiment. His food gave him great uneasiness, "blowing him up"; for two hours after eating the pressure on his stomach was dreadful. He also described extreme weakness of his legs, which appeared almost to amount to paralysis.

The exaggerated orthopnœa, which was so prominent a symptom, and was evidently hurrying the case to a fatal termination, of course suggested at once the probability of pericardial effusion—a probability greatly strengthened by the large space of the chest occupied by the heart's dulness, which covered a space of five inches in vertical height and six inches transversely at the base, extending from the right edge of the sternum. It would have appeared not very difficult with so large a space of dulness to determine whether the dulness were occasioned by effusion into the pericardium or by uncovering of the heart by the lung; but, perhaps in great part from the peculiar condition of the patient, a very careful consideration of the case with reference to the question of puncturing the pericardium left the subject still in uncertainty. The cardiac sounds were clear over the dull space, and a mitral bruit was discovered; but, on the other hand, there was singular absence of impulse (probably from the impure condition of the blood in the coronaries), and on this account, as well as from the intolerance of the patient, the effect of variation of position could not be satisfactorily tested. Subsequently, however, the question was postponed in consequence of unhoped-for relief being afforded by tapping the abdomen, which was found to contain an unexpectedly large quantity of fluid, amounting to seventy ounces. The relief was remarkable. The pulse, which had become very feeble, rose at once, and the lividity greatly lessened. The patient was at once able to lie on his back. Unfortunately the puncture produced peritonitis, rapidly aggravated by a dose of castor oil indiscreetly given by an attendant at the earnest request of the patient, and he died on the third day after paracentesis.

On post-mortem examination the pericardium was found to be completely uncovered by lung, but did not contain fluid. The heart was large (ten ounces), owing to hypertrophy and dilatation of the right ventricle; the main cusp of the mitral valve was contracted. The lungs were quite concealed by the heart, and were, besides, universally adherent to the costal pleura; they were of very small size, the left lung weighing only five ounces and a half, the right nine ounces. The liver weighed twenty-four ounces. The two kidneys weighed eight ounces and a half; their cortex was anæmic; the lobular markings were indistinct; the capsule stripped readily.

It should be added that the temperature in the axilla was between 99° and 100° during the first two days; on the third

and fourth it was steady at 98°; on the evening before death with the peritonitis it registered 99°.

CLINICAL LECTURE
ON TWO CASES OF DEATH AFTER HOLT'S OPERATION.

By R. W. TIBBITS, M.B., M.R.C.S.,
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GENTLEMEN,—Those of you who take an interest in the treatment of stricture of the urethra are certain to read Mr. Barnard Holt's very interesting work upon this subject. You will see that he sums up the great advantages to be derived from his method of forcible dilatation or rupture in the proposition—"that the process is facile, speedy, prompt in its effects, and free from every danger—immediate or remote." I am afraid that the two cases I intend to bring under your notice this morning must throw considerable doubt upon the absolute correctness of the latter part of this proposition, or at least show that this rule is not without an exception.

The first case was that of a healthy-looking sailor, aged 25, who was admitted into No. 11 ward on February 21. Five years ago he had been laid up with a sharp attack of gonorrhœa, and since then had suffered from a gradually increasing stricture. Several unsuccessful attempts had been made by medical men to pass instruments into his bladder; after each attempt he had shivered and felt unwell for one or two days. He was kept in bed for three days, the bowels freely opened with castor oil, and on the evening of February 24 a full dose of Dover's powder was administered.

February 25.—Holt's instrument was easily passed, and the stricture—a slight one—split with the largest-sized dilator. Afterwards No. 11 catheter was introduced into the bladder.

26th.—Patient seemed perfectly well. Had not shivered after the operation, and passed his urine in a full stream, with slight pain.

27th.—Still going on well. No. 10 catheter passed easily, causing little pain.

28th.—Twenty-two hours after the passing of No. 10 catheter, and seventy hours after the operation, he was suddenly seized with a severe rigor, which lasted for two hours. He then perspired freely. Countenance extremely anxious-looking. Complained of much pain in his head and back. No tenderness in the perineum or over the abdomen. No albumen or pus in the urine. Nothing to be detected with the stethoscope. Pulse 120; temperature 101·6°.

March 1.—Complained of feeling very ill. No recurrence of the rigor. No pain anywhere. Tongue dry and brown. Morning: Pulse 136; temperature 105°. Evening: Pulse 128; temperature 103·6°.

2nd.—Evidently much worse. Complained of no pain or tenderness anywhere. Urine scanty, but free from albumen. Nothing to be detected with the stethoscope. Morning: Pulse 136; temperature 104·2°. Evening: Pulse 116; temperature 104°.

3rd.—Perspiring freely. Could not be roused sufficiently to understand the questions asked him. Extremities congested. A dark purple petechial-looking rash had appeared over the whole of the body, especially on the chest, where it was very thickly distributed. Tongue dry and brown. Pulse 160; temperature 104·5°.

From this time he gradually passed into a state of coma, and died on the following night at a quarter-past one o'clock, the temperature rising to 107·6° fifteen minutes before death.

Post-mortem Examination (thirty hours after death).—Lungs congested posteriorly; extreme staining of inside of heart and bloodvessels; liver healthy; spleen enlarged, and broke down into a pulp when cut; kidneys presented numerous hæmorrhagic spots, varying in size between a pin's head and a small pea,—many of these showed signs of softening in their centre; bladder healthy, walls rather hypertrophied. Around the seat of stricture, at the junction of the spongy and membranous portions of the urethra, there was a slight extravasation of blood; the mucous membrane over this part was perfectly smooth—there was no apparent rupture of it. The prostatic veins were considerably obstructed, and one of them was blocked with a firm clot for about an inch and a half.

This, gentlemen, is one case. Let me now briefly read you the notes of the second one, which appeared in our post-mortem room yesterday, and which you have all had an opportunity of observing:—

D. S., aged 46, a muscular Irishman, was admitted into No. 9 ward on December 13. He told us that he had only noticed that his urine came in a small stream during the last two years; that on several occasions he had had small-sized instruments passed, and that once or twice he had shivered after their passage, but this was not the rule.

December 14.—A No. 5 sound was attempted to be passed, but only for a short time, as the stricture bled at the slightest touch of the instrument.

15th.—Had suffered no inconvenience from the attempted passage of the sound. Ordered ten grains of Dover's powder at night and half an ounce of castor oil the next morning.

16th.—Holt's instrument was passed with little difficulty through a stricture in the membranous part of the urethra, which was split with the largest-sized dilator; one or two drops of blood following the operation. Ordered thirty minims of tr. opii and two ounces of brandy to be taken in hot water. In the evening he passed his water freely with little pain.

17th.—4 a.m.: Whilst at the closet was seized with a severe rigor, which lasted for about two hours. 9 a.m.: Temperature 102·2°; pulse 120. Ordered brandy and an opiate draught. 12 noon: Temperature 102°; pulse 130, weak; extremities cold and congested. Ordered five grains of carbonate of ammonia every two hours. 2 p.m.: Pulse weaker. Ordered three ounces of brandy in hot water. 5 p.m.: In much the same condition. Brandy to be repeated. 9 p.m.: Temperature 100·2°; pulse 130. Brandy and ammonia to be continued; hot-water bottles to be applied to extremities.

18th.—9 a.m.: Temperature 100°; pulse uncountable. To continue brandy. 2 p.m.: Temperature 101·2°; pulse imperceptible at wrist; extremities mottled purple. Has passed no water during the last twenty-four hours; bladder not distended. Patient perfectly sensible, but restless. Ammonia to be discontinued; half an ounce of brandy every fifteen minutes; to be dry-cupped over loins and to have hot fomentation of infusion of digitalis applied over the abdomen.

From this time his condition changed but little. He passed a small quantity of water at about 6 p.m., and remained sensible to within a short period of his death, which occurred at 3 a.m. on the following morning—sixty-two hours after the operation, and forty-eight after the first rigor.

Post-mortem Examination (ten hours after death).—Moderately firm old pleuritic adhesions on both sides of the chest; lungs healthy, but congested at bases; heart and its valves healthy—a small quantity of clot and fluid blood in each cavity,—no clot in the pulmonary artery; intestines and peritoneum healthy; liver to some extent congested, otherwise perfectly healthy; spleen healthy; kidneys healthy, not even congested. The bladder contained about six ounces of urine; walls slightly hypertrophied; mucous membrane healthy, and not congested, except for a patch about the size of sixpence at the posterior part of the neck of the bladder; the tissues under this were also congested for the depth of about the eighth of an inch. The urethra was slightly congested along its whole tract, and at the juncture of the spongy and membranous portions there was a patch of deep congestion, showing the seat of the stricture. There was slight extravasation of blood into the tissues around this for the depth of about the eighth of an inch. The mucous membrane over this point, examined under the microscope with a two-inch lense, showed no sign of rupture.

It has seldom been my duty to draw your attention to cases of so painful an interest as the two I have just related. Those of you who saw the first patient will recollect what a fine healthy-looking man he was. You will also remember that in the operation-room I mentioned that it was the slightest case of stricture that I had ever performed forcible dilatation upon. It may be said that in this instance the passage of the catheter on the second day after the operation was the cause of the mischief; but then the subsequent passing of a catheter follows as a necessity upon this method of treatment. In the second case no such question can arise. This man, with all the organs of his body healthy, died in sixty-two hours from the undoubted effects of the operation.

There was a certain amount of resemblance between these two cases. In each the first symptom was a severe rigor, coming on many hours after the operation, and in each there was the same dusky congested appearance of the extremities.

Very little either was there to be detected during life, and still less in the post-mortem examinations; for I look upon it as probable that the deep-red condition of the inside of the heart and large vessels in the first case was due to a considerable extent to the effects of decomposition. But the hæmorrhagic spots in the kidneys of the first patient were exactly similar in appearance to that which you sometimes see in well-marked pyæmia. Moreover, during life the symptoms and appearance of these patients closely resembled what we see in the worst cases of septicæmia following after other operations or injuries which sometimes, but fortunately very rarely, occur in the wards of our Infirmary. Therefore I should put down the cause of death in both instances to blood-poisoning.

The practical lesson I wish you to learn is, that in performing any operation upon the urethra you cannot be too careful. When the patient's history points to the stricture being a bad one, or more especially should he habitually have suffered from rigors after the passing or attempted passing of an instrument, let me urge upon you the advisability of insisting upon at least twenty-four hours' complete rest before you attempt to do anything. It has always been my rule to do this; and for two reasons—firstly, you will find it much easier to pass an instrument through a bad stricture if your patient has been kept quiet for some time; secondly, I believe that previous rest often obviates the occurrence of subsequent unpleasant symptoms, for I have more than once found that patients who had always suffered inconvenience from the passage of an instrument would stand considerable manipulation with impunity, previous rest having been insisted upon. At any rate, should mischief result, you will have the satisfaction of knowing that all rational means had been taken to prevent it. Holt's operation is one you have seen me perform moderately frequently, but never without having kept the patient in bed for at least forty-eight hours.

Mr. Holt claims for his operation that cases of stricture treated by this method show less tendency to contract than after any other plan of treatment. My experience relates only to strictures situated in the neighbourhood of the membranous part of the urethra; but it is decidedly in favour of this assertion. At the same time, as a rule, unless a full-sized instrument is afterwards passed with tolerable regularity, you are running your patient to unnecessary risk; for to a certainty will the diseased tissues again contract.

There is one more point of very special interest that these cases help to demonstrate. I mean what actually occurs when you rapidly force the dilator through the stricture. Mr. Holt advances the proposition that the diseased submucous tissue is alone split, and that the mucous membrane is simply dilated. This is a matter of considerable importance, because, with any considerable wound of the mucous membrane of the urethra, there would be a risk of infiltration of urine being the result, though I believe this risk would be slight. We particularly examined both these cases, with the view of obtaining information on this point, and undoubtedly they go towards proving the correctness of Mr. Holt's supposition; but we must bear in mind that during the time these patients lived after the operation a certain amount of rupture might have healed. Still, they certainly seem to prove that, at any rate when the stricture is not a bad one, the injury, if any, that is done to the mucous membrane is of the slightest.

With these two cases before us, it may perhaps suggest itself to the minds of some of you to ask—Why continue to perform the operation? You cannot learn too early that cases of stricture, as a class, are some of the most troublesome and difficult that you will have to deal with, and also that no method of treatment is perfectly free from danger, for death has more than once resulted from the simple passing of a catheter. There are also persons who will not submit to the tedious treatment by gradual dilatation. Specially have I found this amongst the lower classes, with whom time is of importance. These people will remain under treatment till the stricture is partially relieved, and then cease to attend, to come back again in a few months' time worse than ever. But even under these circumstances you would not be justified in performing Holt's operation, if the risk to life from it is considerable, unless the advantages to be derived from it are far more considerable. But what is the increased amount of risk? Sir H. Thompson, in his lectures on "Diseases of the Urinary Organs," lays no stress upon this point, neither is it referred to by many of our best surgical authorities. Moreover, the results published by Mr. Holt are extremely favourable; therefore, we have a right to assume that the cases we have this morning considered are very exceptional. My experience of the advantages of the operation in successful cases is decidedly satisfactory; but unless the patient afterwards submits to the periodical passing of a full-sized instrument, the stricture will again to a certainty contract, and the operation will have been useless.

In treating all ordinary cases of stricture let me advise you, as a rule, to adopt first of all the simplest method at your disposal, and fairly try the plan of gradual dilatation, reserving Holt's operation for the more severe cases, or for those patients who will not submit to lengthened treatment. Remember, also, that there are certain persons whose constitutions resent any interference with their urethra, and who will tell you that they nearly always suffer from a rigor after any attempt to pass a catheter. It will behove you in such cases to be especially careful.

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Medical Times and Gazette.

SATURDAY, AUGUST 2, 1873.

THE BRITISH MEDICAL ASSOCIATION.

The coming meeting of the British Medical Association in London may be regarded from different points of view. Socially, it will be without doubt a very pleasant reunion. Town and country will shake hands, and the good offices of the former, we are certain, will be lavished to welcome the latter. The *fêtes* and *conversaziones* will be very largely attended, and the *salons*, we may safely prophesy, very hot. There will be an enormous consumption of ice and claret cup, and there will be plenty of opportunities for estimating the progress which the present generation of English cooks are making in their art under the direction of South Kensington. Then, again, there will be many special attractions, to borrow a phrase from the theatrical managers, which have been cunningly devised to give *éclat* to the present gathering. The meeting will be commenced with a religious service in the central temple of the national church—one of the grandest cathedrals of Christendom (if only the capitular authorities would push on its repairs a little). The Association is to be entertained by a most deservedly popular Lord Mayor, who, having wound up the accounts of a great benevolent movement for the patients, is now most willing to show the high estimation in which he holds the doctors. They will be

received in the institution consecrated by the genius of Hunter and of every venerable name in British surgery on one evening, and on the next they will meet within the walls of a college which has influenced the teaching of modern medicine at least as much as any school in the three kingdoms, whilst their ordinary meetings take place daily in another, the boast of which is to prove by experiment that modern science may be the handmaid of the Christian faith. Regarded in its social aspect, therefore, there can be no doubt that the meeting of the British Medical Association in 1873 has all the elements of a great success. The weather is charming, the death-rate low, the country healthy, and the means of transit at everyone's command. Never was a holiday planned under more propitious circumstances.

Then, again, we are promised addresses by men whose reputations are of the highest in their respective spheres. It is perhaps a pity that these orations are to be delivered in the morning, when many London men are obliged to be in their consulting-rooms. But if they were to be delivered at midnight the names of Parkes, Quain, and Burdon-Sanderson would be sure to attract audiences. We hear that this year, as far as is practicable, discussions are to take the place of papers of varying merit. This we think, if it can be done, is a right step, although there is a danger that discussion may degenerate into mere oratory, as with our Gallican neighbours.

If we were in a mood to criticise the British Medical Association, we should at least have no fault to find with its social organisation or its annual choice of members of the profession to fill its chairs. The Association, however, has its weak side as well as its strong one. It is a body of large numbers and large income. In these respects it is undoubtedly a great success. But powerful bodies with large annual receipts have responsibilities which they ought not to evade. It is a question often asked—Is the influence of the British Medical Association in forwarding the progress of Medical Science in any degree comparable with the influence in favour of General Science exerted by the British Association or by the Royal Society? We fear this can scarcely be answered in the affirmative. A society possesing a revenue of five or six thousands a year might in the course of four or five years find the means for clearing up a large number of medical and surgical problems of the highest importance, not merely to the medical profession, but to the world at large. It is not our wish to criticise the mode in which this body expends its income, but we should be the first to welcome any sign that the British Medical Association were a society looking beyond the mere popularity of the day—an Association bent upon influencing for good, in any permanent degree, the great art of healing.

THE PROVIDENT SCHEME IN MANCHESTER.

It is said that what Illinois thinks one year the American Union will think the next; and somewhat similar claims have been set up for Manchester as regards this country. Certainly, the politicians of these parts show little hesitation in grasping and dealing with the most difficult problems, though there may be two opinions as to the value of the solutions afforded by them. At all events, when an attempt is made to revolutionise the whole system of medical charity in a city of the size of Manchester, which is the medical centre of one of the most populous districts in England, it behoves us to inquire very carefully into the merit of the proposals. Meeting after meeting has been held—one, we are sorry to see, with closed doors: for no good comes of secrecy in such cases,—and still there is difference of opinion where there should be unanimity; but unanimity, we fear, in the present instance is hopeless; and it is certain that the minority, on whichever side, will endeavour to carry out their own views, despite of opposition or indifference on the part of their opponents. Our views on the subject have long been well known, and we are heartily glad to find that they have so far prevailed as to seriously modify all propositions now made for the institution of provident dispensaries, and have, indeed, been made the platform of the Medico-Ethical Association of Manchester; but the whole thing has been so grievously misunderstood that we are constrained once more to enter into a discussion of the whole subject on its merits.

Hospitals, it is often triumphantly said, are special characteristics of the Christian era; their object is the relief of suffering humanity. Founded and supported by the rich for the benefit of the poor and needy, there is but one claim which can be admitted as absolute on behalf of those seeking relief in them—that is, suffering. We take it that the fundamental principle of all our general hospitals is this—that no one really ill shall be turned away from their doors without at least temporary relief. It was found that the appointments to such hospitals constituted great advantages in the race of life, as schools were soon established along with most of our large hospitals, and lucrative practice was the prize of most of their officers. But then hospitals were close boroughs—their appointments were not open to the profession at large; and so some disappointed men began to found an opposition to them—dispensaries,— in many instances at least not for the sake of Christian charity, but for their own interests. Special hospitals have been, too often, a later development of the same principle.

In course of time there have grown up certain other institutions connected with hospitals, but which are not of their essence—out-patient departments,—and these now mainly occupy the ground formerly occupied by the dispensaries, so that the two as it were compete in their attractions for patients. These out-patient departments are exceedingly valuable if properly worked: they constitute an excellent means of selecting the patients to be admitted with most advantage to themselves and others; and they form an admirable school for training students in a class of cases they should never see in the wards. For the dispensaries there is nowadays no such *raison d'être* save in certain localities. Both dispensaries and out-patient departments have, moreover, it is well known, had pauperising influences; and it has been proposed to stop this by inducing men when well to lay up a provision for illness by a small weekly payment. An institution on this principle is called a Provident Dispensary. We have again and again pointed out the faults of provident dispensaries as usually worked. They have attempted to combine what should be distinctly kept apart—charity and independence. Charity is charity, and independence is independence; but this provident system is neither one thing nor the other. These institutions have been unjust in many instances to medical men, by enabling one or two who work the dispensary to make a large income, whilst their neighbours starve; for the class of men who fill these posts are not physicians or surgeons who act as consultants only, such as traditionally is the hospital caste, but gentlemen in ordinary general practice. Again, it is useless for a man to lay by money to pay a doctor when he is ill if he cannot also obtain the food necessary for himself and family. Some sick allowance ought clearly to be included in the provision, as in the club system. Now, it is proposed to extend the benefits of the provident system to large masses of the community who, among other advantages obtained by strikes, now seek cheap physic. But surely to extend anything like charity mixed with independence to such will hardly do them good. They like being independent, it is said. Well, let them! They can belong to a club or call in a medical practitioner and pay him; their wages are quite good enough. If it is the policy of the profession to screw the last farthing out of a poor man's pocket who wants to go to a hospital, it cannot be the same policy to take part fees from those who can pay whole.

We are heartily glad that the Manchester Medico-Ethical Association have in the main adopted these views when recommending the adoption of the provident system throughout the city. Their principles are these—that provident sick societies should be entirely self-supporting; that every qualified medical man should have the option of attaching himself to some one society; and that no medical officer should delegate his duties to an unqualified assistant. Such principles are perfectly sound, but they have nothing to do with charity; that is left as before. Undoubtedly every effort should be made to exclude improper persons from obtaining relief at hospitals and dispensaries; but a small payment will only aggravate, not alleviate, the mischief.

THE DEATH FROM CHLOROFORM IN SIR P. DUN'S HOSPITAL, DUBLIN.

Our readers were, no doubt, much pleased to find that in the trial, *in re* Lamb *v.* Barton and Bennett, the jury had no difficulty in returning a verdict for the defendants. We may be allowed to congratulate these gentlemen on their triumphant acquittal from a charge which (as one of their counsel, Mr. Gibson, Q.C., described it) "was calculated to blast their reputation and ruin their prospects."

Now that the trial is over, we desire briefly to draw attention to a few points of special interest in the evidence given on both sides. In the first place, it will be observed, from a consideration of the arguments of counsel for the plaintiff, that an endeavour was made to establish two things—first, that there had been negligence on the part of the defendants in not making a thorough examination of the heart and lungs before the administration of chloroform, and in delegating to a student the duty of watching the behaviour of the pulse under the influence of the anæsthetic; secondly, that the use of chloroform as an anæsthetic was now almost exploded, and that American and Continental authorities were almost unanimous in condemning its employment. We cannot help thinking that both these plans of attack broke down completely and at once. The patient was a stalwart man, six feet two inches in height, of immense muscular development, and with a full, steady pulse at 70—he himself had stated that he had not suffered from any serious illness. The chest was fully exposed during the administration of chloroform, and so the respiration could be accurately watched by Dr. Barton, the Resident Surgeon of the Hospital; while an experienced and intelligent student kept his finger on the pulse unceasingly. But this was not all, for another student, Mr. Forsythe, who in evidence stated that he had seen chloroform given several hundred times, had control of the femoral artery of the injured limb, and was thus in a position to judge of the state of the patient's circulation. As a matter of fact, three persons were throughout watching the patient uninterruptedly, and all three cried out simultaneously when the respiration altered and the arterial pulsation began to flag. Great stress, however, was laid upon the fact that it was a student who watched the pulse. If we wished, we might with fairness rebut this charge by an admission that we are all students; and, indeed, a physician or surgeon who is not ready to admit, even after an experience of a quarter or even a half-century, that he is still a student, has failed to view our calling in its true light. But, apart from this, it was merely to support a legal argument that it was attempted to draw a broad distinction between an advanced student and a qualified medical practitioner, especially as the former had had ample opportunities and had made good use of them.

The endeavour to taboo chloroform appears to have been far from successful, and the statements made by counsel as to its disuse in America were at once sweeping and extremely inaccurate. Indeed, we should not have thought it necessary to allude to these statements at all were it not that some of the skilled medical witnesses for the defence, when cross-examined as to their accuracy, seemed to acquiesce in their correctness to some extent, even with respect to the late American war. Now, we have before us at the present moment Circular No. 6 of the Surgeon-General's Office, War Department, Washington, November 1, 1865; and at page 87 of this official document we read as follows:—"There have been consulted, in regard to the employment of anæsthetics, the reports of 23,260 surgical operations performed on the field or in general hospitals. Chloroform was used in 60 per cent. of these operations, ether in 30 per cent., and in 10 per cent. of the cases a mixture of the two was administered. At the general hospitals the greater safety of ether as an anæsthetic was commonly conceded. It was often employed, and no fatal accident from its use has been reported. In the field operations chloroform was almost exclusively used. The returns indicate that it was administered in not less than 80,000 cases. In seven instances fatal results have been ascribed with apparent fairness to its use." It may be mentioned that in at least three of these seven fatal cases death occurred suddenly, as in Dr. Bennett's case, and post-mortem examination failed to indicate the cause of death. In the Franco-German war, again, chloroform appears to have been very generally used. On the whole, the plaintiff's side, in attempting to prove too much as to the shortcomings of chloroform, failed to prove anything at all.

Here we would willingly have brought these comments to a close, but that a strong feeling of duty compels us to criticise—we trust in no unkind or partial spirit—some of the medical evidence on behalf of the plaintiff. Dr. Austin Meldon's description of the physiological effects of chloroform seems to have been much more suited to a class-room than to a court of law. But, even passing this over in silence, we would ask Dr. Meldon candidly whether the four stages in the administration of chloroform, and their increasing degrees of danger, described by him with such graphic minuteness, can be so accurately isolated as he would lead his audience to suppose? Indeed, in the case of Lamb, that unhappy man appears to have died at the end of what Dr. Meldon terms the first stage, or "stage of excitement." We cannot help thinking that this "protesting too much" is a habit in a medical witness which cannot be too strongly deprecated.

With a statement of another medical witness, also, we feel disposed to quarrel. The gentleman in question laid stress upon the fact that the patient Lamb had suffered from "functional derangement of the heart," and that therefore he was not a fit subject for chloroform. We should be sorry to say that these words, "functional derangement of the heart," were used in an *ad captandum* sense to impress, and possibly influence, the jury. But at the best they were dangerous words, and for two reasons: first, because they were capable of misinterpretation by the non-medical world; and secondly, because the gentleman who used them stated on cross-examination that "Lamb had no organic disease of the heart, no valvular disease, no fatty degeneration." Why had these latter words to be dragged from him, while the former ones, of at least doubtful interpretation, flowed glibly from his lips? If the patient had functional derangement of the heart, would this have been a valid reason for withholding the chloroform? We believe this to be at least an open question.

THE WEEK.

TOPICS OF THE DAY.

The social characteristics of the meetings of the British Medical Association are generally in the ascendant, and the days devoted to excursions are usually among those marked with a white stone when the meeting is over.

One year these excursions were so numerous and interesting that sectional work was well-nigh forgotten; it is even said that on one occasion no papers were forthcoming—even the secretaries had gone holiday-making. This year the excursion arranged to Woolwich Arsenal for Friday after the sectional work is over, and those for Saturday, promise to be of unusual interest. The Arsenal will then be in full work, and arrangements have been made so that some of the special processes shall be seen in actual operation. On Saturday one excursion of great promise is that to Windsor and Clevedon—the river seat of the Marquis of Westminster, and one of the most lovely spots on the loveliest river in England. The Queen has been graciously pleased to throw open all but the strictly private apartments in Windsor Castle for that day, and the Princess Christian has induced her husband, the Ranger of Windsor Park, to send a buck from her Majesty's herd to regale the visitors. Eating and drinking are important matters on such days, and by the kindness of a gentleman who is unable to do in town what he would like to do for visitors, a luncheon will be provided at Windsor free of cost to all who make up the party, and in the evening a dinner will be provided at Maidenhead at a cost which is comparatively trifling. The excursionists will leave by one of the ordinary trains from Paddington about nine, will first visit Windsor Castle, and thence by ordinary train to Taplow. Shallops will be in readiness to convey the party up the river to Clevedon Woods, whence they will return in the same fashion, and after dinner, which will take place in a fine marquee, the party will return about 9.30 by a special train to Paddington.

For those who are unable to start so early an excursion to another portion of the river has been planned. Excursionists will proceed by the loop line from Waterloo to Teddington for Bushey Park. For this party Dr. Langdon Down has been kind enough to offer every hospitality. He will meet them in the park with light refreshments; and for those who care for such things, her Majesty's laundry-shed will be open for inspection. Hampton Court and its picture-galleries, to say nothing of the gardens, are exceedingly well worthy of a visit. Thence the party may proceed by boats or otherwise to Kingston to visit Dr. Langdon Down's interesting asylum, where that gentleman will hospitably entertain them; after which the party may return, some by way of Richmond, others by the South-Western, the station of which is close to Dr. Langdon Down's place.

Unfortunately to both these excursions the number must be limited—the Windsor and Clevedon excursion can only accommodate 150, that to Hampton Court 100—and to neither can ladies be admitted. Fortunately there are no such restrictions in the excursion to Brighton. The London and Brighton Railway Company have consented to take all members at a reduced rate, and arrangements have been make for a *table d'hôte* dinner at the Grand Hotel. For those who want a sniff of sea and a look at the grand aquarium, this excursion will offer unusual facilities. The aquarium, library, and museum will all be open to members free of charge, and are well worthy of a visit.

During the week Lambeth Palace will, by the kindness of the Archbishop of Canterbury, be open for inspection. Its library contains some matchless treasures. Equally interesting, but in a totally different way, are Stafford House and Grosvenor House, both of which will be open to members. Of the evening festivities we can hardly here speak—a reception by the Lord Mayor, a *conversazione* at the College of Surgeons, a public dinner in the grand hall of Lincoln's-inn, and the *conversazione* given by the Professors and Council of University College, will amply fill the time of those who seek such things. The Museum of the Association, too, will be full of interest; among other things there will be collected for the first time the most perfect series of electrical apparatus for medical purposes which has been exhibited in this country. Altogether the attractions are something sensational, and the meeting can hardly fail to be a success.

We have recently had to note the appointment of a lady physician to the Children's Hospital at Bristol. We now have to record the resignation of the whole of the male medical staff.

Sir D. Wedderburn has come forward as the champion of the women-doctors. He gave notice in the House of Commons on Tuesday that early next session he should move for leave to introduce a Bill to empower the Universities of Scotland to admit women to the medical curriculum and grant them degrees. It is said that a great effort is being made to obtain medical education for them at the University of St. Andrews.

CHOLERA.

We have this week been startled by the report that cholera had crossed the sea, and had broken out in Sweden and Helsingborg, a port opposite Elsinore in the Sound, and not far from Copenhagen. Hardly had we mastered this piece of intelligence and its full meaning when we were still more startled at hearing that a fatal case of Asiatic cholera had occurred in London. Two cases occurred on the 28th inst.; one of them has already died; but the subjects were emigrants, and the disease imported. They were members of a band of emigrants from various parts of Denmark and Sweden, who sailed from Copenhagen on the 22nd for Kiel; from Kiel they crossed by rail to Hamburg, and thence came to London, where they landed at Blackwall, on their way to New Zealand. As far as we know, neither Kiel nor Hamburg are as yet infected, but Copenhagen, as we have seen, if not already attacked, is at all events near infected spots; but during the whole time occupied in the journey from Copenhagen no case of illness occurred among the party. The first patient seized was a man aged 45, who was very bad, but has not died. The second was a girl aged 12; she speedily sank. Other members of the party have suffered from diarrhœa, but there has been no further outbreak of the cholera. Prompt steps were taken by the gentleman in charge, Mr. Holt, to put himself in communication with the Privy Council authorities; and along with Dr. Buchanan, Mr. Liddle, and Mr. Harry Leach, the newly appointed medical officer for the port of London, an attempt was made to collect all the suspected into one group, where they might be the more easily controlled. Other means were also employed to avert the danger of spreading. They were authoritatively forbidden to go on board any ship or otherwise risk the spread of the contagion. All this is the more necessary as the cholera news which reach us from abroad are far from reassuring. The latest official reports announce that at Königsberg, in Prussia, up to the middle of July there had occurred scattered cases in the town and various parts of the province. Still worse were the tidings from Warsaw; there, from May 30 to July 11, had occurred in the city 298 cases with 103 deaths, whilst the disease was present in all parts of the kingdom of Poland. From the Roumanian territory we learn that in Jassy two deaths had occurred up to July 14. In Rutschuk, up to July 10 the town was free, but the disease was present in the neighbouring villages; whilst in Shumla, from July 5 to July 7 inclusive, 143 cases occurred. From July 12 to July 16, 22 deaths occurred in Galatz, whilst in Crajova and neighbourhood a good deal of cholera was about up to the middle of July. In Silistria and Widdin scattered cases. In Bulgaria (Sofia) cholera broke out early in July (?), and is extending over neighbouring districts. Turning now to Hungary, we find that in Pesth, from July 1 to 8, 70 cases and 46 deaths occurred; from July 9 to 15, 190 cases and 80

deaths, thus showing a tendency to increase; whilst throughout the whole of Hungary the disease was widely prevalent. In Italy cholera continues to prevail in the province of Treveso; thus, from July 1 to 6, 20 new cases occurred, and 10 deaths, 16 remaining under treatment on July 6. In the province of Venice from July 1 to 6 there were 3 new cases and 23 deaths, 35 remaining under treatment. In Trieste 2 scattered cases had occurred. Thus we see that for this year cholera has assumed epidemic proportions all over Central Europe. We ourselves have had the disease imported to our shores. It is high time to provide for dealing with the disease promptly and rigorously where that has not been already done.

THE NEW MEDICAL WARRANT.

Mr. Cardwell, in reply to an inquiry in the House of Commons on Monday last from Mr. D. Dalrymple, whether he had considered the representations made to him by its Parliamentary Bills Committee and other bodies on behalf of the army medical officers affected by the recent Army Medical Warrant, stated that the subject had received a good deal of consideration in the department, but as yet he had been quite unable to submit to the Treasury any modification of the Warrant. There should be no unnecessary delay in the matter. But our brethren must bear the reproach of Shylock: "Sufferance is the badge of all our tribe."

WIMBLEDON CAMP.

The recent meeting has been one of the most successful in a sanitary point of view that have ever been held. The daily rate of sickness, according to the senior medical officer's report, amounted to no more than 1·5 per 1000, and scarcely more than half a dozen cases required to be seen oftener than once or twice. The cool weather and persistent breezes which prevailed no doubt had a great deal to do with this result; but the strict cleanliness and total suppression of nuisances which are enforced in the camp must be credited with a large share of it. The dry earth system is carried out on a very large scale—sufficiently large to provide not only for the 3000 who sleep in camp, but for the 10,000 or 20,000 who spend part of the day there,—and gives complete satisfaction. Staff-Surgeon Temple, V.C., of Woolwich Arsenal, and Dr. Mayo, Fellow of New College, Oxford, of the Inns of Court Corps, have for several years past divided the medical work between them. We see by the *Army List* that the former meritorious officer, whose distinguished services in New Zealand have not prevented him from remaining an Assistant-Surgeon for nearly fifteen years, is now fifth on the list for promotion; we trust that although the length of time that has elapsed since the New Zealand war has naturally produced many changes among those who preside over the department, those services will not be forgotten at this juncture. The intensely hot days which immediately followed the meeting forced strongly on the attention of the remaining inhabitants of the camp the total absence of shade on the common. The consequence of this is that the peaty and sandy soil becomes baked, and gives out again the whole of the heat that it receives, producing a climate which the old soldiers compare to Ceylon or India. A body of important local personages called "conservators" was established some time ago to improve and protect the common, but it does not appear that they have taken any steps whatever to remedy this great defect. Not a single tree has been planted. That trees will grow there is sufficiently shown by the presence of a few poplars round "The Cottage" which affords a temporary residence to the public-spirited Chairman of Council of the National Rifle Association, the Earl of Ducie, and his family, during the meeting. To plant a few thousands of quickly-growing trees would be a mode of deserving the gratitude of the frequenters of the common which we respectfully commend to the notice of the conservators. Sunburnt faces have a wholesome look, which excites the envy of the pale prisoner of the desk or counter; but the process need not be carried so far as to remove the entire cuticle of the nose and cheeks. It is fortunate that the great rise in temperature did not take place during the meeting; for a place where men are driven into the glare of the sunshine, in order to escape the stifling heat of the tents, can scarcely be confidently recommended as a health-resort.

DOES WINE IMPAIR DIGESTION?

We suppose no practical physician doubts that large quantities of wine, or of any other alcoholic beverage of equal or greater strength, not only retard, but impair digestion. The well-known experiments of Dr. Beaumont went to prove that even small quantities had an effect similar in kind, if not in degree. Now we have a paper in the *Pharmaceutical Journal* by Mr. Charles Symes, Ph.D., detailing the results of experiments with different pepsines, from different firms, prepared by different processes; and he gives two experiments in which wine was used as the solvent of good pepsines. In both cases less than 50 per cent. of the albuminous material employed was digested; whilst some of the dried pepsines supposed to be equivalent in strength dissolved 76, 97·5, and 98·5 per cent. of the same egg-albumen. These experiments will greatly delight the nephalists, but the problem we have to solve in practice is less simple than the artificial digestion of hard-boiled eggs. We have to deal with men and women whose bodily and mental powers are more or less exhausted by hard work, preceding illness, or some other method of exhaustion; and it can scarcely be seriously denied that many of them can take and digest, *with* a stimulant, what they could neither eat nor digest without one. But the fact that wine, *per se*, tends to retard, if not prevent, the digestion of certain kinds of food, must, we presume, be taken as pretty fairly established, without resting on these experiments of Mr. Symes. His paper is, however, deserving of perusal on other grounds, as he shows that there is a great difference between the solvent powers of pepsines prepared by different makers and by different methods.

REPORT ON SLAUGHTER-HOUSES AND OFFENSIVE TRADES.

The Select Committee appointed "to consider the operation of clauses 55 and 56 of Act 7 and 8 Vict., c. 84, and the best means of making provision concerning the offensive or noxious businesses therein specified," published their report on Monday last. It states that if it is the wish of Parliament to banish the trades of fellmongers, slaughterers, tallow-melters, boilers of various kinds, etc., from the metropolis, or from any portion of it, the change should be made directly by clear legislation, and should not be made indirectly by the strict enforcement of these sections of the Act of 1844, which in the more thickly covered districts of the metropolis would involve so large a cost as to be practically prohibitory. In regard to the trade of slaughterers of cattle and sheep—the most important of the enumerated trades,—the Committee have come to the conclusion in the first place that the 55th section of the Act of 1844 should be repealed. They are, however, of opinion that it would be desirable, so far as possible without interfering with the trade or subjecting those who carry it on to expense or inconvenience, to diminish, or rather to accelerate the diminution of, the number of these private slaughter-houses. With this object the Committee recommend that additional private slaughter-houses, varying in size, should be constructed, and other conveniences given at the Copenhagen-fields market, and other markets if established, so as to induce butchers to slaughter animals on the spot, and not drive them through the

streets to their own premises. The Committee also recommend that no additional private slaughter-houses should be established in the central part of the metropolis except under special circumstances, and not then except with the consent of some such authority as the Metropolitan Board of Works or the Courts of Quarter Session. To meet the decrease that must be continually going on of private slaughter-houses attached to butchers' shops, they desire to encourage the substitution of private slaughter-houses belonging to the individual butchers in suitable localities in the vicinity of public markets; and the Committee wish to draw a clear distinction between private slaughter-houses so attached to markets and public slaughter-houses possessed by the market authority. After insisting upon the necessity for a strict and constant supervision of all public and private slaughter-houses, the Committee observe with respect to all businesses that may be called noxious, whether enumerated in the Act of 1844 or not mentioned in it, that they should not be actually banished from the metropolis unless a case of nuisance can be established against them, but that they should all be subjected to stringent rules and frequent inspection, and the sections of the Act of 1844 concerning the enumerated trades should be repealed. It will be seen by the above report that the question is one of the utmost difficulty. In the main we agree with it, as it deals with the subject in a practical manner.

HEALTHY DWELLINGS.

The report of the Improved Industrial Dwellings Company, just issued, for the half-year to June 30 last, states that the number of dwellings erected and in course of erection is 1517, which will accommodate about 7500 persons. The report congratulates the members on the complete success of the Company during its ten years' existence, and shows that a great improvement in the moral and physical condition of the tenants has been effected. The death-rate in 1872 was only 15·8 per 1000 in the buildings, compared with 21 in the metropolis, the average death-rate during the eight years' occupation having been 16 per 1000, against 24 in the metropolis.

PRECAUTIONS AGAINST CHOLERA.

Quarantine regulations have just been adopted by the Dover Local Board, in conjunction with the Collector of Customs for that port, in consequence of the appearance of cholera upon the Continent. All vessels from suspected ports bound for Dover are not to come into the harbour until they have been examined by the medical officer and released from quarantine. A series of regulations are given in Tuesdays evening's *Gazette*, applicable to Scotland, as to the examination of vessels which may be infected with cholera or choleraic diarrhœa on arrival within the limits of any port in the country, and for preventing the spread of the disease.

COFFEE AND MILK ADULTERATION.

Out of thirty-eight samples of coffee submitted to Dr. Muter, Analyst to the Wandsworth District Board of Works, by the inspector, he found twenty-one adulterated and seventeen pure; and out of forty-two samples of milk only six were described as "good," the rest as "skimmed," "skimmed and watered," and twelve of the samples were watered with proportions of water varying from 11 to 27 per cent. In one of the samples he says that the milk had either been skimmed from the top of the can, or had had cream added purposely to deceive the analyst, but without success.

SANITARY SUPERVISION.

Now that the meetings of our metropolitan vestries and local boards are beginning to be adjourned for the usual summer recess, we trust that proper provision is being made for strict sanitary supervision in their several districts during the period of these adjournments. Any want of care in this respect would not only involve a charge of neglect of a very important duty, but it might lead to consequences highly dangerous and disastrous to the public health.

THE COLLEGE CONVERSAZIONE.

We are requested to state that at the reception by the President, Vice-Presidents, and Council of the Royal College of Surgeons, on Wednesday, the 6th inst., admission can only be obtained by tickets, procurable at the College any day up to five o'clock on the evening of Tuesday. As the museum will no doubt be the principal object of attraction, ladies for obvious reasons cannot be admitted.

FROM ABROAD.—INJECTION OF IODINE DURING ACUTE INFLAMMATION—REPORT ON DIEULAFOY'S ASPIRATOR IN AFFECTIONS OF THE KNEE.

Dr. Menzel, Senior Surgeon to the Trieste Civil Hospital, has published an article in the *Gazetta Medica Lombardia* of July 19 on "The Injection of Iodine into Tissues the seat of Acute Inflammation." He observes that while during the last ten years various articles have been injected into the substance of tissues affected with different forms of chronic disease, he is not aware of any instances in which such practice has been pursued during the existence of acute inflammation. Repugnance has been felt to injecting tissues the seat of acute phlogosis with substances possessing more or less power of inducing inflammatory action. His object in the present paper is to show that such practice may nevertheless be attended with great benefit; and although he certainly is able to adduce but very slight evidence in favour of this view, we may as well lay it before our readers. During last spring diphtheria prevailed severely in Trieste, defying the various remedies employed, such as cauterisation, the chlorate and permanganate of potash, carbolic acid, quinine, etc. Most of the children brought to the hospital were already affected with excessive bilateral tumefaction of the cervical glands, the lymphadenitis pursuing a rapid course in diphtheria, and inducing a far greater amount of swelling than is observed in ordinary catarrhal tonsillitis. In the author's opinion the frequent inefficiency of caustics arises from the circumstance that the morbific agent has been transported from the parts accessible to their action (as the tonsils, velum, etc.) to the glands of the neck, and thence into the circulation. Under such circumstances the caustics will only act by limiting the local gangrene; and, although the tonsils may be freed, the ganglionary intumescence and the general symptoms persist, and the patients succumb. The question arose whether the "parenchymatous injection" of iodine might not arrest the local destructive process, and at the same time, by its absorption, exert a favourable effect on the progress of the disease. The first case in which it was tried seemed to realise the most sanguine expectations. A girl, aged 6, when brought in had been ill two days, and the tonsils were so swollen as to be in intimate contact with each other. The removal of the white membrane which covered them exposed an ulcerated surface. Beneath the angle of the jaw on each side were two or three glands the size of walnuts, of an elastic consistency, and very tender to the touch. Each tonsil, by means of a Pravaz syringe, was injected with four drops of Lugol's solution. Next day the tonsils were found reduced to their normal dimensions, and the glandular swellings were hardly perceptible. In other cases the iodine was injected in part into the tonsil and in part into the arch of the palate and the velum, and was repeated daily until the tonsils were reduced. Of seven children so treated three recovered; and although two died, and the other two, not being heard of again, probably also died, yet, as the

epidemic was a very severe one, even this amount of success is not to be despised. Dr. Menzel, however, admits that he has not brought much material forward, but he observes that the means is quite innocuous, and is productive of no local inconvenience.

At a meeting of the Paris Society of Surgery, which took place in May, but which has only just been reported (*Gazette des Hôpitaux*, July 15), M. Desprès read a report on a memoir submitted by M. Dieulafoy on the application of his aspirator for the evacuation of effusions into the knee-joint. This memoir is founded on twenty-two cases in which capillary punctures, followed by aspiration, have been performed sixty-five times for the discharge of sero-sanguinolent or purulent collections, none of these operations having been followed by any accident. M. Dieulafoy classes his cases according to the duration of the treatment—1. Hydarthroses which are cured by from one to three aspirations occupying from three to eight days; they are chiefly traumatic. 2. Acute hydarthroses, *à frigore* or rheumatismal, in which there are leucocytes contained in the serous liquid, and which require from four to six aspirations during a week or fortnight. 3. Old hydarthroses and some of those of a rheumatic character, which recur with such remarkable facility that sometimes two aspirations are required in one day. They are generally cured in the third week. Compression of the knee is employed after the puncture. One peculiarity that is met with in all these cases is that so small a relative quantity of liquid has been drawn from the knee by aspiration. This has been a mean of 60 grammes only in traumatic hydarthrosis, 70 grammes in rheumatic hydarthrosis, and 40 grammes in hydarthrosis with sero-purulent liquid. The frequency and rapidity with which the liquid reaccumulated in rheumatic hydarthrosis is also remarkable, showing that in these cases aspiration exerted no curative effect until the cause which maintained the fluid in the joint had ceased to exist. In one-half of the traumatic hydarthroses, also, two reproductions of fluid followed its removal.

The question arises whether these punctures effect a cure more completely or more rapidly than the means ordinarily in use. One is apt to become enthusiastic about remedies we have found successful, and to exaggerate the gravity of the diseases for which we have employed them. This has evidently been the case with M. Dieulafoy in regard to hydarthroses. Indeed, M. Desprès is of opinion that the prognosis of this affection has been regarded too seriously in French works on surgery, and appeals to his own recollections and those of his auditory for numerous instances which have readily yielded to remedies. He cites the last six cases that came under his care at the Cochin, four of traumatic and two of rheumatic hydarthrosis, and none of them selected. These recovered as readily as those treated by M. Dieulafoy. Without denying that there are cases in which aspiration may be usefully employed, the reporter believes that it cannot be recommended as a general mode of treatment. He concludes as follows:—1. That in hydarthroses of a traumatic origin the usual methods cure the disease as well and as quickly as aspiration. 2. That in those of a rheumatic nature the punctures have no effect, as these, if performed early, require repetition, and only, in fact, effect a cure after twenty-five or thirty days—*i.e.*, the time required for the cessation of the irritation in the synovial membrane, which is the true cause of the evil. 3. In blenorrhagic arthritis the punctures have no superiority over revulsives. 4. In chronic hydarthrosis which has remained stationary more than two months, as in three cases related by M. Dieulafoy, aspiration has exerted an evident curative action. This is only in harmony with the experience of former surgeons, such as Bonnet, Velpeau, Boinet, etc., who in obstinate chronic hydarthrosis have derived advantage from puncturing the joints and injecting iodine. For this purpose the excellent apparatus of M. Dieulafoy is well adapted. 5. In effusion of blood within the joints these evacuatory punctures are entirely contra-indicated.

M. Blot entirely agreed with the reporter. He thinks that the use of these aspiratory punctures should not be encouraged for articular effusions, believing that a penetrating wound of the knee, however small, is not exempt from danger. M. Verneuil does not employ the apparatus. In some cases of acute dropsy of the joint relief is obtained by puncture, but the effusion and the pain with it soon return. Compression and immobilisation of the joint will relieve the pain as well as puncture. M. Demarquay observed that at the present time there was a complete rage for these aspiratory punctures, and, strange to say, it is surgeons who have to set their face against them, while physicians are employing them on all manner of occasions. In simple hydarthrosis of the knee there is very little pain, so that there can be no occasion for making a puncture. In acute effusions he cannot imagine how evacuation of the fluid can be thought of, and he entirely endorses the conclusions of the reporter, not being able to accept these aspiratory punctures as a good practice. M. Dolbeau observed that to such an extent had the passion for articular punctures gone that the examiners at the Faculty often had to oppose the theses written upon the subject. It had even been carried so far as to propose aspiration for effusion of blood consequent on fracture of the patella. For his part he could only join his colleagues in opposing this practice. M. Panas has never made these punctures in the knee, and has only had recourse to them in the treatment of cold abscesses. Even here they are not quite inoffensive, as the orifice may remain fistulous and keep up a communication with the air. M. Marjolin agreed with the reporter in his adverse conclusions, but believed that some reserve should be made with respect to hydatid cysts. M. Duplay believed that the reporter's opinions against aspiration should be expressed still stronger; for while the procedure is neither more efficacious nor more speedy than other measures, it is more dangerous. He referred to two cases of suppuration of the tunica vaginalis (one occuring to M. Dieulafoy himself) which followed several aspiratory punctures. M. Sée also regarded aspiration as dangerous in acute hydarthrosis, and of no especial benefit in chronic cases. He has employed it in a blenorrhagic hydarthrosis without any result. M. Labbé has performed aspiration upon the knee-joint both for effusions of serosity and effusions of blood, and he has never witnessed the slightest accident. The adverse opinion of so many of his colleagues has much touched him, but he recalls to them the practice of Jarjavay; while he has himself punctured articular effusions with a lancet with good results. M. Tillaux has punctured a great number of chronic and traumatic hydarthroses without having ever observed an accident; and in the latter of these affections he believes that puncturing diminishes the duration of treatment. M. Dubrueil observed that Jarjavay punctured the joint not with a trocar but a lancet; and during many years M. Voillemier treated in the same manner fracture of the patella with bloody effusion, without meeting with any accident. M. Desprès replied that in a procedure possessed of so little efficacy as that of M. Dieulafoy's, even rare accidents ought entirely to proscribe its employment.

PARLIAMENTARY.—ARMY MEDICAL OFFICERS.

In the House of Commons, on Monday, Mr. Cardwell informed Mr. D. Dalrymple that the department had given a great deal of consideration to the representations of the Parliamentary Bills Committee of the British Medical Association and other bodies, on behalf of the army medical officers affected by the recent Warrant, but had been unable as yet to recommend any modification of the Warrant.

CLINICAL REMINISCENCES.—No. I.

By PEYTON BLAKISTON, M.A., M.D., F.R.C.P., F.R.S.

[To the Editor of the Medical Times and Gazette.]

SIR,—A short time ago you told me you were of opinion that some clinical remarks on subjects not embraced in my previous works would be acceptable to the readers of the *Medical Times and Gazette*, particularly if illustrated by cases that had fallen under my observation during the last half-century. In accordance with your suggestion, I send these pages, with no hope of adding a single grain to the stock of medical knowledge, but simply with that of furnishing a small link in the chain which connects the workers of the present day with those of the past age. In one respect the endeavour to bring to memory facts that have taken place during this period of time has been a painful one, for it has brought up vividly those fellow-students, fellow-workers, and colleagues who have passed from amongst us, and of whom not more than one or two remain: some taken in their youth or their prime, others after having filled up the full measure of their days. In another respect, however, the memory of the past has afforded much pleasure, for I have recognised the good clinical and physiological work that has been done by earnest, truthful men, and can feel well assured that the amount of sound medical knowledge has been greatly increased by it, and that medical practice has been placed on a much firmer basis than that on which it stood fifty years ago.

It is probable that among the cases here recorded more will be found to indicate failure than success in the discovery and treatment of disease; but they shall be given, nevertheless, in the full belief that a *past failure*, carefully observed and faithfully recorded, may become the means of promoting a *future success*. I am, &c.,

55, Victoria-street, S.W. PEYTON BLAKISTON.

CEREBRAL AFFECTIONS.

During the period in which I was engaged in the study of medicine, and attending hospital practice, I witnessed several instances in which the appearances discovered in the brain after death were very different from those which were supposed to have been indicated by the symptoms which occurred during lifetime. Consequently, from the commencement of my own practice, I was very cautious in giving a decided opinion as to the nature and seat of diseases occurring within the cranium, etc. I had not long been Physician to the Birmingham General Hospital before a case occurred which proved the necessity for such caution:—A female, aged 29, was admitted as a patient with complete hemiplegia and amaurosis. The symptoms were said to have existed about ten days, but whether they came on suddenly or not I cannot now remember. The pupils were of opinion that disease of the brain would be discovered in that portion of it wherein the nerves belonging to the affected parts met, but, to their great astonishment, I declined committing myself to any such diagnosis, simply telling them that I would not venture to pronounce any opinion as to the nature and seat of the mischief, but, as the patient was evidently sinking, they would probably ere long be able to discover them.

Six hours were spent in the examination of the body, but not a trace of disease was discoverable in any part of it. This was more than thirty years ago, when the microscope had not been brought into full use, and it was not employed in this case, otherwise it is possible the result might have been different.

Again, in two cases of aggravated hysteria, death ensued apparently from effusion on the brain. In one case a red speck was seen in the choroid plexus about the size of a pin's head, and in the other there were a few drops of fluid in the ventricles more than usual—nothing more.

A gentleman, aged 48, suffered greatly from violent paroxysms of pain in the head. His father and grandfather had both committed suicide. The notes of this case having been mislaid, I cannot recall all the symptoms, but I think there was at times some unsteadiness in walking. At any rate, I gave it as my opinion that there was organic disease of the brain, the nature of which was unknown to me, but I believed it to be seated in the lower and back part of the skull. He then consulted a physician of some position in London, who pronounced the case to be one of tic-douloureux, and had the courtesy to laugh me to scorn for having treated it as disease of the brain. He prescribed large doses of morphia, and for a short time the pain was diminished, and the patient went to his country seat. On a violent paroxysm of pain returning, the same physician was sent for; he still maintained that the disease was tic-douloureux, and that the patient would certainly recover. The next morning he vomited violently, and soon after died. An abscess was discovered in the cerebellum, which had burst into the spinal cavity.

Cases of albuminous dropsy often terminate in coma; but here I have generally found much serous effusion in the ventricles. When, however, a similar termination has taken place in diabetes, I have failed in some cases to find any abnormal appearance in the brain.

It is by no means uncommon to hear a positive diagnosis given in chronic affections of the brain, more especially that of softening; but both in the hospitals of Paris and of this country I have seen the same symptoms occur in cases of softening, induration, and arterial degeneration.

It will then, I think, be allowed by practical men who have been much occupied in comparing the lesions found after death with the symptoms evinced during life, that, as regards cerebral affections, we still "see through a glass darkly," and that a man in many cases will best show his knowledge of his profession by golden silence rather than by giving a positive diagnosis.

Even when there is no doubt of serious injury or death having resulted from external violence, it is often difficult, on account of the arched form of the cranial bones, to ascertain the exact nature of the injury. In one instance, however, I was enabled to swear in court that a death had been caused by a blow immediately behind the ear, but whether the blow was given by a weapon or a missile, or from the skull coming in strong contact with a projecting body, of course I could not say. A boy died from the effects of inflammation of the dura mater near the right ear extending inwards. On examining the body, not only were the effects of such inflammation visible, but on closely regarding the petrous process it was found to be cracked across its middle portion, the crack not extending to the neighbouring sphenoid bone. It was clear, therefore, that the blow which produced it must have been on its long axis, which pointed just behind the ear. It was in evidence that a brick had been thrown at him, and had struck him behind the ear, and the evidence was thus confirmed by the post-mortem examination.

Errors in prognosis are by no means unfrequent in cerebral affections—most unexpected results taking place. I have myself seen several cases of recovery from an apparently hopeless state after apoplectic attacks. A lady about 60 years of age was struck with apoplexy, after having had two or three previous attacks, which had left her partially paralysed on one side. She was totally unconscious. A physician and a surgeon from London met me in consultation on the case, and we all agreed, from the state of prostration in which she was, that she would probably not live twenty-four hours. However, enemata of beef-tea and brandy were frequently administered, and in seventy hours she gradually revived, and lived twelve months longer, with increased loss of power. She then had another attack, but died before a medical man could reach her. Much the same occurred in a gentlemen aged 64, but he revived much sooner.

A very eminent architect, a short, fat little man, died in the thirteenth attack of apoplexy. An empty cyst was found, about the size of a pigeon's egg, communicating with one of the ventricles. He had once passed some blood per anum, but had never complained of pain in the abdomen, which was loaded with fat, and was never examined to my knowledge. The liver was found to contain a large number of cancerous tubera,—one of the size of a small melon. His nephew, one of the most distinguished pathologists of the day, could hardly credit this until I sent him a drawing with the exact measurement of some of the tubera.

I have usually in such cases placed some calomel on the back of the tongue, with or without a drop of croton oil. One short and stout lady frequently had attacks, on which occasion about twenty or thirty grains of calomel were placed on the tongue. She rapidly came round. In her case, although the flushed state of the countenance would seem to have indicated venesection, it was never employed, as the circulation was found to be much depressed. Her maid was cautioned to mention the treatment to any medical man who might be called to her. She went a journey, although advised to remain quiet; was

seized with one of her attacks at an inn; a medical man was sent for,—he bled her, and she died in six hours.

On the other hand, a lady, very large and stout—weighing, in fact, nineteen stone,—had a very spongy state of the uterus, from which she had frequent enormous discharges of blood. Being a great feeder, in a few days she would make up this loss. When this ceased she had violent rushing of blood to the head; and if venesection was not promptly employed she became almost black and her breathing stertorous. She removed to London, and when she had another attack venesection was not practised, and she died at once. Whilst on this subject I may mention the case of a lady, aged 75, of extremely temperate habits, who had a slight apoplectic attack, which left her with loss of power of one arm. When seen she was on very low diet, and was becoming rapidly weaker and weaker. She was placed on a more generous diet; never had another attack; and has recently died at the age of 96.

On several occasions I have met with cases in which some cerebral disease was indicated, but have never had an opportunity of ascertaining its nature by a post-mortem examination. Noises in the head, dizziness, and occasional impaired vision and hearing, have been the first symptoms observed by the patients—generally persons advanced in age,—succeeded by unsteadiness of gait and staggering to such an extent as to require the assistance of one or two persons in walking. In all cases most marked benefit resulted from the application of an open blister behind one or both ears. One case was that of a lady aged 72, and occurred about twenty-two years since. She recovered the power of walking with very little assistance, and when I last heard of her (about ten years ago) she was alive. Two other ladies are still living—one 84, and the other about 64—the first symptom of the disease having occurred about fifteen years since. Whenever an attempt has been made to dry up the blisters, the old symptoms have reappeared; so that a raw surface has been always kept up, although in general of a size not exceeding that of a threepenny-piece. In all these cases I had reason to believe there existed an atheromatous condition of the arteries.

Three cases have come under my notice in which inflammation, acute or chronic, of a portion of the brain has subsided after destroying vision—in two cases of both eyes, and the other of one. In the latter case—a mechanical engineer of great talent, who had over-taxed his powers—the attack was so severe as totally to disqualify him from following his business; but after the loss of vision of one eye his health improved very much, and his intellect was undisturbed. In four or five years afterwards cerebral disease—probably softening—set in and destroyed his life.

In a second case—that of a gentleman aged 72—violent inflammation set in behind one eye, which became glaucomatous, the attack not yielding to treatment; and whilst under the influence of mercury the second eye was attacked, and total blindness ensued. After that his health was gradually restored, his intelligence remaining perfect, and he died some years afterwards of old age. No post-mortem examination was made. The third case was that of a medical man of very active habits. The attack commenced about twenty-seven years ago, was of a chronic character from the onset, and terminated in total loss of vision. That the brain was the subject of disease was evident from the fact that the ophthalmic nerves had lost their power, and he was not able to direct the eyeball and to bring the eyes into focus. He is still alive, and has enjoyed very good health ever since he became blind.

A striking instance occurred about thirty years ago in the Birmingham General Hospital, showing the manner in which cerebral irritation was produced by injury to a distant part of the body, and how it was removed by remedies applied to the injured part. A lad, aged 16, was admitted, the flesh of whose thigh and leg had been fearfully lacerated and almost torn from the bone by a waggon-wheel. Severe convulsive fits came on, and were fast wearing out his strength. I was requested by Mr. Hodgson to meet him and Mr. Jukes in consultation on the case. I suggested immediate amputation so that the extensive lacerated portion might be removed, and a simple incised wound substituted for it, which was much less likely to cause cerebral irritation. It was objected that there was no case on record in which amputation had been performed during convulsions; but on the score that he was certain to die if he remained longer in his present state, they agreed to perform the operation. The convulsions then gradually ceased, and the boy made a complete recovery.

Having frequently observed the best effects produced in cerebral inflammation by mercurial purging, soon after joining the staff of the Birmingham General Hospital I persuaded some of my surgical colleagues to sanction the application of calomel in large quantities to the back of the tongue in all cases of supposed cerebral concussion; and although I cannot now refer to statistics, I well remember that the mortality in such cases was much diminished, the mercurial action being thus made to forestall the inflammation likely to occur from the injury received.

Now, although the cases here slightly sketched can in no way add to our knowledge of the pathology or diagnosis of disease, yet they are sufficient to prove the necessity of extreme caution in pronouncing a diagnosis or prognosis in certain cases of cerebral affections,—and thus to prevent the occurrence of mistakes, injurious to the medical attendants, and distressing to the friends of the patient.

PROFESSOR HOLMES'S LECTURES AT THE COLLEGE OF SURGEONS.

Abstract of Lecture V.

Aneurism in the axilla is not perhaps quite so rare as in the neck—a result probably of the comparative frequency of wounds and injuries of this region. But the connexion of the artery with the capsule of the shoulder-joint is by no means so direct as is that of the popliteal with the capsule of the knee. Consequently the sprains and injuries so common in the neighbourhood of the shoulder less often affect the axillary than those of the knee do the popliteal artery. In speaking of axillary aneurism, Professor Holmes adopted the same plan of treatment as with carotid aneurism—*i.e.*, he first referred to the preparations in the museum of the College, and then showed some diagrams of those forms of this aneurism which he considered characteristic, and which illustrated his view of its surgical treatment. Thus a preparation (No. 1694) was produced as a typical example of the normal relations of the disease, showing the close connexion of the sac with the nerves of the plexus and the great branches which leave the artery close to the sac. This preparation showed likewise the curability of the disease even under unfavourable conditions: extensive disease of the heart existed, yet the aneurism is compactly filled with laminated coagula. The second preparation produced (No. 1695) showed the enormous size to which this aneurism grows. The whole axilla was filled, and there was a large sausage-shaped pouch running down the arm, and due no doubt to a partial rupture at some previous period. In this case the artery was originally tied with two ligatures by Mr. Liston, and the case is reported and figured in the *Edinburgh Medical and Surgical Journal* for 1827. Three other preparations exist in the museum (No. 1696 and Nos. 1694 A and B); these illustrate the tendency of axillary aneurisms to occur as popliteal aneurism pretty often does, on both sides of the body. Such preparations as these, which constitute the whole series of axillary aneurisms contained in the museum of the College, are characteristic and valuable because they demonstrate most of the debatable points in the surgical treatment of this disease.

Professor Holmes commenced the discussion of the surgical treatment of these aneurisms by exhibiting four diagrams which illustrate forms of this disease curable by different surgical proceedings. In such a case as Liston's (No. 1695), already referred to—where the enormous tumour extends into the subscapular fossa, the sac has given way at one point, and the walls of the great sac are incorporated with the muscles of the axilla, having the axillary plexus of nerves and the axillary vein lost in its substance—there is practically no hope of saving life by the Hunterian method. Cure by compression is out of the question. The operation recommended by Mr. Syme could not have been performed, for though the upper end of the artery might by possibility have been tied, the lower end of the vessel seems to have been separated by an interval of many inches instead of being close to the upper, as Mr. Syme leads us to expect, and could not have been found. The size and shape of the sac, too, would have rendered its obliteration by a process of suppuration fatal to the patient.

There would besides have been the risk of bleeding from arteries opening into the tumour.

For such cases as these no remedy remains except amputation at the shoulder-joint. After the subclavian artery had been secured, the limb might have been amputated and the remains of the sac could then have been easily cleared out of the subscapular fossa—a desperate operation, it is true, but one from which recovery would not have been hopeless. The tied end of the vessel would have been far less likely to be the seat of secondary hæmorrhage after the removal of all the parts below it than when tied in its continuity. In such cases as this, then, no minor operation holds out any hope of benefit. If the surgeon is not prepared to adopt the extreme and most hazardous measure of removing the limb, he should allow his patient to die a natural death. On the other hand, the cases most probably amenable to the ligature of the subclavian are like one produced from Guy's Hospital, in which the tumour is of large size, and the artery has a free entrance and exit at either end of a sausage-shaped sac; a great branch arises from the artery just as it enters and two others just as it leaves the sac, and the brachial plexus of nerves envelopes the tumour on all sides. Compression would probably have failed, not so much on account of the size of the tumour as on account of the free anastomoses by which the circulation would have been constantly carried on. The relations of the sac would have made an attempt to lay it open, as Mr. Syme proposed, exceedingly hazardous, and in all probability fatal from lesion of the nerves, from the necessary ligature of the collaterals and from the too probable injury to the vein. But there seems a very fair prospect that the arrest of the main stream of blood by ligature of the subclavian might have been sufficient to effect a cure. In many such recorded cases, though the aneurism has retained some pulsation for a time—in consequence, no doubt, of the large branches opening into it,—yet coagulation has gradually advanced and has finally been completed. Another of Mr. Liston's preparations, preserved in the museum of University College, affords an illustration of the kind of case in which it is not impossible that an enterprising surgeon might carry out the operation described by Mr. Syme, although not without much risk of injury from the proximity and the uncertain position of the vein and nerves. It is a specimen in which there is that relation between the vessel and the sac which Mr. Syme described as universal, but which Mr. Holmes has shown to be exceptional. The last illustration is a diagramatical representation following closely on the model of Mr. Gay's preparation (No. 1694A), it is intended to show the usual conditions or relations of an elongated or fusiform aneurism in the axilla, and if compared with a preparation of axillary aneurism seven years after it was cured by compression, it will be found to correspond in all essential particulars with the state of things there shown. The conditions here represented render it desirable to avoid if it be possible the ligature of the subclavian artery; both because the situation of the ligature must always be dangerously near the aneurism, and the possibility of curing these moderate-sized aneurisms in the axilla by compression can be amply proved by cases.

Hitherto—in this country, at least—the treatment of axillary aneurisms has been almost uniform; nearly every case having been treated by the ligature of the third part of the subclavian artery. We have had very little experience of the compression, or indeed of any other of the substitutes for the Hunterian ligature.

Mr. Erichsen, in writing only last year, thus sums up—and Professor Holmes thinks very fairly—the views of surgeons on this subject:—"Digital compression might be advantageously used, but compression by instruments on the cardiac side can seldom be made applicable to aneurisms in this situation, inasmuch as the pressure that is brought to bear upon the subclavian must necessarily at the same time influence the greater part of the brachial plexus of nerves to such an extent as to be unendurable to the patient. Yet it is not impracticable, and means might be devised to overcome this difficulty. Ligature of the artery is still the surgeon's chief resource in the treatment of these cases."

Daily experience, however, proves how very dangerous a resource ligature of the subclavian is in axillary aneurism. The earlier statistical tables of Norris and Porter show that nearly half of the cases in which the subclavian artery has been tied in its third portion for aneurism have died, and the more recent researches of Koch go to prove the same. Out of ninety-four cases where this artery has been tied for aneurism in the axilla not extending above the first rib, and, therefore, permitting the ligature of the subclavian in its third part, fifty-one have recovered and forty-three have died. Thus, almost as many cases of axillary aneurism which have been operated on by ligature of the subclavian have died from the operation as have survived; and there can be but little doubt that a good many of those who have survived the operation have not survived very long.

The dangers of the operation on the subclavian artery for axillary aneurism increase, as those of ligature of the common carotid for carotid aneurisms do, the nearer the ligature has to be laid to the aneurismal sac; and several of the preparations on the table prove that in these cases the ligature is often in contact with the aneurism. Besides the risk of inflammation and suppuration under these circumstances, there is (as proved by a case of Sir W. Fergusson's) another danger; for the sac, even though not wounded in the operation, may give way from the loss of support due to the proximity of the wound to its tissue.

The Professor produced several preparations from different museums which showed how frequently the operation proves fatal from other causes (pyæmia, plugging of great veins from inflammation going on around them, hæmorrhage from diseased arteries, etc.), even when all is going on well with the aneurismal sac and its contents; and, lastly, he drew attention to the fact that hidden dangers beset the path of the operator, even in cases which present no apparent risk beyond the common. Thus, in one of the preparations from the Irish College of Surgeons there was seen a diverticulum from the aneurismal sac the existence of which was not suspected during life, but which (as Professor Porter says in his account of the case) must necessarily have been wounded had any attempt been made to tie the artery as it passes over the first rib. Thus, by statistics, histories of cases, and preparations, the danger of ligature of the subclavian are sufficiently illustrated. Still these dangers are no argument against the employment of the ligature if no safer means of treatment exist. But as there are cases of the most unpromising character which have been successfully treated without resort to so dangerous an operation, we must inquire under what conditions it is possible to treat axillary aneurisms without operation; and when, on the contrary, we should feel justified in exposing a patient to all the dangers of the Hunterian or Anel's ligature; and, further, in what cases it may be justifiable to cut into the axilla and seek for the two ends of the artery, or to remove the limb altogether. Allusion must also be made to modes of treatment which are applied directly to the tumour itself—viz., manipulation, galvano-puncture, and coagulating injection.

Notwithstanding the admitted fatality of Hunter's or Anel's operation on the subclavian, English surgeons have not as yet made any very serious attempts to treat aneurisms of this kind by milder methods. Fischer, in an elaborate paper, has collected all the published cases which he could find, in which digital compression had been used with or without success in the treatment of various forms of aneurism.

The number of cases of axillary aneurism he alludes to which have been so treated are only two, and the compression was in both cases unsuccessful.

Compression of the subclavian artery in axillary aneurism is as old as the time of Desault, whose attempt is related in Broca's work. The patient did not give the treatment a fair chance: being frightened, he left the hospital and placed himself under Ferraud, at the Hôtel-Dieu, who, mistaking the aneurism for an abscess, opened it, and the patient died at once of hæmorrhage. Another unsuccessful trial of pressure in this form of aneurism is also referred to by Broca, who, however, gives it as his opinion that axillary aneurism is not suitable for compression at all.

It may be doubted whether digital pressure is so applicable in this form of aneurism as instrumental, or that combination of the two which consists in the application of manual pressure by means of some pad such as that designed by Mr. Coles; for the artery lies at so great a depth that the fingers soon get weary, and the pressure is liable to become unsteady, being both uncertain in its direction and also varying in its force—*i.e.*, both insufficient and painful.

Out of ten cases of axillary aneurism—contained in the table alluded to in the first lecture, of 337 cases surgically treated in our British hospitals—three of them were submitted to compression: in one with perfect success. In a second case the patient was at the extreme age of 78 years, and died during his stay in hospital apparently from natural decay;

only direct pressure by pad and bandage was used. In the third case pressure was tried, but could not be borne by the patient; then an attempt was made to tie the subclavian, but by mistake the posterior scapular artery, which was unusually large and came off from the third part of the subclavian, was taken up instead. The patient died two days afterwards. The first of these cases is of much interest, as being the only one in which the cure of axillary aneurism by compression has been effected in one of our large metropolitan hospitals. It occurred last year at Guy's Hospital, under Mr. Cooper Forster's care, and is published in the *Guy's Hospital Reports* for 1873.

A case which was recently under the care of Professor Rizzoli, of Bologna, proves that an axillary aneurism—even of the most formidable kind—accompanied with degeneration of the subclavian artery to such a degree as must have precluded the prospect of successful ligature of that vessel—may nevertheless be cured by pressure. Rizzoli terminates his account of this case by saying—"I hope the cure of this case by compression may help to moderate the impatience of those surgeons who, discouraged by the first unsuccessful trials of compression, with reprehensible haste resort too quickly to the ligature of great arteries, exposing their patients thereby to the grave dangers which frequently follow on such operations, however skilfully performed, and even after the most approved method of operating." Rizzoli also refers to two other cases—one related by Ciniselli, to which brief reference is made in the New Sydenham Society's Biennial Retrospect for 1867 and 1868, and of which a full account is to be found in "Bulletins delle Scienze Mediche di Bologna"; and the other is a case of Dutoit's.

These cases are of great value, as showing that there are instances of every kind of axillary aneurism which are amenable to the cure by compression. Rizzoli's case was depending upon spontaneous disease of the artery; Ciniselli's, a distinctly traumatic aneurism, the artery being almost certainly healthy; Dutoit's, of that mixed or uncertain kind occurring after an accident, but in which it is always a matter of doubt whether the artery will not be found more or less diseased; Cooper Forster's was somewhat of the same nature—*i.e.*, one in which the cause of the disease is uncertain, but its rapid increase renders it most probable that the artery is extensively diseased.

These cases prove further that the cure may be effected either by digital or instrumental pressure. They show the feasibility in many cases of digital pressure, and also that it may be borne for a considerable period without producing unbearable pain or any loss of function from injury to nerves.

The facility with which the subclavian artery can be compressed, and the ease with which it can be separated from the nerves of the brachial plexus, so as to be compressed without much pain, vary very much in different persons. In some, where the artery rises high in the neck, there is no difficulty in stopping the pulse with moderate pressure of a single finger, and the patient will not complain of much inconvenience when this is done. In others the pressure has to be directed almost under the clavicle; too great force is required to be efficiently maintained for any length of time, and this gives so much pain as to induce the patient speedily to beg for its cessation.

Then arises the question, If pressure on the subclavian be too painful to be endured without an anæsthetic, cannot it be successfully employed under anæsthesia? Professor Holmes can see no objection to the use of total compression under chloroform in the case of the subclavian artery, except the difficulty of making a proper instrument. It is true there may be some risk of contusing the nerves of the brachial plexus by prolonged pressure; but this risk is so trifling in a disease so dangerous as axillary aneurism, and is so very small in comparison with the dangers of the ligature, that it seems quite justifiable to make the attempt. It must be left to future experience to decide in how large a proportion of cases success may be hoped for, and whether the attempt is worth persevering in. But the complete success obtained in Mr. C. Forster's case is a most powerful encouragement to renew it.

Mr. Harry Leach, M.R.C.P.L., has been appointed Medical Officer of Health for the Port of London until March 25 next, at a salary of £400 per annum.

MEGRIM, OR SICK-HEADACHE.(a)

There is no more distressing malady during the time it lasts than sick-headache, but, on the principle that all's well that ends well, the poor sufferer meets with little more sympathy than the possessor of a toothache. Its investigation has consequently been too much neglected in this country; but recently two treatises—one a most formidable-looking one—have been given to the public, whose fault it now will be if they lack information when so much is offered.

In truth, the history of sick-headache has been sadly neglected. It is too common a malady to excite much interest, and yet we have monographs on it by such distinguished men as the Astronomer Royal, Dubois-Reymond, Lebert, Sir John Herschel, Wheatstone, and others, who have all suffered from it to a greater or less extent. We might divide sick-headache into more than one variety. First, there is the curious form described by Airy and Herschel, where there is loss of sight over a certain area of the field of vision; or a certain mistiness over the whole of it; or where there is a semblance of a fortified city as far as the jagged outline is concerned, sometimes coruscating with various colours and sometimes plain. Again, there is the more common form, where, after a slight mistiness of vision, not unfrequently absent, the headache comes on intensely; and a third, where difficulty of expression and numbness of some part, generally unilateral, precede the development of the headache.

The phenomena of sick-headache are only too well known. Coming on with or without this misty vision—sometimes early in the morning, sometimes later in the day,—the pain gradually increases until hardly bearable. Yawning and sickness early make their appearance, but vomiting is not an invariable phenomenon. The patient is for the time being utterly incapacitated for business or any active occupation. The only thing is to be as quiet as possible. Noise is an abomination; every beat of the heart even seems to be both heard and felt on the affected side. Now, as a rule, the sick-headache is distinctly one-sided sooner or later, but it may begin by affecting the whole forehead, gradually concentrating its violence on one spot in the temple or sometimes in one eye—which throbs as if it would burst; it is tender on pressure, but deep pressure gives relief. In other cases the pain begins at one point, and spreads all over the head; but on the whole the former is more commonly the course of development. If the nausea goes on to vomiting, first food (if any has been taken) is brought up; afterwards bile. In some the vomiting, though intensely painful—every heave seeming as if it would burst the head,—gives relief; but in others this is not the case. There seems to be only one real mode of securing rest—that is by sleep; and curiously enough, though the pain is so great, this is not so difficult. After some hours' sleep, very likely restless, the patient wakes shaky and debilitated, but free from pain. The stomach is still in a ticklish condition, but there is no absolute nausea, and a little walk and a cup of strong tea help to restore the patient to his normal state. Many and various are the causes which lead to such attacks. Excitement or reaction from excitement may pave the way; anything else will do to set it up. We well remember the case of a young lad brought up in the country to whom a visit to the market town was something to be looked forward to. On the mother's side such headaches were hereditary, and to him the excitement of such visit was invariably the origin of a splitting headache. All the way to town the headache kept off, and so it would during business, but as this invariably on his part culminated in a visit to the docks to see the shipping, there the headache invariably began—the smell of tar seemingly the direct cause. Even now, at the interval of many years, the smell of tar will often set up headache of the same kind, but different in certain respects. Then the pain affected the whole forehead, now it only affects one side and one eye, and on this side the first grey hairs appeared. In the lad's case the return journey was hardly bearable; every step seemed to add to the pain until home was reached, and then bed was the only refuge. All this was accompanied by intense nausea and disagreeable belchings, but vomiting was very rare save something

(a) "On Megrim, Sick-Headache, and some Allied Disorders: a Contribution to the Pathology of Nerve-Storms." By Edward Liveing, M.D. Cantab., formerly Physician to King's College Hospital, etc. London: J. and A. Churchill. Pp. 512.

"On Nervous or Sick-Headache: its Varieties and Treatment." By P. W. Latham, F.R.C.S., Physician to Addenbrooke's Hospital, Deputy for the Downing Professor of Medicine, etc. Cambridge: Deighton, Bell, and Co. Pp. 71.

unwholesome had been eaten, and then it gave no relief, though sleep did.

In the volumes before us the pathology of this curious state is considered. The old idea was that such headaches were the result of "foulness of the stomach," and truly they are often accompanied by clammy mouth, and some amount of oral catarrh, but undoubtedly they are of nervous origin. The popular theory as to their causation seems to be that they depend on disordered innervation of a limited area of the sympathetic. First comes on a period of contraction of vessels due to vaso-motor irritation, with mistiness of vision, etc. Sometimes the first indications come from the vagus, with yawning, nausea, and the like. In either case the end seems the same—paralysis of the vaso-motor system over a certain area, and hence fulness of vessels, with throbbing pulsation, redness, and pain. Hence, too, the slightest increase of vascular pressure by lowering the head, movement of any kind, still more by vomiting, will increase the pain. Its nervous origin is likewise indicated by the remedies which are most useful—these are sleep and stimulants; but there seem to be only two kinds of stimulants of especial use. True, in some cases alcohol does good, but these are not the majority; in most it does harm. Strong black or green tea, strong black coffee, guarana—all of which seem to act in exactly the same fashion,—are the remedies most generally useful; ammonia in the form of aromatic spirit in good full doses is also very good; but the most useful remedy we have seen, though rarely mentioned, is smelling salts or any other form of ammonia taken by inhalation through the nose. Fortunately this can be easily combined with the former, and by dint of them a man who otherwise would be hopelessly incapacitated from business may be enabled to conduct it in comparative comfort.

We can cordially commend Dr. Liveing's and Dr. Latham's books. The former is a bulky treatise, and deals with many other neuroses besides this. Dr. Latham's is a smaller and less pretending work, but contains much sound sense on the subject.

REVIEWS.

Outlines of Physiological Chemistry, including the Qualitative and Quantitative Analysis of the Tissues, Fluids, and Excretory Products. By Charles Henry Ralfe, M.A., M.B., late Scholar of Granville and Caius College, M.R.C.P. London: Lewis. Pp. 231.

Dr. Ralfe has undertaken a task of no ordinary difficulty. The subject of physiological chemistry is very far from easy—many points are altogether unsolved; indeed, the whole of this department of biology even now is but in its infancy,—but Dr. Ralfe's is an honest attempt to give a sketch of the subject such as may be useful to students and practitioners. It is because Dr. Ralfe's work is so entirely unambitious that we are the more ready to award it this meed of praise, for in it we could pick a good many faults; but, taking the whole circumstances of the case into consideration, we are inclined to overlook these when we might find them in greater abundance in works of more pretension and less accuracy. The earlier portion of the volume is devoted to that somewhat dreary subject, the organic and inorganic constituents of the human body. Dr. Ralfe, in dealing with these, has adopted the new notation, which will be a comfort to recent students, if not to those of older date, for whom the conflicting notations now in use are somewhat trying. This part we shall lightly pass over with a query as to the value of the graphic mode of showing the composition of some of the more complex substances. At all events, Dr. Ralfe has not adopted it,—whether to the advantage or disadvantage of the student is not easy to say, though we incline to the latter belief.

It is, however, where chemistry and physiology come most nearly in contact that Dr. Ralfe chiefly fails to come up to the accuracy so necessary to the student. Turning, for instance, to saliva and the action of nerves on the submaxillary gland, he fails to separate the effects of stimulating the sympathetic from those of the chorda tympani, although they are as different as may be; he contrasts the saliva formed by stimulation with that of paralysis only. So again as regards pepsine, he tells us that it is best prepared by macerating the mucous membrane of the stomach of a recently killed animal with phosphoric acid until completely dissolved; but this process implies the presence of peptones. In point of fact, it is a question whether perfectly pure pepsine has ever yet been obtained.

Fault-finding is, however, an ungrateful task, and so we rather turn with pleasure to the marked good qualities of the book. Chief among these we would note the processes for estimating quantitatively such fluids as urine and the like. They are terse and clear, perhaps all the more so within certain limits that the book is highly condensed. In his preface Dr. Ralfe says that most of the work described in his pages has been carried out in Mr. Heaton's laboratory at Charing-cross Hospital. This is in itself a great guarantee for care and accuracy, and decidedly adds a stamp to Dr. Ralfe's book which is of the greatest value. We are, at all events, in a position to say that no better guide to physiological chemistry, practical and theoretical, is now available for the English-reading student.

Posological Tables. By W. Handsel Griffiths, Ph.D., etc. Second edition. Dublin: Fanning and Co.

This is a valuable sheet of information, both as regards students and practitioners. It is a classification of the doses of official substances. At a glance the student may ascertain these doses, and thus afford an aid to the memory of immense importance to him. To practitioners, apothecaries, and dispensers it is valuable as a work of reference. The tables should be framed and hung in the study of every pupil, and in the dispensary of everyone who has to prepare medicine.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 2.

E. J. Tilt, M.D., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—James Henry Bennet, M.D.; Francis Davison, L.R.C.P., Armagh; Simon Fitch, M.D., Portland, Maine; Robert Henry Moon, F.R.C.S., Norwood; and Richard Wilkins, Madras.

Dr. Heywood Smith exhibited a Fœtus with a Diaphragmatic Hernia. It was a male and a fifth child. Of these five children the first only lived an hour, the three next were born dead, and this only lived three-quarters of an hour. On opening it the liver was found fairly normal; a prolongation posteriorly passing upward was embedded in the diaphragm. The stomach was lying nearly perpendicularly. There was only a short portion of small intestine, and about the lower half of the large. On opening the thorax all the rest of the intestines were seen occupying its left side. The heart was placed centrally, taking up the space of the right lung, while the left lung was rendered even smaller by the large space taken up by the intestines, which were found to have passed upwards through an opening in the left posterior aspect of the diaphragm just large enough to admit the tip of the little finger. To the right of this was seen the spleen dipping into and filling a sort of pocket at the posterior margin of the diaphragm.

Dr. Squire exhibited an Earthenware Bed-Pan, modelled by Phillips, of Oxford-street, on the design of a nurse, to allow free ablution; also a Linen Breast-Supporter, invented by the same nurse, and found to be very useful.

Dr. Heywood Smith did not know whether Dr. Squire was aware that there was a bed-bath, made by Maddox, in University-street, which was exceedingly convenient, and much lighter than the pan now exhibited.

Dr. Protheroe Smith exhibited his Pneumatic Indiarubber Plug for facilitating the introduction of cylindrical specula. It forms a soft elastic cushion in the end of the speculum, and renders the introduction of it painless to the patient.

Dr. Aveling showed a drawing demonstrating what he considers to be the Best Mode of Opening the Vein so as to enable the operator to pass a tube into it with ease in Transfusion. He stated that he had transfused blood a second time by the immediate method, and that this plan of opening the vein was the result of his further experience. He seizes the exposed vein with a pair of fine forceps, and incises it so as to form a V-shaped flap. Although the opening thus made may become obscured by blood, it is still readily to be found by using the forceps as a director, and passing the tube down it into the vein.

Dr. Savage (Birmingham) remarked that in a case of transfusion which had occurred in his practice he had used Dr. Aveling's syringe. He found no difficulty in opening the vein nor in inserting the nozzle. He exposed the vein by transfixing the skin, and then passed a probe under it. It seemed to him that nothing could be simpler or more successful than using Dr. Aveling's syringe.

Dr. Aveling thought it unnecessary to pass a probe under the vein, and that the less the vein was disturbed the better.

The President congratulated the Society on the readmission of Dr. Henry Bennet, the importance of whose scientific work could be best estimated by the very different character of the books on the diseases of women published before and after 1845, when Dr. Bennet published his little work "On Inflammation, Ulceration, and Induration of the Cervix." In that work he taught the profession of this country the two great lessons he had learnt in the Paris Hospitals—1. That diseases of the womb must be studied like other diseases, by every available mode of investigation. 2. That the treatment of diseases of the womb should be to a great extent surgical. These views have been adopted by all the eminent men who have written in English on diseases of women since 1845, and a school of gynæcology had sprung up which he called English, comprising American, Scotch, and Irish authors, and which he believed to be richer and more varied than that of any other country. Dr. Henry Bennet was the founder of this school, and it was a matter of congratulation for the Obstetrical Society that his unexpected recovery again enabled him to take an active part in its labours.

Mr. George Roper read a case of Hypertrophic Elongation of the Cervix Uteri at the Full Term of Pregnancy. E. C., aged 22, a primipara, was taken in labour on the morning of November 3. The next day the membranes ruptured naturally, and the pains became strong and frequent. The cervix uteri protruded from the vulva to the extent of about three inches; it was in circumference about the size of an ordinary adult male wrist, the portions without and within the vagina measuring about four inches in length. The canal of the cervix would just admit the forefinger, but no presentation could be felt. The canal was too long to allow the finger to pass up to the uterine end. The structure of the cervix had a firm, hard, and gristly condition, and there seemed to be no probability of its expansion under natural efforts of the uterus. Dr. Barnes saw her when she had been in labour thirty-six hours, and slight expansion had taken place; the pains were not violent, and there were no symptoms of exhaustion. Further delay was advised, but should further expansion not take place free incision of the lower part of the cervix was recommended. After waiting four hours, seven incisions in the os externum were made, the tissue cutting with a gristly sensation. After the operation a gradual dilatation took place, occupying sixteen hours, at the end of which time the patient was delivered by forceps. The duration of the labour was fifty-two hours. The child was alive, and the mother made a good recovery. The author believed such a case as this was not amenable to treatment by means of water- or air-bags. Two months after delivery the uterus was found fairly involuted, and the cervix slightly larger or longer than usual. The portion which had been elongated hung down into the vagina like a shrivelled skin. This was removed, and she has since had several children after easy labours.

Dr. Brunton thought that in this case great benefit might have arisen from putting the patient in the knee-elbow position. He had met with a similar case, and had found this method of treatment successful, the prolapsed uterus passing into its natural position, and labour terminating in a short time.

The President wished to know what was the effect of pregnancy in preternatural elongation of the cervix—whether the result of the puerperal tissue-transmutations was to shorten it in a manner analogous to that softening of the hard cervix which he had repeatedly seen to follow pregnancy.

Dr. Barnes said that these cases were sometimes cured by labour and sometimes not. Dilatation would occasionally answer as a mode of treatment, but incisions were now and then necessary. He had seen a case in which the protruded cervix formed such a large mass as to be mistaken by the midwife for the whole uterus; and he believed that this mistake had often been made.

Dr. Playfair said that with regard to incisions it was right to remember that in such cases as that now related and in cases of rigid cervix they were very different things. In the latter the cervix was stretched and thin, and the incisions would be merely linear; in the former each cut would be the entire length of the hypertrophied cervix (in this case nearly four inches), and the risk of septic absorption would be of course materially increased. He did not make these remarks to criticise the practice adopted, as he believed it was the only means of overcoming a very formidable difficulty.

Dr. Madge said it was generally supposed that laceration of the cervix uteri during labour, without any ill consequences following, was a common occurrence. That being the case, there was not so much fear in making incisions in the cervix when rigid and unyielding.

Dr. Protheroe Smith could confirm the remarks of Dr. Barnes, having for many years been in the habit of incising the cervix when it formed an obstacle to the progress of labour; and in no case had he found the wound to extend beyond his incision. He had seen a case in which an unyielding cervix had been completely torn from the body of the uterus. He advocated the plan of cutting only laterally to avoid wounding the peritoneum, and of using the douche freely afterwards to prevent absorption of putrid lochia.

Dr. R. Eardley-Wilmot read a paper "On the Fillet or Loop as an Obstetric Aid, with especial reference to a New Modification of the Instrument." The author pointed out that the fillet was an instrument of great antiquity, but that it had fallen into disuse; that it was treated in our text-books either with silent contempt or unqualified condemnation. In spite of this he believed the fillet to be a useful instrument. It may be used in cases where slight or great force is required, and as a general rule in any case where the head is clear of the os uteri. It is lighter, more portable, and can be used more easily than the forceps, and it does not frighten the patient. If desirable it can even be used without the patient's knowledge. He had employed it in twenty-five cases: all the children had been born alive, and in only one was there slight rupture of the perineum. The fillet in its old form he believed to be difficult of introduction and adjustment, and liable to injure the child. Dr. Westmacott had improved it by rendering the instrument capable of being easily removed, one end of the loop being made so that it can be detached from the handle. But the difficulty of adjusting still remained. This the author overcomes by having the handle of the fillet divided longitudinally, so as to leave one end of the whalebone loop attached to each section of the haft. The two portions are separable at pleasure, or united when compressed, by steel pins projecting from one half of the handle and perforating the other. The instrument may be introduced as usual; let one half of the handle then be taken in each hand, and by a gentle sawing movement in the direction required, and by pressure on each limb alternately, the loop is readily brought into its due position.

Dr. Westmacott said that four years ago he had shown the Society his fillet with the improvement of being able to remove the end of the whalebone loop from the handle. The idea struck him then of dividing the handle; but, wishing to keep the instrument as simple as possible, he had abandoned it. He had since added a strong indiarubber ring, which slides up and down the loop, to make it more portable, and to compress the head of the child. He objected to the author's plan of applying the loop over the chin, as it might slip towards the neck and strangle the child. He usually applied it over the eyebrows or nose, and he had seen no other bad result than a slight mark, which disappeared in a few days. He thought the loop of the instrument now exhibited too thin. Its sharp edges might scratch the skin, or twist, or split. He had used his own fillet sixty or seventy times, and with favourable results in almost every case.

Dr. Aveling thought that obstetrical writers very properly omitted any lengthened description of the fillet. Compared with the forceps, it was an unscientific instrument. Its liability to slip had been observed long ago, and Levret, to prevent this accident, added a third branch. This same modification had been a short time since reinvented by Dr. Sheraton, and, he was sorry to say, also patented. If the fillet were hooked over the chin, as recommended by Dr. Eardley-Wilmot, there was a chance of its slipping round the neck and producing strangulation; and if over the nose or brow, as advised by Dr. Westmacott, it might injure the former or slip off the latter. The instrument might answer where slight traction was required, but he would be sorry to have to rely upon it where largeness of the fœtal head and rigidity of the maternal passages demanded the exercise of much force.

Dr. Playfair believed that the reason why the fillet did not sink into well-merited oblivion was the appearance of sim-

plicity about it, and the fact that it could be used without the knowledge of the patient—this latter being, in his opinion, one strong reason why it should not be used. But the truth was, as Dr. Aveling had remarked, that the fillet was essentially an unscientific instrument. If it were applied when the head was high in the pelvis, traction over the face would necessarily produce extension of the chin before the time of that change had arrived. Another strong objection to the fillet was, that it drew attention from the forceps—an instrument perfect in its adaptation to the natural mechanism of labour.

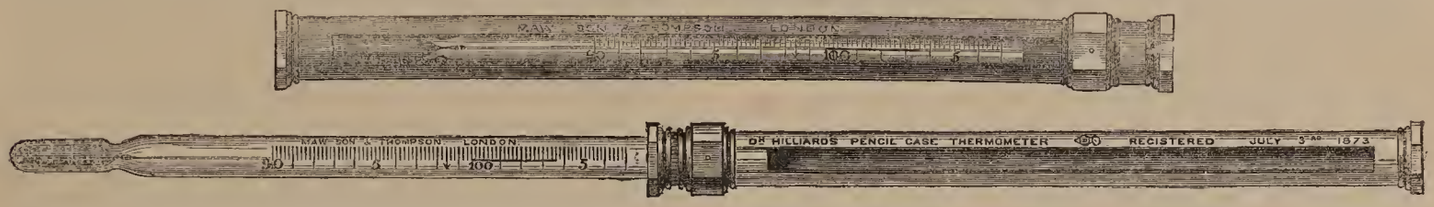
Dr. Eardley-Wilmot found his own fillet much more easy to use than Dr. Westmacott's. He did not think there was fear of strangling the child or of the loop slipping; nor did he think the fillet an unscientific instrument, or likely to interfere with the natural course of labour. He never intended to place it in competition with the forceps as a means of delivery in difficult labour.

Dr. E. H. M. Sell read a case of Complete Uterus Bicornis, the Septum extending into the one Common Cervix, with Pregnancy of the Right Horn. This case occurred at the General Hospital of Vienna, and the diagnosis was made out by Professor C. Braun while the patient was under chloroform. Owing to the narrowness of the pelvis, delivery was very difficult, and the child had to be extracted by turning. The conjugate diameter of the pelvis measured only two inches and a half. The placenta had also to be removed by the hand, as the uterus was powerless. On the sixteenth day after delivery the patient left the Hospital, well.

NEW INVENTIONS.

DR. HILLIARD'S PENCIL-CASE POCKET CLINICAL THERMOMETERS.

The accompanying engravings will explain the simple but very ingenious mechanism by which Dr. R. Harvey Hilliard, of Upper Holloway, secures three desirable objects at one and the same time, by applying the familiar principle of the pocket pencil-case, with sliding ring, to clinical thermometers. These three objects are—1, portability; 2, protection; 3, protraction. As regards portability, they are of course as easily carried about as an ordinary pencil-case is, in the waistcoat-pocket. The thermometer is thereby protected, both in carriage and in use, because even in the axilla it is not necessary that more than the bulb should be protruded, as the index can be read afterwards. We understand that Dr. Hilliard has registered a still further protection in the shape of an inner jacket, on which the scale can be engraved, thus doing away with all danger of file-marks on the stem, and still further obviating the risk of breakage. It will be seen that the ends and the sliding ring are octagonal, so that it will not roll off the table. As regards the last object, protraction, it is obvious that the length is almost instantaneously doubled whenever desired. We understand that by simply warming the varnish in the cheap instruments, or by unscrewing the button in the more expensive ones, the instrument can be taken to pieces for the sake of cleaning both tube and case.



OBITUARY.

JOHN WYNNE, M.R.C.S.,

After a short illness, died at his residence in Oswestry, on the 4th inst., in the sixty-third year of his age. He pursued his medical studies at St. Bartholomew's Hospital, London, and Richmond Hospital, Dublin. Mr. Wynne had been in practice in Oswestry for about thirty years. He was medical officer under the Incorporation for the parishes of Llansilin, Sclattyn, and Sychlyn, and one of the surgeons to the Oswestry Dispensary and the Cottage Hospital. His services to the two latter were rendered gratuitously from their commencement. He had been for years surgeon to the Lodge, Glyn, and other friendly societies. His remains were interred in the family vault at Selattyn.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen passed their first professional examination during the July sittings of the examiners:—

Beatty, Thomas Carlyle, Seaham.
Douglas, Thomas, Northumberland.
Forrester, James Stevenson, Edinburgh.
Walker, George Abraham, Darlington.
Walsh, Thomas, Limerick.
Willacy, Charles, St. Michael's.

The following gentlemen passed their final examination, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

Ashworth, Handel, Lancashire.
Atkins, George Purcell, Cork.
Bohrendt, Maximilian Raphael Julius, Prussia.
Court, Adam Smith, Barrow-on-Humber.
Davies, David Llewellyn, Glamorganshire.
Hughes, Robert Jaffray, Birkenhead.
James, William Mawer, Jersey.
Leslie, Louis Gordon, Hampshire.
Martin, John, county Down.
Mathews, James Snodgrass, county Londonderry.
Piggott, Edward Alfred, London.
Rundle, George Edward, Hampshire.
Spowart, Thomas, Fifeshire.
Stewart, James, Canada.
Welch, William John Joseph, Staffordshire.
Whitla, William, Monaghan.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 24th inst., viz.:

Batterbury, George Henry, Haverstock-hill, student of King's College.
Beresford, William Hugh, Westbourne-park-road, of St. Mary's Hospital.
Boodle, Robert Maxwell, Highbury, of St. Bartholomew's Hospital.
Burgess, Edward John, Brentwood, Essex, of St. Bartholomew's Hospital.
Davies, John, Kington, Hereford, of the Westminster Hospital.
Davies, Lewis, Llandyssil, Cardigan, of Guy's Hospital.
Ellis, Herbert Mackay, Chudleigh, Devon, of St. George's Hospital.
Fox, Charles Allen, Stoke Newington, of the London Hospital.
Hartley, Charles, Stocking Pelham, Herts, of the Charing-cross Hospital.
Hughes, Richard David, Aberystwith, of Guy's Hospital.
Jackson, Henry, L.S.A., Great Torrington, North Devon, of the Middlesex Hospital.
Keetley, Charles Robert Bell, L.R.C.P. Lond., Cleethorpe, Great Grimsby, of St. Bartholomew's Hospital.
Lyons, Alfred De Courcy, Wednesbury, Staffordshire, of St. George's Hospital.
Mackinlay, James Egan Harrison, Kensington, of St. George's Hospital.
Manser, Robert, L.S.A., Chatham, of Guy's Hospital.
Mills, Joseph, Andover, of St. Bartholomew's Hospital.
Nicholls, Henry Alfred Alford, M.B. Aberd., Kingsland-road, of St. Bartholomew's Hospital.
Sherwood, Arthur Paul, Reading, of St. George's Hospital.
Sprod, John, Adelaide, South Australia, of the Bristol School.
Strugnell, Frederick William, Kilburn, of St. Bartholomew's Hospital.
Tucker, Robert Goldsworthy, Shrewsbury, of St. Bartholomew's Hospital.

Admitted Members on the 25th inst., viz.:—

Carline, William Arthur, Lincoln, student of King's College.
Cheese, Frederick, Newport, Mon., of St. Bartholomew's Hospital.
Chitwood, L.R.C.P. Edin., Waltham Abbey, Essex, of St. Bartholomew's Hospital.
Cousins, Dennis Wood Deane, Witheridge, North Devon, of St. Bartholomew's Hospital.
Davis, Harry, L.S.A., Callington, Cornwall, of University College.
Davis, Edwin Harry, Dorchester, of St. Thomas's Hospital.
Hicks, Edward John William, George-street, Hanover-square, of Guy's Hospital.
Jones, Charles Griffith, Cardigan, South Wales, of St. Bartholomew's Hospital.
Jones, James Thomas, Tredegar, Mon., of St. Thomas's Hospital.
Keates, William Cooper, Peckham-rye, of St. Thomas's Hospital.
Kingsford, Percival, L.S.A., Sunbury-on-Thames, of Guy's Hospital.
Leonard, John, Sheffield, of the Charing-cross Hospital.
Mahon, Edward Elphinstone, Aspley Guise, Beds, of St. Mary's Hospital.
Paley, James Hewitt, Honduras-terrace, E., of Guy's Hospital.
Palmer, Frederick John Morton, L.R.C.P. Edin. and L.S.A., Old Kent-road, of Guy's Hospital.
Stephens, Augustus Edward Richard, Chatham, of the Charing-cross Hospital.
Sturge, William Allen, Bristol, of University College.

Taylor, Christopher Musgrave, Wrawby, Lincolnshire, of St. Thomas's Hospital.
Whittingham, George William, Rutland-street, of University College.

Admitted Members on the 26th inst., viz.:—

Adams, James, M.B. Aberd., Kingsbridge, Devon, student of St. Bartholomew's Hospital.
Bevan, John Paul, New Cross, of Guy's Hospital.
Cattell-Jones, Thomas, Dalston, of Guy's Hospital.
Cursetjee Framjee Khory, M.D. Grant College, Bombay, of the Bombay School.
Gabb, James Edward, Dowdeswell, Gloucestershire, of St. Bartholomew's Hospital.
Gaunt, John Penn, Alvechurch, Worcestershire, of the Birmingham School.
Hills, Thomas Hyde, Maidstone, of St. George's Hospital.
Holden, Lonsdale Andrew, Durham, of St. Bartholomew's Hospital.
Humphreys, Robert William, Carnarvon, of Bartholomew's Hospital.
Johnson, Francis, Brigg, Lincolnshire, of the London Hospital.
Rustamjee Cowasjee Badhurjee, M.D. Grant College, Bombay, of the Bombay School.
Satchell, Walter Alfred, Kensington, of St. Mary's and Charing-cross Hospitals.
Woodforde, Alfred Pownell, Clevedon, Somerset, of St. Bartholomew's Hospital.

Of the 175 candidates examined, 53 having failed to acquit themselves to the satisfaction of the examiners, either in Surgery or Medicine, or both, were referred to their professional studies. The Court of Examiners will not meet again till November. Those candidates not examined in Medicine possessed the following medical degrees:—M.B. Cantab., 2; L.R.C.P. Lond., 1; L.R.C.P. Edin., 2; L.R.C.P. & S. Edin., 1; L.R.C.P. Edin. and L.S.A., 1; M.B. Aberd., 4; M.B. Edin., 2; L.S.A., 25; L.K. & Q.C.P. Ire., 4; L.M. Durham, 2; M.D. Philad., 1; and M.D. New York, 2.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examination during the July sittings of the examiners:—

Crawford, John Liston, Girvan.
Grant, James, Caithness.

The following gentlemen passed their final examination, and were admitted Licentiates of the College:—

Brown, John, Melrose.
Greene, John Joseph, Dublin.
Maxwell, Theodore, Barnsley.
M'Naughtan, John, Perth.
Whittington, Thomas Price, Glamorgan.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, July 24:

Chaple, Charles, Burdett-road, E.
Deakin, Chas. Washington Shirley, Kingstone Grange, Hereford.
Drake, Arthur John, Kingsclere, Bucks.
Eskell, Maurice Clifford, Grosvenor-street, Grosvenor-square, W.

The following gentlemen also on the same day passed their primary professional examination:—

Barnes, James John Fredk., Westminster Hospital.
Beaumont, William Marden, Middlesex Hospital.
Romano, Fredk. Wm. Richard, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ASHBY, ALFRED, M.B. Lond., F.R.C.S.—Medical Officer of Health for the Rural Sanitary Districts of the Grantham, Newark, and Sleaford Unions, and the Grantham, Little Gowerby, Newark-upon-Trent, Sleaford, and Ruskington Urban Sanitary Districts.

CURTIS, ALBERT, M.R.C.S. Eng., L.S.A.—Medical Officer of Health for Staines.

DAVIES, WILLIAM, M.R.C.S., L.S.A.—Assistant Medical Officer to the Northumberland County Lunatic Asylum.

GREALY, JOHN, L.R.C.P., L.R.C.S. Edin.—Medical Officer for the Spiddal District of Galway Union.

MORGAN, GEORGE, M.R.C.S.E.—House-Surgeon to the London Hospital.

MORGAN, WM. LEWIS, L.R.C.P. Lond., M.R.C.S. Eng.—House-Surgeon to the London Hospital.

PIERCE, FREDERICK MORRISH, M.D., L.R.C.P. Lond.—Physician to the Hulme Dispensary, Manchester.

RHIND, SAMUEL, L.R.C.P. Edin., M.R.C.S. Eng.—Medical Officer of Health for the Joint Districts of Tormoham and St. Mary's Church, Torquay.

WEBB, WILLIAM, M.D., F.R.C.S. Eng.—Certifying Surgeon for the Factories at Wirksworth, Matlock Bath, Cromford, Lea, and Bonsall, in the county of Derby, *vice* William Cantrell, F.R.C.S., resigned.

NAVAL APPOINTMENTS.

ADMIRALTY.—Patrick Keelan, Staff Surgeon, additional to the *Asia;* Septimus Terry, Staff Surgeon to the *Duke of Wellington;* Dr. Alexander Turnbull, Staff Surgeon to the *Cambridge;* E. C. Thompson, Staff Surgeon to the *Lord Warden;* Septimus Sexton, Surgeon to the *Jackal.* Bradley Gregory, Staff Surgeon to the *Spiteful;* John M. Hunter, M.D., Staff Surgeon to the *President;* John Nihills, Staff Surgeon to the *Serapia;* Seaton Wade, Staff Surgeon to the *Crocodile;* Cecil Drake, Surgeon to the *Narcissus;* Robert A. Bernal, M.D., Surgeon to the *Spiteful.*

BIRTHS.

GARRETT-ANDERSON.—On July 28, at 20, Upper Berkeley-street, Portman-square, Mrs. Garrett-Anderson, M.D., of a daughter.

HARLEY.—On June 24, at Saffron Walden, the wife of Edward Harley, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., of a daughter.

JACOB.—On July 24, at 79, Harcourt-street, Dublin, the wife of Archibald Hamilton Jacob, M.D., F.R.C.S.I., of a daughter.

ORANGE.—On July 27, at Broadmoor, Wokingham, Berks, the wife of Wm. Orange, M.D., of a daughter.

MARRIAGES.

DIXON—FORSTER.—On July 29, after banns, at Bisham Church, near Marlow, Stephen Brown Dixon, Esq., of Pewsey, Wilts, to Emily, eldest daughter of J. Cooper Forster, F.R.C.S. Eng., M.B. Lond., of 29, Upper Grosvenor-street, W.

DREW—THOMPSON.—On July 23, at Christ Church, Brondesbury, Walter Henry Drew, M.D., of 72, Gower-street, Bedford-square, to Edith Emma (Woodie), second daughter of William Thompson, Esq., The Avenue, Brondesbury.

FINNY—WATSON.—On July 24, at St. Matthias Church, John Magee Finny, M.B., of Lower Baggot-street, to Agnes Anne, youngest daughter of William Watson, Esq., of 25, Fitzwilliam-place, Dublin.

GREAM—GOOCH.—On July 28, at St. George's, Hanover-square, George T. Gream, M.D., F.R.C.P. Lond., L.K.Q.C.P. Dub., of 2, Upper Brook-street, Grosvenor-square, and Frogmore Lodge, Herts, to Lady Gooch, widow of the late Sir Edward Sherlock Gooch, Bart., of Benacre, Suffolk, and daughter of R. A. Hankey Hirst, Esq., of the Down Grange, Hants.

HALL—WILLIAMS.—On July 22, at the parish church, Blore, Staffordshire, James Thomas Hall, M.R.C.S., L.R.C.S., of Alton, to Mary Jane, younger daughter of Wm. Williams, Esq., Solicitor, Caton House, Calton.

KENNEDY—ABERCROMBIE.—On July 22, at Christ Church, Cheltenham, George O'Brien Kennedy, Esq., of York-street, Dublin, to Clara, eldest daughter of John Abercrombie, M.D., of Suffolk-square, Cheltenham.

LUND—CLARKE.—On July 24, at St. John's Church, Hackney, Edwin, third son of the late John Richard Lund, Esq., of 41, Cornhill, and Manor-park, Lee, Kent, to Charlotte Emily (Emmie), second daughter of Benjamin Clarke, F.R.C.S., of Upper Clapton, Middlesex.

TRENCH—SOWTON.—On July 24, at St. John's, Notting-hill, William Power Banbury Trench, eldest son of the late John Power Trench, M.D., Staff Surgeon, to Elizabeth Marianne Pennington (Bessie), eldest daughter of the late Wm. March Sowton, Esq., of the Inner Temple, barrister-at-law.

WHEELER—PRICE.—On July 23, at Holy Trinity Church, Margate, the Very Rev. Thomas Wheeler, co-Dean of Bocking, and Rector of Hadleigh, Suffolk, to Matilda Lydia, eldest surviving daughter of the late David Price, M.D., J.P., of Margate.

DEATHS.

BRIDGE, ALEXANDER, M.R.C.P. Lond., F.R.C.S. Eng., L.S.A., at 7, Argyle-place, on July 23, aged 59.

CARTER, MARY ANNE TROUGHTON, widow of the late William Francis Carter, M.D., R.N., at the residence of her son-in-law, J. A. Warwick, Esq., 22, Lorn-road, Brixton, S.W., on July 23, in her 70th year.

CHANDLER, ANNE COOPER, wife of Thomas Chandler, M.R.C.S. Eng., L.S.A., at 10, King-street, Finsbury-square, E.C., on July 29.

FULLER, HUGH PITTER, M.R.C.S. Eng., L.S.A., at his residence, Bramerton House, Abbey-road, N.W., on July 29, in his 61st year.

SHILLITOE, ERNEST BUXTON, eldest son of Buxton Shillitoe, F.R.C.S. Eng., at Birch Mount, Sydenham Hill, on July 4, aged 17.

SINCLAIR, DONALD, M.D. Edin., M.R.C.S. Eng., youngest brother of the late Sir John Sinclair, Bart., of Barrock, N.B., at 1, Lyndhust-road, Peckham, on July 23, in his 59th year.

WARD, WILLIAM, M.D., F.R.C.S. Eng., L.S.A., of Huntingdon, on July 22, in his 74th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Medical Committee, Children's Hospital, Steelhouse-lane, on or before August 4.

BOURNEMOUTH DISPENSARY.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

BRADFORD INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to W. C. Woodcock, Secretary, 65, Market-street, Bradford, on or before August 4.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

COVENTRY PROVIDENT DISPENSARY.—Surgeon. Candidates must be M.R.C.S. of London, Dublin, Edinburgh, or Glasgow, and possess a licence from one of the Royal Colleges of Physicians, or from the Society of Apothecaries. Applications, with testimonials, to the Honorary Secretary, on or before August 2.

DERBY COUNTY ASYLUM.—Assistant Medical Officer. Candidates must be duly qualified in Medicine and Surgery. Applications, with testimonials, to John Barber, County Lunatic Asylum, Mickleover, Derby.

DERBYSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Applications, with testimonials, to the Secretary, 4, Victoria-street, Derby.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Committee, on or before August 21.

KNIGHTON UNION.—Medical Officer for the Llanbister District. Candidates must be legally qualified medical practitioners. Applications, with testimonials, to Edward Hooper Deacou, Clerk to the Guardians, Knighton, Radnorshire, before August 2.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 24, Friar-lane, Leicester, on or before August 4.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to R. Harrison, Registrar (of whom particulars may be obtained), before August 13.

LOYAL UNITED BRETHREN BENEFIT SOCIETY.—Surgeon and Apothecary. Candidates must be M.R.C.S.E. Applications, with testimonials, to the Secretary, Mr. S. Emmanuel, 24, High Holborn, W.C., on or before August 4.

NORTH BIERLEY UNION.—Medical Officer of Health. Applications, with testimonials, to W. Lancaster, Esq., Solicitor, Bradford, Yorkshire, on or before August 4.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Junior House-Surgeon. Candidates must be Graduates in Medicine of one of the Universities, or Members or Licentiates of one of the Colleges of Surgeons of the United Kingdom, and duly registered. Applications, with testimonials, to the Secretary, on or before August 6.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Candidates must be M.R.C.S. and L.S.A. Applications, with testimonials, to the Assistant-Secretary, on or before August 16.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Physician's Assistant. Candidates must be graduates in Medicine of a British University, or be possessed of such medical qualifications as are satisfactory to the Medical Committee. Applications, with testimonials, to the Chairman of the Medical Committee, on or before August 9.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. For particulars, apply to Mr. J. G. Buckton, Secretary, 9, High-street, Wrexham.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Bridgwater Union.—Mr. Antey has resigned the Middlezoy District. Area 6997; population 2317; salary £36 per annum.

APPOINTMENTS.

Barnsley Union.—William Ritchie, Queen's University, Ireland, M.R.C.S. Eng., to the Hoyland Nether District.

Boston Union.—James A. Storey, L.R.C.P. Edin., L.R.C.S.I., to the Sutterton District.

Cardigan Union.—James M. Phillips, M.D., M.R.C.S.E., L.S.A., to the Second District.

Chelmsford Union.—Ebenezer Shedd, L.R.C.S., L.S.A., to the Second District.

Falmouth Union.—Newton Greenwood, M.R.C.S.E., L.S.A., to the Penryn District.

Guildford Union.—Joseph H. Sutcliff, M.R.C.S.E., L.S.A., to the Horsley District.

Kingsbridge Union.—Frederick Howard Clarke, L.R.C.S., L.S.A., to the Seventh District.

Liverpool Parish.—Alexander M. S. Hamilton, M.D., M.R.C.S.E., to the Brownlow-hill Workhouse.

St. Saviour's Union.—Alfred Matcham, M.R.C.S., L.R.C.P.E., L.S.A., to the First District.

Spilsby Union.—Richard Lauphier, M.B.T.C.D., L.R.C.S.I., to the Alford District.

West Derby Union.—Alexander Dunbar, M.B., C.M. Edin., to the Workhouse.

QUEKETT MICROSCOPICAL CLUB.—The eighth annual general meeting was held on Friday evening last, July 25, at University College, Gower-street, Dr. Braithwaite F.L.S., F.R.M.S., President, in the chair. The report of the committee for the past year was read, and testified to the continued prosperity of the Club, which now numbers 570 members. The president delivered the annual address, in the course of which he noticed the progress of microscopical investigation in botany and zoology. The ballot then took place for the election of officers. Dr. Braithwaite was re-elected president. Dr. Matthews, Messrs. B. T. Lowne, T. W. Burr, and C. F. White vice-presidents; and Messrs. Bywater, Crisp, Hailes, Hind, Waller, and T. C. White were elected to fill the six vacancies on the committee. Mr. J. E. Jugpen succeeded Mr. T. C. White, who retires from the office of honorary secretary owing to increase of his professional duties, after four years of unremitting and valuable service. The proceedings terminated with the usual *conversazione*.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

H. C. C.—Consult your medical attendant.

A Father.—The Naval and Indian Medical Services are both in want of qualified practitioners.

M.R.C.S.—The new Naval Hospital was established on shore, at Hong-Kong, on May 29. The hill on which the establishment stands has in compliment to the commander-in-chief been called Mount Shadwell. The old Melville Hospital ship will now probably be broken up.

Inquirer.—The Scandinavian Congress of Naturalists held its meeting at Copenhagen at the beginning of last month.

Epidemic.—At the Stockwell Small-pox Hospital in the years 1871 and 1872 there were 4747 cases of small-pox under treatment, and the average death-rate was 17·8 per cent.

A Member.—Write at once to the Secretary of the College, when you will obtain a ticket of admission to the *conversazione*, to which Members of the College and also of the Association are invited.

A Tutor.—The list of those who passed at the recent preliminary examination in Arts, etc., for the diplomas of Fellowship and Membership of the College of Surgeons is too long for publication at the present moment in the *Medical Times and Gazette*.

S. S. P.—It is distinctly stipulated in the 27th section of the Vaccination Act of 1867, 30 and 31 Vict., cap. 84, that the guardians on receipt of the registrar's half-yearly list of defaulters "*shall* make inquiry into the circumstances of the cases contained in the said list, and if they find that the provisions of the Act have been neglected, *shall* cause proceedings to be taken against the persons in default." Thus a duty is imposed upon guardians which they cannot disregard without infringing an important direction of the Act.

C. N. S.—Dr. Andrew Marshall built a dissecting-room and opened an anatomical school in Thavies Inn, to which his reputation attracted a large number of pupils.

Senex.—William Barrett, an eminent surgeon, of Bristol, died at Higham, in Somersetshire, September 15, 1789. He was the author of the "History and Antiquities of the City of Bristol."

CASE OF AORTIC OBSTRUCTION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I send a few notes of a case of obstruction of the aortic valves which perhaps you may think worthy of insertion in your next number.

W. B., aged about 57, had come under my care in March, 1872, for gout. He had at this time considerable enlargement of the liver, and a well-marked, though not very loud, systolic bruit heard only at the base of the heart, and traceable for some distance up the course of the aorta. He had been a constant dram-drinker, frequently consuming a pint and a half of whisky in the twenty-four hours. Under treatment the gout disappeared, and he recovered sufficiently to go to the seaside in July for change of air.

He came back in August, and on the 12th of that month I was sent for again, and found him suffering from severe præcordial oppression, considerable œdema of the lower extremities, and total loss of sleep. His tongue was foul, and his lips congested. The base of both lungs dull on percussion, and without any respiratory murmur. Pulse 75, soft and round. Liver still enlarged. Systolic bruit at base of heart unchanged. Cough troublesome.

Under small doses of pil. hydrarg. with pulv. Doveri and night draughts of henbane, Indian hemp, and Hoffman's ether (afterwards changed for bromidi potassii, chloral hydrate, āā gr. xij., in a draught at bedtime), he improved, and for a month did well; but on September 18 he was attacked with violent vomiting, with a feeling of fulness in right side. Pulse 72, hard and full. Vomiting allayed by a blister to epigastric region. The præcordial oppression and want of sleep then returned, and the pulse became most variable—from 65 to 75—sometimes hard and jerking, sometimes soft and intermittent.

On the 26th vomiting returned with constipation. Breathing laboured. Pulse 80, intermittent and compressible. At this time the area of hepatic dulness was not at all enlarged. Vomiting checked by ice dipped in brandy, and allowed to dissolve on tongue.

29th.—Severe attack of angina pectoris. Pulse 120, feeble and intermittent. Orthopnœa. Heart thumping violently; bruit as before. The œdema of extremities at this time had returned considerably.

October 4.—Another tremendous attack of vomiting, with cold clammy sweats. Ice dipped in brandy with iced brandy-and-water and iced beef-tea gave relief when creasote, hydrocyanic acid, sinapisms to the epigastrium, *et hoc genus omne*, had failed.

18th.—Almost sleepless at night, and when sleep comes it is attended with horrible dreams. Eyes suffused; manner wild. Complains of a feeling of oppression in the left side, extending from the head to the knee. Frequent attacks of faintness, accompanied by cold sweats. Œdema at a standstill.

23rd.—Visible pulsation of carotids, never observed before. Bruit unchanged in character, and heard over exactly the same area as before. Patient beginning to rave at night.

30th.—Suppression of urine, which yielded to sinapisms over kidneys. Delirium at night much increased. Mind wanders at times through the day. Patient becoming violent and unmanageable. Insisted on going to Dublin, and actually got his way, having thrown down a man-servant who tried to prevent his leaving the house.

November 15.—Returned from Dublin. The œdema of extremities is now very great; face, scrotum, and prepuce also œdematous. From the size of the two latter the penis is completely hidden. Some ascites also present. Bruit unchanged. Urine free from albumen. Very irritable, and at times dangerous.

At this time I tried the following mixture:—℞. Liq. hydrarg. perchlor. B.P. ʒj., tinct. scillæ, tinct. digitalis, āā ʒij., spt. juniper, spt. chloroform, āā ʒiv., decoct. cinchon. ad ℥xij. Sig.: a tablespoonful thrice daily.

21st.—Albumen present in urine for first time. Anasarca less. Pulse 120, jerky and feeble.

22nd.—No albumen present in urine. Mind terribly astray.

28th.—Anasarca much less. Patient very sleepy. Pulse 100, very weak. Urine high-coloured, acid reaction, scanty, sp. gr. ·024; no bile present, but heat and nitric acid threw down a deposit of albumen to the extent of one-fourth fluid in test-tube.

29th.—Coffee-ground vomit and suppression of urine.

30th.—Died quietly in a comatose state.

The circumstances in this case to which I wish to call attention are—first, the apparently trivial nature of the bruit which marked disease of so severe a nature; secondly, that the bruit never became intensified or altered from first to last. The third point to which I wish to call attention is the various ways in which the heart disease was masked, as it

were, by the very symptoms which it produced. There was congestion of the back of both lungs; and as the systolic bruit was audible only over the base of the heart, and for about two inches up the course of the aorta, it might very possibly have been overlooked, and the case treated as one of simple congestion with gout. The next set of symptoms which developed themselves were gastric—violent vomiting, etc.; next in order came more distinctive cardiac symptoms—fainting fits, cold sweats, horrible dreams, orthopnœa, angina pectoris; then came the mental alienation—due, I presume, to an insufficient supply of arterial blood to the brain; and, lastly, the immediate heralds of death's approach were the appearance of albumen in the urine, showing that the tired kidneys could no longer perform the extra work cast upon them, and the coffee-ground vomiting, probably caused by blood oozing through the coats of the gastric vessels for want of the ordinary means of escape checked by the valvular obstruction.

As to remedies I need say little. Minute doses of mercury seemed to give most relief to the heart symptoms, and to increase the effect of diuretics in causing absorption of the anasarca. The angina and fainting fits seemed most under the control of equal parts of spt. ammon. arom., Hoffman's ether, and spt. chloroform—a teaspoonful in cold water for a dose. The vomiting could only be checked by ice and brandy; and as for the want of sleep, opium and morphia in various forms, Indian hemp, lupuline, henbane, chloral hydrate, bromides of potassium and ammonium were all tried, and all found equally unavailing. I am, &c.,

Armagh, Ireland. A. Leslie Mease, M.B.

COMMUNICATIONS have been received from—

Dr. A. H. Jacob; Dr. Edis; Dr. P. Royle; Mr. T. M. Stone; Dr. Blakiston; Mr. Lawson Tait; Mr. F. A. Mahomed; Mr. J. Chatto; Mr. R. W. Tibbits; Dr. B. W. Richardson; Dr. Bathurst Woodman; Dr. J. Russell; Dr. Peacock; Mr. A. Leslie Mease; Mr. G. Morgan; Mr. W. L. Morgan; Mr. A. J. Hughes.

BOOKS RECEIVED—

Snake-bite Curable and Hydrophobia Preventable, by D. Butter, M.D., etc.—The Reign of Terror—Twenty-seventh Report of the Commissioners in Lunacy to the Lord Chancellor—Cracroft's Trustees' Guide—Annual Report of the Registrar-General of Births, Deaths, and Marriages—Man a Special Creation, by W. Sharpe, M.D.—Mackenzie's Throat Hospital Pharmacopœia, second edition.

PERIODICALS AND NEWSPAPERS RECEIVED—

The Western Lancet—Bulletin Général Thérapeutique—New York Sanitarian, No. 5, August—The Obstetrical Journal of Great Britain and Ireland, No. 5, August—Guy's Hospital Gazette—Lancet—British Medical Journal—Pharmaceutical Journal—Le Mouvement Médical—Gazette des Hôpitaux—Le Progrès Médical—La Tribune Médicale—La France Médicale—L'Union Médicale—Gazette Hebdomadaire—Manchester Daily Examiner and Times—Allgemeine Wiener Medizinische Zeitung—Archives of Scientific and Practical Medicine, No. 4—Journal de Médecine et de Chirurgie Pratiques, Juillet, 1873—Science Gossip—Manchester Guardian—The Pocket Edition of the Jamaica Gleaner—The Colonial Standard and Jamaica Dispatch—Berliner Klinische Wochenschrift—Centralblatt für die Medizinischen Wissenschaften—Medical Press and Circular—London Medical Record—Medical Notes and Queries, part 1—Practitioner.

APPOINTMENTS FOR THE WEEK.

August 2. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

4. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

5. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

6. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

7. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

8. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

EXPECTED OPERATIONS.

London Hospital.—The following Operations will be performed on Thursday next, at two o'clock:—

By Mr. Hutchinson—Lithotomy, and other operations.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 26, 1873.

BIRTHS.

Births of Boys, 1060; Girls, 1077; Total, 2137.
Average of 10 corresponding years 1863-72, 2046·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	825	784	1609
Average of the ten years 1863-72	858·2	813·2	1671·4
Average corrected to increased population	...	...	1839
Deaths of people aged 80 and upwards	...	...	37

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	3	...	8	2	5	1	47
North ...	751729	...	...	5	1	13	1	5	2	69
Central ...	334369	...	4	...	2	10	...	2	1	34
East	639111	...	6	6	2	14	2	4	2	84
South	967692	...	15	1	3	17	1	4	5	71
Total	3254260	...	31	15	8	62	6	20	11	305

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·869 in.
Mean temperature	68·8°
Highest point of thermometer	88·7°
Lowest point of thermometer	52·8°
Mean dew-point temperature	58·4°
General direction of wind	S.W. & S.E.
Whole amount of rain in the week	0·03 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 26, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending July 26.	Deaths Registered during the week ending July 26.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2137	1609	88·7	52·8	68·8	20·44	0·03	0·08
Portsmouth ...	118280	12·4	74	36	82·2	45·2	62·8	17·11	...	...
Norwich	81677	10·9	39	33	92·0	50·0	67·6	19·78	...	...
Bristol	189648	40·4	116	77	90·2	53·9	64·9	18·28	0·54	1·37
Wolverhampton ...	70084	20·7	44	37	91·2	50·4	66·6	19·22	0·65	1·65
Birmingham ...	355540	45·4	271	148	89·8	52·7	66·5	19·17	0·33	0·84
Leicester	102694	32·0	83	47	91·7	51·0	67·4	19·67	0·28	0·71
Nottingham ...	89557	44·9	70	52	90·4	49·7	67·0	19·44	0·23	0·58
Liverpool	505274	98·9	307	268	89·1	53·5	64·4	18·00	1·15	2·92
Manchester ...	354057	78·9	242	214	95·0	54·0	68·7	20·39	0·61	1·55
Salford	130468	25·2	107	75	91·5	52·4	66·3	19·06	1·19	3·02
Oldham	85141	20·4	61	33	86·0	...	...	...	0·96	2·44
Bradford	156609	23·8	119	70	88·8	55·8	67·9	19·94	0·77	1·96
Leeds	272619	12·6	206	136	91·0	54·0	67·8	19·89	1·23	3·12
Sheffield	254352	11·1	156	110	91·0	54·0	67·4	19·67	0·33	0·84
Hull	128125	35·9	98	53	...	...	...	...	...	...
Sunderland ...	102450	31·0	66	39	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	121	66	85·0	57·0	66·3	19·06	0·87	2·21
Edinburgh	208553	47·1	130	77	82·9	49·8	66·2	19·00	0·76	1·93
Glasgow	498462	98·5	451	335	84·4	47·2	63·9	17·72	0·88	2·24
Dublin	314666	31·3	119	121	81·6	48·2	64·3	17·94	1·15	2·92
Total of 21 Towns in United Kingd'm	7507575	34·5	5017	3636	95·0	45·2	66·4	19·11	0·66	1·68

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·87 in. The highest was 30·03 in. on Monday morning last, and the lowest 29·73 in. at 9 a.m. on Wednesday.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

SUPPLEMENT

TO THE

Medical Times and Gazette.

No. 1205. LONDON, SATURDAY, AUGUST 2, 1873. Vol. II. 1873.

A COMPANION FOR VISITORS

TO THE

MEETING OF THE BRITISH MEDICAL ASSOCIATION,

LONDON, AUGUST, 1873:

BEING A DESCRIPTIVE CATALOGUE OF PLACES OF MEDICAL INTEREST IN THE METROPOLIS.

The meeting of the British Medical Association in London will without doubt bring together a large number of medical practitioners from the provinces, who have had of late years but little actual acquaintance with the places and sights of interest in this great city. It has therefore seemed probable that to many of our readers a short descriptive catalogue of the principal institutions and places of scientific, general, and especially of medical interest in the metropolis might be a real boon. We therefore offer them this Supplement to our journal, not as an exhaustive account of all worth seeing—for this would fill a large Murray or Baedeker, and would detain our guests as many weeks as the Association meeting will number days,—but as a help to spend their spare hours during their absence from the sections with amusement and profit.

We may divide London into the five principal divisions—the City, the West-end, the East-end, the North, and the South. In each of these the medical visitor will find a number of places of interest. Some of the chief of these we shall now indicate. We will begin with the City proper.

THE CITY.

Starting from King's College, the City—the oldest part of London—may be reached by the Strand or by the new Thames Embankment. In the City, besides the time-honoured attractions of St. Paul's and the Tower, which the medical visitor should see, if he has not done so in the days of his boyhood, we would point out as institutions especially worth a visit the following:—

ST. BARTHOLOMEW'S HOSPITAL.

This magnificent Hospital, by far the oldest in London, is so replete with interest that only comparatively few of its attractions can be noticed here. Entering by the west gate from Giltspur-street, the visitor will find before him the gardens with the large blocks of buildings containing the wards. Of these we can only say that they will amply repay a visit. On the west side of the Hospital are the College buildings. The museum is large and excellent, and is decorated with busts of Hunter, Freke, Pott, Lawrence, etc. The visitor should on no account neglect to ask for the handsome new laboratory for practical chemistry. Towards the south side of the Hospital will be found the dispensary, where the application of steam in practical pharmacy and the arrangements for supplying hundreds of patients daily with medicine are very wonderful. At the north-east corner are the casualty out-patients' rooms, where a single physician may *see* over 200 patients of a morning.

St. Bartholomew's also possesses much of æsthetic interest. By the kindness of the authorities the grand staircase and the various halls will be thrown open for the inspection of members of the Association. The walls of the grand staircase are splendidly decorated, being chiefly occupied by two magnificent paintings by Hogarth of "The Good Samaritan" and "Christ at the Pool of Bethesda." The great hall at the top of the staircase is of splendid proportions and elaborate finish. It contains several excellent pictures—as St. Bartholomew, by Carducci; Henry VIII., unknown; and portraits of William F. White, Esq., by Knight; Sir G. Carroll, Sir W. Pritchard, and Alderman Lucas. There are also a plaster bust of Harvey; a marble bust of Abernethy, by Sievier; and a painted window given by the son of Alderman Barber. In the Prince's Room, beside the hall, are some fine water colours. Returning downstairs, the visitor will find on the right the committee-room, with several very interesting portraits in oil—Henry VIII., probably by Janssen or Holbein; Percival Pott, by Reynolds (extremely fine); Abernethy, by Sir Thomas Lawrence; Sir William Lawrence, by Pickersgill; Dr. Baly, by Knight; Dr. Burrows, by Knight; Dr. Radcliffe, by Kneller; John Vincent, by Eddis; and Colston and Sir N. Rainton, by doubtful artists. The portrait of Sir James Paget, by Millais, is not yet hung. On the north side of the Hospital is the Church of St. Bartholomew the Less, which ought to be seen. The tower at the right of the entrance is all that remains of the original priory of the same name. The fine alabaster pulpit is by Phyffers, of Belgium. Above the church-gate (1702) are two figures of cripples and a statue of Henry VIII. A few yards to the right of this gate, beyond the out-patients' entrance, is to be seen in the wall a tablet to the memory of several martyrs burned near the spot at the time of the Reformation.

The medical officers at St. Bartholomew's visit the Hospital at 1.30 p.m.:—Dr. Black on Monday, Tuesday, and Thursday; Dr. Harris on Tuesday, Thursday, and Saturday; Dr. Andrew on Monday, Tuesday, Thursday, Friday, and Saturday; Dr. Southey on Monday, Wednesday, Thursday, and Saturday. The surgeons—Mr. Holden, Mr. Savory, Mr. Callender, and Mr. Thomas Smith—attend almost daily. The physician-accoucheur, Dr. Greenhalgh, attends on Thursday at 1.30 p.m. and Saturday at 9 a.m. The ophthalmic surgeons attend—Mr. Power on Tuesday and Thursday, Mr. Vernon on Thursday and Saturday. Operations on Wednesday and Saturday at 1.30 p.m.; ophthalmic operations on Tuesday at 1.30 p.m. Post-mortem examinations at 1 p.m. and 2.30 p.m.

BARBER-SURGEONS' HALL.

In the old *Barber-Surgeons' Hall*, Monkwell-street, near the Hospital, is Holbein's celebrated picture of Henry VIII. presenting the charter to the company at the time of the union of the surgeons and barbers in 1540, Mr. Thomas Vicay kneeling to receive the charter. Among the other figures are those of Sir John Chambre in a furred gown, and the famous Dr. Butts, introduced by Shakespeare in "Henry VIII."

THE GUILDHALL MUSEUM AND LIBRARY.

The new building for the Library and Museum of the Corporation of the City of London has a special interest for members of the medical profession, inasmuch as one of our *confrères*, Dr. Sedgwick Saunders, has taken a very active part in promoting its erection. The new building is in general accordance with the Gothic of the old Guildhall, and its windows and fittings are of remarkable beauty. The Museum contains some most interesting specimens of Roman London, and the Library possesses MSS. of great antiquarian interest. The Guildhall, which is approached by King-street, Cheapside, is a grand specimen of Gothic civic architecture. It was restored in 1865.

APOTHECARIES' HALL, BLACKFRIARS.

Many of our visitors may like to see "the Hall" once more, and to inspect some of the curious and valuable pictures which it contains. The Hall, which is situated in Water-lane,

Blackfriars, has been but little altered since the Great Fire of London, and is a very good specimen of Stuart domestic urban architecture. It contains an unique portrait of James the First of England and Sixth of Scotland (which we cannot help thinking Sir Walter Scott must have seen before he wrote "The Fortunes of Nigel"), and many other portraits of interest, especially a fine one of the late Professor Brande, and one of Mr. Wheeler, formerly Lecturer on Botany at St. Bartholomew's.

The stranger should also, before leaving the City, see the Bank of England, the Mansion House, and Royal Exchange. Returning to King's College along Fleet-street, the Temple with its ancient church and modern library—its memories of Johnson and Dickens, and the grave of Goldsmith—is well worth a visit.

In Somerset House are the meeting-rooms of the Society of Antiquaries and the Astronomical Society. The former possesses a very remarkable collection of English historical portraits and a good library.

Admission to the rooms of most of the learned societies may be obtained from the Fellows or Members.

THE EAST-END.

For those whose curiosity or love of investigation will lead them to the East-end of the metropolis, there are several institutions worthy of the attention of the country or foreign medical man. If he selects to go by underground railway to Moorgate-street, there is the Ophthalmic Hospital, Blomfield-street, Moorfields, within three minutes' walk. After this has been visited, a green omnibus to Mile-end will within fifteen minutes convey the visitor to the London Hospital. From the London Hospital the distance to the City of London Hospital for Diseases of the Chest, Victoria-park, is within a walk or cab-drive of a mile and a half, and from Victoria-park Hospital the distance to the Bethnal-green Museum is very slight indeed. Any of these places are easily accessible from any central or west part of London by omnibus as well as cab. To Bethnal-green omnibuses pass every ten or fifteen minutes along Grosvenor-place, Piccadilly, Long Acre, and Cheapside. To the London Hospital any Mile-end 'bus will pass close by the building. Victoria-park may be reached by omnibus or rail from the City.

THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS,

founded in the year 1804, owes its origin and success as a school for ophthalmic surgery to John Cunningham Saunders, who first adapted the operation for cataract to the condition of infancy. It is the earliest, in order of time, of institutions of this kind, now so general in this and other countries. It is situated in Blomfield-street, E.C., close to Broad-street Station, and within three minutes' walk of Moorgate-street Station; it is also within six or seven minutes' walk of the Bank of England. Some of the Surgeons attend every morning from nine till about twelve o'clock—thus, Mr. Bowman, Mr. Critchett, and Mr. Lawson attend on Tuesdays and Fridays; Mr. Hulke and Mr. Wordsworth on Wednesdays and Saturdays; Mr. Hutchinson and Mr. Streatfeild on Mondays and Thursdays. There are operations upon the eye most days at about eleven o'clock.

Any of the resident staff will be happy to show strangers over the wards and other parts of the building upon the presentation of their visiting cards, and the curator of the museum or his deputy will accompany any visitor through the small museum connected with this Hospital.

In this museum, which has not long existed, are already contained very complete sets of pathological specimens of eyes lost after pyæmia, syphilis (acquired and inherited), fevers, measles, small-pox, injuries and operations; others illustrative of the ravages of diseases of different tissues of the eye; and a numerous assortment of coloured drawings of ophthalmoscopic and naked-eye views of diseased eyes.

THE LONDON HOSPITAL.

The school buildings of this Hospital are very compact, and the museum contains several excellent anatomical specimens, and some admirable coloured portraits of skin diseases lent by Mr. Hutchinson, as well as some of pathological conditions of many of the viscera by Dr. Sutton. It is worth while to call to the minds of intending visitors to the London Hospital that it enjoys the credit of having, in 1785, set the first example of a complete medical school, in connexion with a hospital, upon the model of the medical faculty of an university; and in 1792, besides courses of lectures on the then usual subjects of medical education, a course of lectures on clinical medicine was at that time given in the school. The present medical college was inaugurated in 1854, and enlarged in 1867. Previously the school buildings—the expense of erecting which devolved to a great extent upon one of the officers of the period, Sir W. Blizard—stood at the east end of the Hospital.

In the Hospital will be found ophthalmic, venereal, and clinical wards—these latter being essentially similar to those at Guy's Hospital, in which cases are set aside for the more accurate and painstaking observation and instruction. The days and hours of attendance in the wards of the physicians and surgeons are the following:—Dr. Davies at 8.30 a.m. on Tuesdays and Fridays; Dr. Andrew Clark at 1.30 p.m. on Mondays and Thursdays; Dr. J. S. Ramskill and Mr. Couper at 1.30 p.m. on Wednesdays and Saturdays; Dr. Langdon Down and Mr. Maunder at 1.30 p.m. on Tuesdays and Fridays; Mr. Hutchinson at 2 p.m. on Mondays and Thursdays; Mr. Rivington at 1 p.m. on Mondays and Thursdays. The obstetric wards are visited by Dr. Head at 1.30 p.m. on Tuesdays and Fridays. The regular operating day is Wednesday at 2 p.m.

VICTORIA-PARK AND THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

This picturesque and capacious park serves as a huge lung for the inhabitants of Spitalfields and Bethnal-green. The first cost of its formation was covered by the purchase-money received from the Duke of Sutherland for the Crown lease of York House, St. James's. A very handsome granite Gothic drinking-fountain was erected in the park, at a cost of £5000, by Baroness Burdett Coutts.

The Hospital was established in 1848, and the new building at the Victoria-park was opened in 1855. The Hospital contains accommodation at present for 120 patients, in wards of two, four, six, eight, and twelve beds, each so as to afford opportunities for the proper classification of the cases. There is a good day-room for convalescents and excellent corridors in which patients take exercise.

Recently a new wing has been added, which, when furnished, will allow the number of beds to be increased to 164. The Hospital is always open to visitors.

BETHNAL-GREEN MUSEUM

is open daily, except on Sundays. On Monday, Tuesday, and Saturday admission is free from 10 a.m. to 10 p.m.; on Wednesday, Thursday, and Friday, admission 6d., from 10 a.m. to 6 p.m. As we have said, the distance from Victoria-park and the London Hospital to the Bethnal-green branch of the South Kensington Museum is not great. It is situated close to the Mile-end Station (one mile from Shoreditch on the Great Eastern Railway), near the junction of the Hackney and Cambridge-heath Roads, one mile and three-quarters from the Bank of England, and two miles from the General Post-office. Omnibuses run in all directions to and from most parts of London.

The oblong open space upon which it is situated was bought as a gift to the poor in the reign of James I. The building is to a very considerable extent constructed of the iron columns, floors, and fittings of the old iron buildings of South Kensington Museum; but brick walls and a slate roof give the East London building more dignity of appearance and greater permanency than the old "Brompton boilers" possessed. In front of the principal entrance has been erected that well-known fountain of majolica, made by Messrs. Minton, which formed a principal ornament of the International Exhibition of 1862, and which was afterwards placed in the Horticultural Gardens. The interior arrangements of the building consist of a large hall, around which runs a double gallery—the lower one raised some feet above the level of the hall, and of moderate height; the upper gallery reaching to the roof, and obtaining, in consequence, an upper light very favourable to the exhibition of the beautiful pictures and other works of art here collected. At the beginning of the year 1872, when the building was sufficiently advanced for the reception of objects, two important collections, formerly exhibited in the South Kensington Museum, were transferred to the Bethnal-green branch—viz., the *Animal Products Collection* and the *Food Collection*. These, with an important series of examples of *Economic Entomology*, now occupy the whole of the space on the ground-floor under the galleries, and, forming as they do no inconsiderable contribution towards a complete trade museum, will

no doubt prove of great and abiding interest and educational value to the inhabitants of the East-end of the metropolis.

The food collection consists of specimens of breads, wines and spirits, the substances used for adulterating foods, the strange objects considered as delicacies by other nations (such as sharks' fins, sea-slugs, and edible birds'-nests), the different kinds of tobacco, and the variable kinds of edible and non-edible fungi.

The portion of the ground-floor *not* under the galleries, and the upper galleries of the Museum, are for the present occupied by pictures and other art treasures, lent by Sir Richard Wallace, who has placed at the disposal of the authorities of the Museum the chief treasures of the long celebrated, though rarely seen, Hertford collection of art objects. These treasures, collected by the late Marquis of Hertford, K.G., during a period of thirty years, have hitherto been almost unknown to the English public, and, in fact, a large portion of them was specially brought over from Paris by Sir R. Wallace just previous to the opening of the Museum. The paintings in oil and water-colours, the porcelain—especially the Sèvres—the majolica ware, and the bronzes are all very fine and particularly worth seeing. As, however, Sir R. Wallace intends to remove everything he has lent on view when his mansion in Manchester-square is finished, it is probable that all these gems and valuables will not remain up to Christmas next. Unquestionably, however, the pictures will form the greatest attraction to visitors—gentlemen as well as ladies. And well they may do, for probably there is not a finer collection of paintings to be seen at the present time in England. They are arranged in the Museum according to their schools—English, Dutch, Flemish, Italian and Spanish, and French. Here are to be seen in perfection the works of Bonington, Canaletto, Claude, Cuyp, Decamps, Greuze, Micris, Murillo, Pater, Rembrandt, Reynolds, Rubens, Turner, Vandernecr, Vandevelde, Vandyck, Velasquez, Vernet, Watteau, Wernix (Jan), Wouvermans (Peter and Philip), and a host of other well-known great artists.

Let all who can take the opportunity while it lasts of seeing this splendid collection of works of art.

GERMAN HOSPITAL, DALSTON, E.

This Hospital, which contains 100 beds, is situated close to London, and can be reached by omnibus from the Bank, or by the North London line of railway. It has been opened since 1845, and is for the reception of poor natives of Germany and others speaking the German language, and English in all cases of accidents. It is in a healthy and pleasant locality, but at the same time in the vicinity of that crowded portion of the East-end of London where most of the poor Germans reside. All the medical officers, the matron, nurses, and servants are German. Some of the physicians make their visits daily, either in the early morning or at two o'clock in the afternoon. The surgeons visit on Wednesdays and Thursdays at about three o'clock.

For the relief of out-patients there are three German Dispensaries in connexion with the Hospital—one in the East and one in the West-end of London, and the third at Dalston, in the front wing of the house. There is also a sanitarium in the Hospital, which offers accommodation to German patients not belonging to the lower classes who, being unmarried or away from their families, desire to have hospital attendance in a room by themselves on payment of a moderate sum.

GREENWICH.

NAVAL COLLEGE, NAVAL SCHOOL, SEAMEN'S HOSPITAL.

Many of our guests will no doubt be tempted by the fame of the dinners at the "Ship" to refresh themselves by a trip by steamboat or railway to the "green Greenwich" which "greets the growing god of day," and where "warbling whitebait win their welcome way." Let those of them to whom the place is new go a little earlier than the hour for dinner, and take a look over the Naval College, picture gallery, the Naval School on the opposite side of the road to the College, and last, but not least, the Seamen's Hospital.

The Naval College—for such, we believe, the "Royal Hospital for Seamen at Greenwich" is now and in the future to be called—is situated on the southern bank of the Thames, and for its architectural beauty is not excelled. The fabric comprises four distinct piles, and the terrace fronting it extends 1182 feet in a straight line east and west. The Painted Hall or Naval Gallery, designed by Sir C. Wren for a large dining-hall, was for a long while used as a refectory for the pensioners, until the number of pensioners had so increased that a different arrangement became necessary. It was then retained as a depository for objects of national interest, and in 1823 it was prepared for the reception of naval pictures. His Majesty King George IV. presented a valuable series of portraits from the galleries of Windsor Castle and Hampton Court, besides paintings from his Majesty's private collections at St. James's Palace and Carlton House.

Here are colossal statues of Nelson, Howe, Duncan, St. Vincent, and others; and a monument to the memory of Franklin by Westmacott. The ceiling, which is beautifully painted in compartments, is the great feature of this gallery. This celebrated work was executed by Sir James Thornhill during a period of nineteen years, and is graphically described by Sir R. Steel in "The Lover," which was written at the period when the work was just completed. The Hall is open every day to visitors.

The Greenwich Hospital School occupies a long range of buildings on the south side of the College, the centre building of which was completed by Inigo Jones: three extensive wings have been subsequently added to it. The school consists of 800 boys between the ages of ten and fourteen years, with the exception of eighty who constitute the "Nautical Division," and who are allowed to remain one year longer. Adjoining the easternmost wing of the school buildings is a very compact and admirably arranged observatory, fitted with mural circle, transit instruments, clocks, and equatorial and other telescopes, for the use of the senior boys of the Nautical Division. Between the centre building and the road separating the school from the Royal Hospital or Naval College, is a handsome model of the deck and upper works of a corvette of 500 tons completely rigged, and with sails bent, wherewith the senior boys are exercised in reefing and furling, etc. This model ship is also supplied with small pieces of brass ordnance, in exercising which a number of the boys acquire a knowledge of gunnery. The school broke up, and most of the boys left for their holidays, on Saturday, July 26; but strangers are permitted to go over the school buildings any day except Sunday, by making application by card to the Captain in residence, who will then give orders for an official to accompany the visitors and explain the different parts of the establishment.

The Seamen's Hospital.—The Seamen's Hospital Society owes its origin to the Committee of 1817-18, appointed to manage a fund for the temporary relief of distressed seamen. In 1821, at a meeting of this same Committee, it was determined to establish a floating hospital on the Thames for the use of sick and diseased seamen only, to be supported by voluntary subscriptions and managed by a committee. The *Grampus* (a fifty-gun ship), moored off Greenwich, was used as the first hospital; but the *Grampus* being too small to satisfy the growing demands of applicants, the Government in the year 1830 exchanged her for the *Dreadnought* (104-gun ship) which was fitted up by the Society for the purposes of the hospital in 1831. In 1857 this vessel having become very unhealthy, was replaced by H.M.S. *Caledonia* (120-gun ship), and her name was altered to *Dreadnought*. Each ship in succession was moored in the most central and eligible situation that could be found in the Thames off Greenwich, but of late years the position of the *Dreadnought* became injuriously affected by the increasing number of iron ship-building yards, the incessant noise from which was very detrimental to the patients. As the act of incorporation of this Society empowered the Committee to build a hospital on shore if thought desirable at any time, it was decided that the floating establishment should be given up. Soon after this decision of the Committee, the Royal Hospital at Greenwich became emptied of its former tenants, and the Lords Commissioners of the Admiralty in the year 1870 granted the Society a lease of ninety-nine years of the infirmary of Greenwich Hospital in lieu of the loan of the ship. This building is entirely separate from the main edifice of Greenwich Hospital or Naval College, and was built for the same kind of work as that carried on by this Society. It affords room for 300 patients, and consists of eighty-eight wards, the majority of which contain but three beds. The Hospital comprises a large quadrangular building, the east and west sides of which are occupied by patients and are two storeys in height; and an adjoining building, which has ground-floor wards only, and is well adapted for casualties. The wards are situated on both sides of a corridor which runs down the centre of every floor. The kitchen and bath-rooms are situated in the centre of the

quadrangle, so that each wing might form a distinct hospital. There is also some ground around the buildings in which the convalescent patients take exercise, and thus in this respect the Hospital possesses a great advantage over the *Dreadnought*.

A visit to this compact and excellent Hospital will well repay the medical man. There are interesting cases to be seen in the wards, and the internal arrangements are well worthy of notice. The resident medical attendants make their rounds in the morning before mid-day, but there is always someone at hand who would be happy to show visitors over the buildings at other times during the day. There is, too, in connexion with this Hospital the nucleus of an anatomical and pathological museum. A great many specimens of skulls of different races of mankind, which even the Committee of Management of the Hunterian Museum might be glad to possess, occupy one large case in the room given up for the purposes of a museum.

Our visitors will now return to King's College. Before starting on a fresh expedition they may, however, wish to know something of the College where the meetings of the Association are taking place.

KING'S COLLEGE AND HOSPITAL.

But little need be said about these buildings for the information of visitors to the British Association meeting, because as the College building is to be the great centre and place of meeting, all the features of these institutions will be brought before the attention of the members of the Association who are present at the London conferences.

It will be sufficient to remark, therefore, that the College is situated between the thoroughfares of the Strand and the Thames Embankment, close to the Temple Station on the Metropolitan District Railway, by which easy access can be obtained from the more distant parts of London and the suburbs. The building includes a house for the principal, rooms for a limited number of matriculated students, a chapel, the general class-rooms for the College and School, museums, libraries, laboratories, anatomical rooms, and workshops. The Hospital connected with the medical department is situated in Portugal-street, Lincoln's-inn-fields.

The Chapel is undergoing restoration in accordance with original designs by Sir Gilbert Scott. The expense of finishing the work and of completeing the organ satisfactorily will amount to £2000. It occurs to us that now would be a very appropriate time for obtaining from the beneficently inclined considerable aid in this undertaking. No doubt when the need is put before the gentlemen attending the Association, the actual and personal acquaintance with it will be sufficient to induce many to contribute. However, even in its present very incomplete state the work has more than realised the hopes and expectations of the Committee of the Restoration Fund. When completed the chapel will, we think, present one of the most artistic and interesting interiors in London.

The Museums.—Her Majesty the Queen having conferred on King's College the valuable collection of mechanical models and philosophical instruments formed by his Majesty King George III., a suitable room has been fitted up for its reception. Extensive additions have been since made to this Museum by the Council and private individuals. This Museum, under the charge of the Professors of Natural Philosophy, Chemistry, and Manufacturing Art, is perhaps unequalled by any other of its kind in London. There are also—(1) a museum of minerals and geological specimens, and of chemical productions both natural and artificial; (2) museums of human and comparative anatomy and of materia medica and botany, in the medical department, under the charge of the curator, Dr. Kelly.

The Libraries are medical and general, quite distinct from each other, and under the charge of separate librarians.

The Hospital, which is situated in what was once a most populous district between Holborn and the Strand, is well adapted for, and furnished with every means of, practical instruction. The hall, staircase, and landings are capacious and lofty, and the operating theatre is undoubtedly one of the best—if not actually the best—in London.

The physicians and surgeons, some of whom attend every day, make their visits as under:—Dr. Johnson, Monday and Thursday, at 2 p.m.; Dr. Beale, Tuesday and Saturday, at 2 p.m.; Dr. Garrod, Wednesday and Friday, at 2 p.m.; Dr. Playfair, Tuesday, Thursday, and Saturday, at 1.30 p.m.; Dr. Duffin, Wednesday and Saturday, at 1 p.m.; Professor Sir W. Fergusson, Bart., Tuesday, Thursday, and Saturday, at 1.30 p.m.; Professor Wood, Monday, Wednesday, and Friday, at 1.30 p.m.; Professor Cartwright, Tuesday and Friday, at 10 a.m.; Professor Wells, Tuesday, Thursday, and Saturday, at 1 p.m.; Mr. Smith, Monday, Wednesday, and Friday, at 1 p.m.

THE NORTH.

THE ROYAL COLLEGE OF SURGEONS, IN LINCOLN'S-INN-FIELDS.

We feel it is unnecessary for us to say one word with regard to the surpassing interest and value of the scientific and literary treasures which are stored in the Hunterian museum and library. These will be open on Wednesday evening to the members of the Association. The College also possesses a fine collection of portraits of distinguished surgeons. The gem of the collection is, of course, the well-known portrait of Hunter, by Reynolds. Besides these are portraits or busts of nearly every surgical celebrity since the time of Percival Pott, and earlier.

THE SOANE MUSEUM.

Exactly opposite the College of Surgeons, on the north side of Lincoln's-inn-fields, is the Soane Museum, which the lover of the beautiful and the curious should not fail to visit. It is open on Wednesday only from 10 a.m. to 4 p.m. by card, which may be obtained at the door. No fee.

The Museum contains several famous pictures, especially Hogarth's two series of "The Rake's Progress" and "The Election," several landscapes by Canaletto, and a sea-piece by Turner. Among the numerous pieces of sculpture is a nymph by Westmacott. There are also a host of curious antiquities—especially an Egyptian sarcophagus of alabaster,—objects of art of the middle ages and of the Renaissance, miniatures, manuscripts, and curiosities of all kinds. One of the most wonderful sights in the place is the manner in which everything is arranged. A number of very valuable books and manuscripts may be seen by express permission of the keeper: among them the most interesting are the first four editions in folio of the works of Shakespeare and the manuscript of Tasso's "Jerusalem Delivered."

Leaving Lincoln's inn-fields by one of the narrow exits on its north side, we reach Holborn. On the north of Holborn is Bloomsbury—classical to the readers of most of our English humourists, from Fielding to Thackeray. But the point of attraction in Bloomsbury is undoubtedly

THE BRITISH MUSEUM,

which will be open daily during the week to members of the Association. We will not attempt to describe, even shortly, the treasures of the British Museum. Every department is represented on a magnificent scale. On entering the building, the visitor should discover from the official guide-book the locality of the departments he is anxious to inspect, and make his way to them at once. He cannot hope to do much more than walk through the most of the rooms at a single visit. The Natural History Department will interest many of the members, and we would especially refer to the magnificent specimen of the gorilla (upper floor, mammalia saloon, case 11), and to the fossils in the northern gallery. We believe there is also a very extensive osteological collection, which may be seen under special circumstances. According to the present arrangements, parties will be formed amongst the members of the Association on the afternoons of Friday and Saturday, August 8 and 9, to visit the British Museum, when objects of special interest will be shown. Names to be given in not later than noon on Wednesday.

Separated from the British Museum by the length of Gower-street are

UNIVERSITY COLLEGE AND HOSPITAL.

Those who attend the *soirée* at University College on Friday evening, August 8, will no doubt have an opportunity of seeing the libraries, the museums, the Flaxman gallery, the Marmor Homericum, and Mr. Cave Thomas's large cartoon. The libraries contain between 60,000 and 70,000 volumes, and upwards of 15,000 pamphlets. They are divided into general and medical, and consist of the Bentham, the Morrison Chinese, the Ricardo, Graves, Sharpey, and many other collections. The museums consist of collections of—(1) philosophical apparatus; (2) geology and mineralogy, greatly added to by the late Sir R. I. Murchison; (3) anatomy, commenced by the purchase of Sir Charles Bell's series of specimens; (4) comparative anatomy, which contains the large and valuable private collection of Professor R. E. Grant. The works of the late John Flaxman,

the first professor of sculpture in the Royal Academy, adorn the hall under the dome of the College, the adjacent apartments, and the staircase. These consist principally of the casts in plaster from the original clay models of groups of figures, statues, and compositions, in alto- and basso-relievo, among which are many of the great artist's noblest productions. They were in his studio at the time of his decease, when they became the property of his executrix and adopted daughter, Miss Maria Denman, who presented them to University College as a free gift. There are, besides, between four hundred and five hundred drawings by Flaxman. The public are admitted by tickets to the gallery on Saturdays during the months of May, June, July, and August, from 10 to 4, but persons properly introduced to the Secretary may obtain admission at any time throughout the year, between 11 a.m. and 4 p.m. The published works of the late Mr. Flaxman may be seen in the College library.

The Marmor Homericum, a mural decoration depicting Homer singing to the Greeks of Delos, was designed and executed by Baron H. de Triqueti. This, situate in the south cloister of the College, was purchased and placed here at the expense of the late Mr. Grote. It consists of eleven pieces arranged as a central composition, borders and angles; composed of pieces of different marbles inlaid and engraved. Its execution is by processes previously unknown. The colouring is given by the incrustation of cements which have the same hardness, adherence, and durability as the marble itself. It is not affected by atmospheric influences—so often fatal to fresco painting,—and it was therefore supposed by its originator as likely to take the place of fresco mural decorations.

The antique studio in the Fine Arts School contains a large collection of models and casts adapted for the purposes of instruction: among them are the Apollo Belvedere from the studio of Flaxman, and a fine cast of the Laocoon presented by the late Sir Matthew White Ridley, Bart.

The *Hospital* is on the opposite side of Gower-street to that on which the College is situated. It contains about 120 beds, and some excellent new and improved bath-room accommodation. The nursing is conducted by ladies of the St. Margaret-street Home. The days and hours at which the surgeons and physicians attend are the following:—

Physicians.—Sir W. Jenner, 1.15 Monday, Wednesday, and Friday; Dr. Russell Reynolds, 2.30 Tuesday, Thursday, and Saturday; Dr. W. Fox, 1.30 Tuesday, Thursday, and Saturday; Dr. Ringer, 1 Tuesday, Thursday, and Saturday; Dr. Bastian, 1.30 Monday and Thursday; Dr. Graily Hewitt, 1.30 Monday and Thursday; Dr. Tilbury Fox, 1.30 Tuesday and Saturday.

Surgeons.—Mr. J. E. Erichsen, 2 Monday, Wednesday, and Friday; Mr. J. Marshall, 2 Tuesday, Thursday, and Saturday; Sir H. Thompson, 1.30 Tuesday and Friday; Mr. B. Hill, 1.30 Monday and Thursday; Mr. C. Heath, 1.30 Tuesday and Friday; Dr. Wharton Jones, 2 Monday, Wednesday, and Friday; Dr. Ibbetson, 10.30 on Wednesday.

Crossing Tottenham-court-road, and proceeding down Goodge-street, we reach

THE MIDDLESEX HOSPITAL.

This Hospital has existed since 1745. It contains 305 beds, and has attached to it a very complete set of school buildings and a museum of over 5000 specimens. Thanks to the kindness of Mr. T. Hyde Hills, the museum possesses a most complete set of materia medica specimens, consisting of upwards of 600 drugs. Besides medical and surgical wards and special wards for diseases of women and venereal cases, there is in connexion with this Hospital a separate charity which is one of much value in itself, and is believed to be unique throughout the world. In the year 1792 Samuel Whitbread, Esq., fitted up and endowed a ward for *patients afflicted with cancer*. Since his death this Cancer Fund has been augmented by Mrs. A. M. Stafford, and Sir Joseph De Courcy Laffan. In consequence of these endowments three wards—Whitbread, Stafford, and Laffan,—are appropriated exclusively to females suffering from cancer, and in addition several male patients afflicted with the same disease are accommodated in Handel ward. Here the victims of this hopeless malady find a permanent refuge, and remain until "relieved by art or released by death."

The existence of this charity affords to those interested in the study of the ravages of cancer unparalleled opportunities of witnessing the disease in all stages of its course, from the earliest beginnings to the termination.

The museum contains many valuable preparations formerly the property of Sir C. Bell, Dr. Sweatman, Mr. Langstaff, and other eminent anatomists and pathologists. Here is to be seen the brain of Cuvier, and a model of the largest arm and forearm on record, taken from an athlete who was at one time a patient in the Hospital. The medical and surgical staff attend as follows:—

Hours of Hospital Visits, etc.—In-patients are visited by Drs. H. Thompson and Greenhow at 1 p.m. on Tuesdays, Thursdays, and Saturdays; Dr. R. Liveing at 1.30 p.m. on Mondays, Wednesdays, and Fridays; Dr. J. H. Davis at 1.30 p.m. on Tuesdays and Fridays; Mr. De Morgan at 1 p.m. on Mondays and Fridays; Mr. Nunn at 1 p.m. on Tuesdays and Fridays; Mr. Hulke at 1 p.m. on Mondays and Thursdays; Mr. Lawson at 1 p.m. on Thursdays and Saturdays; Operations at 1 p.m. on Wednesday. Out-patients: Diseases of the Skin are seen by Dr. Liveing at 4 p.m. on Thursdays; Cancer cases by Mr. Morris at 1.30 p.m. on Thursdays; Diseases of the Throat by Dr. John Murray at 4 p.m. on Tuesdays; Diseases of the Ear by Mr. Andrew Clark at 1 p.m. on Mondays; Diseases of the Eye by Mr. Hulke at 8.30 a.m. on Tuesdays and Fridays; Dental cases by Messrs. Tomes and Turner, at 9 a.m. each day. Surgical operations are performed on Wednesdays at 10 o'clock.

From Bloomsbury the Regent's-park, with the Zoological and Botanic Gardens, are easily reached.

THE ZOOLOGICAL GARDENS

are open daily from nine till sunset. Entrance 1s.; on Monday 6d.; on Sunday by Fellow's ticket. On Saturday afternoon there is a band. The visitor to the Zoo' should remember that the carnivora are fed at 4, the pelicans at 2.30, the otters at 3, and the birds of prey at 3.30 p.m. The seals are fed about four o'clock, and the process should be seen if possible.

THE BOTANIC GARDENS,

Regent's-park, may be visited by means of a Fellow's order daily, except Wednesday. The gardens are large, and both skilfully and tastefully laid out; the wild flowers are arranged according to their natural orders. The conservatory contains many fine tropical and other plants.

THE SOUTH SIDE.

GUY'S HOSPITAL.

The situation of this institution close to London-bridge Railway Station, the modes of access, and its merits as a leading hospital and medical school of London, are probably well known to all our readers. It may be, however, that the great beauties of the museum connected with it are not so familiar to those who have not been educated at Guy's; and those who have an inclination to do so, and are able to give up the time, we can strongly recommend to make a journey hither, to see the admirable and unsurpassed wax models of human normal anatomy and of skin diseases, the work of that excellent artist Mr. Towne. The models of anatomy include all regions of the human frame, and are remarkable alike for their accuracy and their completeness in the minutest details of the subjects represented. The models of the brain are especially noteworthy, and consist of thirty which exhibit sections through various parts of the organ, and thirty-nine illustrating its development from the earliest fœtal condition and the arrangement of the cerebral convolutions in the principal varieties of the human race. The organs of special senses, more particularly the ear, are also fully illustrated.

The numerous and very beautiful wax models of the diseases of the skin are wonderful for their exactness and for the lifelike manner in which the part of the body is placed before the observer. Typical specimens represent the ordinary diseases, while there are several models of the less common conditions, such as glanders, vitiligoidea, and leprosy. There are also numerous wax models of the viscera in various morbid states, as well as a complete series (in the comparative anatomy section) exhibiting the changes in the egg during incubation, and another beautiful series of the brains of vertebrata, showing the gradual development of the lobes and convolutions up to the human type.

By separating the departments of anatomy and comparative anatomy from the other sections of this very fine museum, and transferring them to the long gallery in the new building, he old museum has been set free for the better display of the preparations and models which form the pathological department, and the old model-room has been converted into a large class-room for the classes of histological and other studies.

The Hospital contains accommodation for 715 patients. The surgical beds and operating theatre occupy the whole of the old building. The ophthalmic wards, the obstetric, most of the general medical cases, and the out-patients' rooms, are in the new building. The physicians and surgeons are in daily attendance at 1.30 o'clock—Dr. Habershon on Tuesdays and Thursdays, Dr. Wilks on Mondays, Thursdays, and Saturdays, Dr. Pavy on Mondays, Wednesdays, and Fridays, and Dr. Moxon on Mondays and Thursdays. Mr. Birkett and Mr. Foster make their regular rounds on Mondays and Thursdays, Mr. Bryant on Mondays and Wednesdays, and Mr. Durham on Wednesdays and Saturdays. The obstetric wards are visited by Dr. Hicks and Dr. Phillips on Wednesdays at 1.30, and Mr. Bader performs operations on the eye on Tuesdays at 1.30. The regular days for operations in general surgery are Tuesdays and Fridays at 1.30.

THE EVELINA HOSPITAL FOR SICK CHILDREN

is situated in Southwark-bridge-road, and but a short distance from Guy's Hospital. It was founded in the year 1869 by the Baron Ferdinand de Rothschild, who for some time had maintained thirty beds at his own cost, and in January, 1871, gave up to the public at large the rest of the accommodation, making a total of 100 beds. Boys are admitted between the ages of two and ten, and girls between the ages of two and twelve years. There are twelve wards well lighted and ventilated, one of which is appropriated expressly to cases of hooping-cough (a distinguishing feature of this Hospital), and another to Jewish children. Though no cases of fever are admissible, a separate building is provided for such cases of an infectious nature as may originate in the hospital building itself.

ST. SAVIOUR'S, SOUTHWARK.

The visitor to Guy's Hospital who is interested in architecture or archæology will do well, if the places are unknown to him, to give a passing notice to St. Saviour's Church and the Talbot Inn. St. Saviour's Church, Southwark, situated in the low ground by Southwark Market, and near the Bridge House Hotel, was first erected into a parish church by Henry VIII. in 1540. After Westminster Abbey, St. Saviour's contains the finest specimens of early English in London. Nothing, however, remains of the nave of the original church; only the choir and the Lady Chapel have been saved. The nave was taken down in 1840 without sufficient cause, much to the disgrace of the parish, and the present unsightly structure built. In the reign of Mary the Lady Chapel of St. Saviour's was used during the Marian persecution by Bishop Gardiner (1555) as a court for the trial of heretics. There are several monuments of mark in the choir and Lady Chapel; and it was in this church that Edmund Shakespeare, "player" (the poet's youngest brother), John Fletcher (Beaumont's associate), and Phillip Massinger (the dramatic poet), were buried.

Near by is the site of the Bishop of Winchester's former palace, close to which stood the Globe Theatre, in which Shakespeare acted.

A little further up the Borough from London-bridge than Guy's Hospital, and on the same side, stands the Talbot Inn—the "Tabard" of Chaucer's "Canterbury Tales"—the starting-place of Chaucer's Canterbury Pilgrims. This building has lately been brought before the notice of readers of the *Times* by letters protesting against its threatened destruction.

No. 119, High-street, Borough, occupies the site of the Marshalsea, where many of the martyrs in Queen Mary's reign were imprisoned for their religion.

ST. THOMAS'S HOSPITAL, ALBERT-EMBANKMENT, WESTMINSTER-BRIDGE, S.E.

This building, being the newest of its kind in London, will be an object of inspection for many—externally, on account of its style of architecture, and internally because it contains all the latest improvements, or supposed improvements, both in hospital and school departments. We have been informed that special arrangements have been made to show visitors belonging to the British Medical Association over the Hospital and its school-buildings on Wednesday and Thursday, August 6 and 7, from 3 to 5 p.m. In addition, visitors will, of course, be received and welcomed by the surgeons and physicians to accompany them in their morning visits. These visits are as follows:—Mondays and Thursdays, 9 a.m., Dr. Murchison; Tuesdays and Fridays, 9 a.m., Dr. Peacock; Wednesdays and Saturdays, 9.30 a.m., Dr. Bristow and Dr. Clapton. The surgeons' visits are also made daily at 9 a.m. or 9.30 a.m., but we do not specify on which days each attends, as just now the surgeons are undergoing a change, owing to the resignation of Mr. Le Gros Clark, and the days of visits are not as yet definitely fixed. The operations take place on Wednesdays at 1.30 o'clock. The mode of ventilating the wards and the lifts are worth the attention of those interested in hospital buildings. The museum offers a wide field of observation in normal and morbid anatomy.

The site of this Hospital and the ways of access to it are far too well known to require a notice at our hands for the guidance of visitors.

BETHLEM HOSPITAL, ST. GEORGE'S-FIELDS.

This hospital for the insane is certainly well worthy of a visit. Originally founded in 1246 as a priory of canons in Bishopsgate Without by Simon Fitzmary, one of the sheriffs of London, it was afterwards given by Henry VIII. to the City of London, when it was first used as a hospital for lunatics. Subsequently (1675) Fitzmary's Hospital was removed to Moorfields, where it remained till 1812, the date of the erection of the present building. It may be reached by train from Ludgate-hill or Victoria to the Borough-road Station, or by omnibuses from Westminster, Waterloo, and Blackfriars-bridges, as well as by all other 'buses going to the obelisk in St. George's-circus, at the bottom of Blackfriars-road.

The hour at which the physicians attend in the wards is eleven o'clock every morning, and the best hours for medical visitors will be between eleven and two o'clock, when they can accompany one of the physicians—Dr. Williams or Dr. Savage—on his round.

SCHOOL FOR THE INDIGENT BLIND.

Standing close to Bethlem Hospital, being one of the buildings immediately in St. George's-circus, is the School for the Indigent Blind. This building was instituted in 1799 for the education—religious, general, and industrial—of those who, not in *extreme* indigence, cannot "distinguish colours or more than light from darkness; are not under the age of ten nor above twenty years of age; are not deficient in intellect or physical power; are in good health, and not married; are able to wash and dress without assistance; and are not subject to fits or scrofula, or any disorder which may be prejudicial to the other pupils of the School."

LAMBETH PALACE.

The Palace of the Archbishop of Canterbury—situated on the south side of the Thames, opposite the Houses of Parliament, and close to the Lambeth boat-pier—can be visited at any time, by making an application in writing to do so; but just now special permission has been granted to gentlemen attending the British Medical Association meeting to look over the buildings. The library is open on Mondays, Wednesdays, and Fridays from ten to three; it contains over 25,000 volumes, and amongst them one of its greatest curiosities is a MS. of Lord Rivers' translation of "The Dictes and Sayings of the Philosophers," containing an illumination of the introduction of Caxton by the Earl to Edward IV. The chapel, the oldest part of the Palace, built in the early English style, with lancet windows and a crypt, and the Lollards' Tower at the west end of the chapel (in which, by the way, it is now ascertained that the Lollards were *not* imprisoned) are the chief features about this venerable and celebrated building. His Grace the Archbishop of Canterbury has lately offered to the Council of King's College the use of the Lollards' Tower as a hall for resident theological students. This offer, however, the Council felt compelled to decline, because of the large outlay it would have necessitated.

THE BROWN INSTITUTION,

founded in pursuance of the will of the late Thomas Brown, for the study and cure of the diseases of animals useful to man, deserves a visit from all interested (as who is not?) in comparative pathology. It includes two departments—the sanatory and the pathological. The former of these is a hospital for animals, where as many as twenty to thirty or more sick horses, dogs, etc., may be seen under treatment of a morning (nine to eleven o'clock). The second department is represented by the laboratory, where experimental researches in pathology are prosecuted by pupil-subscribers, working under the superintendence of Professor Burdon-Sanderson. Any member of the profession is admitted to view the Institution on presenting his card. The buildings are situated in the

Wandsworth-road, close to the Nine Elms goods depôt of the South-Western Railway. It may be reached either by rail or by river. It is five minutes' walk from Vauxhall Station, to which the visitor will book from Waterloo-bridge (trains at intervals of a few minutes), or from Charing-cross (South-Eastern) Station, changing at Waterloo Junction. The penny river steamboat is a more pleasant means of conveyance to the Nine Elms pier, where the stranger should ask to be directed to Wandsworth-road.

Returning now to King's College, we may proceed to point out some of the places of interest in its immediate neighbourhood and to the West.

THE WEST-END.

CHARING-CROSS HOSPITAL

stands close to the West Strand, at the junction of that street with King William-street and Agar-street. It is a modern building, in a single large block, containing 150 beds. The visiting hour of the staff is 1.30 p.m., and the days of attendance of the various physicians and surgeons as follows:—Dr. Headland on Monday, Wednesday, and Friday, Dr. Pollock on Tuesday, Thursday, and Saturday, Dr. Silver on Tuesday, Thursday, and Friday, Mr. Canton on Tuesday and Friday, Mr. Hird on Monday and Thursday, and Mr. Barwell on Wednesday and Saturday. Dr. Watt Black (Physician-Accoucheur) attends on Monday, Wednesday, and Friday; Dr. Sparks (for diseases of the skin) on Tuesday and Saturday, at 1 p.m. Post-mortem examinations at 2.30 p.m.; operations on Saturday at 2 p.m.

THE NATIONAL GALLERY

is fast becoming one of the most important collections of pictures in Europe. Amongst its latest additions is the celebrated Peel Collection, which contains some of the most delightful specimens of Dutch and Flemish art extant. We would recommend all lovers of the fine arts who have not seen these pictures to pay them a visit. The Gallery is open to the public on Mondays, Tuesdays, Wednesdays, and Saturdays.

THE ROYAL COLLEGE OF PHYSICIANS.

A little farther west, on the opposite side of the road, stands the Royal College of Physicians, in Pall-mall East. To medical men a visit to the College will prove of great interest. There is a magnificent collection of portraits of medical worthies from the time of Henry VIII. to our own—Linacre, Sydenham, Harvey, Mead, and many more. The library is also well worth seeing. The almost priceless Caxton, which a few years ago was found on a forgotten shelf in the library, is now shown under a glass case.

From Charing-cross our visitors had better proceed down Whitehall to Westminster, and, if they have not already seen them, spend an hour or two in the chapels and nave of the glorious Abbey, and compare the modern Gothic of the Houses of Parliament with its ancient prototype. On his way he may visit

THE ROYAL UNITED SERVICE INSTITUTION MUSEUM,

in Whitehall-yard, almost directly opposite the Horse-guards. It is open daily (except Friday) from eleven to five. Admission by ticket from a subscriber. It contains a curious collection of objects belonging to the various arts and applied sciences—chiefly relating to the army and navy—such as arms of all kinds, models of vessels, medals, natural history specimens, books, and objects of ethnological and archæological interest. There are to be seen here the swords of Cromwell and Nelson, some of the Franklin relics, some *souvenirs* of Captain Cook, models of the battles of Trafalgar and Waterloo, the skeleton of one of Napoleon's horses, etc.

THE EAST INDIA MUSEUM

deserves a visit from those who are interested in the history and products of the East. It is open daily (except Thursdays) free. The visitor should apply at the south-west entrance in the large court of the India House. In seven rooms are exposed specimens of the various products of India—minerals, plants, cloth, embroidery, arms, jewellery, etc., etc. There is a large collection of the Indian materia medica, including the varieties of opium. In the last room may be seen the collection from Yarkand and Kashgar, in Eastern Turkestan, by the brave and unfortunate Shaw: it is a most miscellaneous one, of garments, arms, domestic and personal requisites, natural history specimens, etc.

WESTMINSTER HOSPITAL

stands opposite the north-west corner of Westminster Abbey. It is built in the Tudor style of architecture, and contains about 200 beds. It is interesting as having been the first Hospital in the metropolis to be built and supported by public voluntary contributions. Chiselden became a surgeon to the Westminster Hospital in 1726, and his portrait hangs in the board-room along with those of Carlisle, Guthrie, White, etc.

The medical officers attend at one or half-past one o'clock on the following days:—Dr. Basham, Monday, Tuesday, and Thursday; Dr. Fincham, Monday, Wednesday, and Saturday; Dr. Anstie, Monday, Tuesday, and Friday; Mr. Holthouse, Monday, Tuesday, and Friday; Mr. Pearse, Monday, Wednesday, and Saturday; and Mr. Cowell on Monday, Thursday, and Friday. Operations on Tuesdays at 2 p.m. Post-mortem examinations at 2 p.m.

Returning then to Charing-cross, and proceeding down Piccadilly.

THE UNIVERSITY OF LONDON.

The University of London is a handsome new structure standing back to back with the Royal Academy buildings in Burlington-gardens, Piccadilly. The front is both imposing and fine, and is adorned with numerous statues of the most famous philosophers and men of science of all ages. The interior of the building, we are able to state, may be visited by the members of the Association during the end of the meeting-week. Within the walls little is to be seen beyond examination-rooms, but even these are interesting in the completeness of their arrangements. The largest hall contains the library of the late Mr. Grote, bequeathed by him to the University. In the senate-room, at the top of the staircase, is a fine portrait of Mr. Grote by Millais.

When at the University of London the visitor should look at Burlington House, where the Royal, Linnæan, and other scientific societies have rooms. The Royal Academy buildings also are well worth seeing.

THE MUSEUM OF PRACTICAL GEOLOGY, JERMYN-STREET, ST. JAMES'S.

is open gratuitously to the public on Mondays and Saturdays, from 10 a.m. till 10 p.m., and on the other days of the week (except Friday) from 10 a.m. till 4 p.m., during the months of November, December, January, and February, and until 5 p.m. during the remainder of the year, with the exception of one month of vacation, from August 10 to September 10. This museum is intended for the exhibition of the rocks, minerals, and organic remains illustrating the maps and sections of the geological survey of the United Kingdom; also to exemplify the applications of the mineral productions of these islands to purposes of use and ornament. The collection divides itself into two principal groups—First, the *Natural Materials*—geological and mineralogical. Those interested in granites, serpentines, marbles, and minerals will find here much to occupy them. Secondly, the *Artificial Productions*, including a vast collection of pottery, porcelain, ancient and modern glass, and mosaics. Further, there are to be seen—(1) the mechanical appliances which are used in working the raw materials; (2) historical specimens which have been added for the comparison of the productions of other ages and countries with modern manufactures; and (3) foreign and colonial minerals imported in their natural state. There are besides other objects of a miscellaneous character which cannot be brought within any of the above groups, such as geological and mining models. The Palæontological collections are of great value to the searcher for mineral treasures.

This Museum is not sufficiently known to the general public, yet it abounds in objects of the highest interest, and its importance as illustrating the mineral productions of the country, and as showing their commercial value, is unspeakably great. Lecture-theatres and laboratories are attached, in which a large number of students are yearly instructed in analytical and agricultural chemistry, metallurgy, mining, and mineralogy, and the analysis of minerals, rocks, and soils.

This institution, which is now under the Department of Woods and Forests, was started in Craig's-court in 1837, and was removed in 1845 to the present building, erected by Mr. J. Pennethorne. The new Museum was opened by the Prince Consort in 1851, and has done a great deal towards the promotion of knowledge serviceable both to the agricultural and mining interests of this country. It is well worth a visit, and from its very central situation, and the free access which is permitted, no doubt many of our guests during the next

week will avail themselves of the opportunity of inspecting the treasures here contained.

ST. GEORGE'S HOSPITAL, HYDE PARK-CORNER, is a place of great interest to surgeons as the Hospital of Hunter and Brodie. There is nothing very remarkable about the building. The medical school, and especially the museum, is worthy of a visit. The board-room, where John Hunter died, contains a portrait and bust of Hunter, and a portrait of the Rev. Mr. Clarke by Callcott.

The medical officers visit the Hospital as follows:—On Monday and Friday, Dr. Fuller, Dr. Wadham, Mr. Prescott Hewett, and Mr. Holmes; on Tuesday and Saturday, Dr. Ogle, Dr. Barclay, Mr. Lee, and Mr. Pollock. The ophthalmic surgeon, Mr. Brudenell Carter, operates on Wednesdays at 1.15 p.m. Operations on Thursdays at 1 p.m. Post-mortem examinations daily at 2 p.m.

THE SOUTH KENSINGTON MUSEUM is certainly the most interesting collection of its kind in London, combining the scientific and æsthetic elements in a pleasing and quite remarkable manner. The departments include—paintings, sculpture, decorative furniture, porcelain, jewellery and other works in the precious metals, musical instruments, the food collection, and the educational collection. The Museum is open daily, either free or by payment of sixpence. At the gate the visitor should ask for a ticket to the National Portrait Gallery.

It is impossible here to do more than refer to the chief objects of interest; the visitor should possess himself at once of a catalogue and adopt the following plan:—

From the principal entrance (in Brompton-road) he will turn to the right and enter the South Court. Here is the Loan Collection of works of art in the precious metals, maiolica, clocks, etc., decorative furniture, wood carving, and a fine collection of musical instruments. In the Oriental Court to the right are works of art from India, China, Japan, and Persia. Passing on to the North Court and Cloister the visitor will find reproductions and models of famous sculptures, and should not fail to inspect several after Michael Angelo, including his "David." In this court are the Abyssinian spoils. Towards the west the court leads into the corridor in front of the refreshment-rooms, where there are a number of statues in marble, and original models by Campbell, Baily, MacDowell, Rauch, Thorwaldsen, and Marochetti. At the west end of the corridor, and on the right hand side, will be found the door leading into the north-west and north cloisters, containing small objects in bronze, copper, and iron; and furniture, carved and inlaid, of the middle ages. At the end of this cloister is the staircase to the Fine Art Gallery, where many of our finest national pictures are to be seen. Here we will tell the visitor to pass through the rooms in the order in which they are numbered, and with this advice leave him to himself. After inspecting the first ten rooms he will find himself in the large Raphael room, surrounded by the cartoons of which the country is so proud. Thereafter he should visit in succession the four rooms containing the Sheepshanks collection, the water colour gallery, the Prince Consort's gallery of treasures of art of the middle ages, and the ceramic gallery. Keeping to the left he will find himself at the staircase by which he ascended, and reaching once more the west end of the corridor he should enter the rooms containing the food collection. To the right he will find the educational collection of school books, designs and models for instruction in the fine arts, botanical, geological, and mineralogical specimens, and chemical and optical apparatus, etc.

THE NATIONAL PORTRAIT GALLERY should be visited after the South Kensington Museum. It stands on the opposite side of Exhibition-road, close to the International Exhibition building. The collection comprises 295 portraits and busts—many of great value from an artistic point of view—of kings, queens, statesmen, warriors, philosophers, artists, and members of our own profession. Among the painters and sculptors of the works are Janssen, Reynolds, Romney, Pickersgill, Kneller, Lawrence, Wilkie, Phillips, Woolman, Gibson, and Marochetti.

GARDENS OF THE HORTICULTURAL SOCIETY. The visitor to the International Exhibition should not fail to visit the gardens of the Horticultural Society, in which the Exhibition stands. Admission 6d.; on Saturdays 1s., and afternoon (band of the Guards) 2s. 6d.

INTERNATIONAL EXHIBITION. At the Exhibition of this year the fine arts represented are—paintings of all kinds; sculpture, carving, and the allied arts; engraving and photography; works of art by officers in the army and navy; lace and tapestries exhibited for their designs; reproductions of ancient works of art, etc. The chief manufactures to be seen are—silk fabrics; steel cutlery, surgical instruments, etc.; carriages; foods, including the various forms of drinks and tobacco; food-machinery; and the science and art of cooking.

The most interesting class professionally is that of surgical instruments and appliances (Class X., in the Royal Albert Hall, West Theatre.—"Official Catalogue," page 142). All kinds of instruments are here exhibited to interest the surgeon, obstetrician, chloroformist, oculist, orthopædist, dentist, aurist, and physiologist. Specially to be mentioned are the collection of instruments for lithotomy, etc., exhibited by the President of the Association, Sir W. Fergusson; the collection from the College of Surgeons; the selection from Liston's collection from University College; the case of ancient surgical instruments from the College of Physicians; and Dr. P. Chamberlen's case of obstetrical instruments, exhibited by the Royal Medical and Chirurgical Society. There is also a good collection of antique instruments from various countries.

The class of foods is abundantly represented (East and West Quadrants). The numerous specimens of adulteration of nearly every article of common consumption will be found very interesting (West Quadrant.—"Official Catalogue," No. 4328). There is a good collection of wines, spirits, beers, and tobaccos, and the processes of tobacco and pipe manufacture may be watched by the visitor.

The machinery in motion is this year almost confined to the preparation of Foods (East and West Galleries.—"Official Catalogue," pages 183 *et seq.*). Among the processes most worth inspection are the manufacture of maccaroni, mustard, and confectionery, and the bottling of soda-water.

The large collection of carriages will interest many visitors (East Arcade, South Corridor, French Court, etc.—"Official Catalogue," page 146).

Many of the pictures are exceedingly fine, especially the foreign. The sixteen pictures of Meissonier alone are worthy of a visit to Kensington (West Gallery, Room VI., screens.—"Official Catalogue," page 10). Every lover of the fine arts will carefully study the pictures of Phillip and Creswick—the first of the series of annual collections of the works of deceased British artists (East Galleries, Rooms XVI. and XVII.—"Official Catalogue," page 45).

Before leaving this neighbourhood, the visitor will of course see the interior of the Albert Hall, and the Albert Memorial on the opposite side of the road.

THE HOSPITAL FOR CONSUMPTION, BROMPTON. At the International Exhibition the visitor is about ten minutes' walk from the Hospital for Consumption; at the South Kensington Museum about five minutes' walk.

The Hospital contains about 200 beds, and has a very large out-patient department. The medical officers attend daily. There are at present several very interesting cases of aortic aneurism in the wards. The ventilation in the new parts of the building is worth inspection. The Hospital possesses several pictures by Opie.

ST. MARY'S HOSPITAL, PADDINGTON, contains about 200 beds. The medical officers attend at the Hospital as follows:—The physicians at 1.15 p.m.—Dr. Handfield Jones (out of town) on Monday and Thursday, Dr. Sieveking on Tuesday and Friday, Dr. Broadbent on Wednesday and Saturday; the surgeons at 1.5 p.m.—Mr. Spencer Smith on Monday and Thursday, Mr. Haynes Walton on Wednesday and Saturday, Mr. Lane on Tuesday and Friday. Dr. Meadows (Physician-Accoucheur) on Tuesday and Friday, at 9.30 a.m.; Mr. H. Walton (Ophthalmic Surgeon) on Monday and Thursday, at 1.30 p.m.; Mr. P. Allen (Aural Surgeon) on Tuesday and Friday, at 2 p.m. Post-mortem examinations at 2 p.m.; operations on Wednesday at 1.15 p.m.

St. Mary's Hospital may be reached by the Metropolitan or District Railways to Paddington, Praed-street Station, or Edgware-road Station; or by Bayswater omnibus from Oxford-street, Holborn, and the City to the corner of Praed-street.

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ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS OF TUMOURS OF THE BRAIN.(a)

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed.

Lecture I.

As we have always some cases of intracranial tumour in the Hospital, I make an opportunity of speaking at length on the diagnosis of this form of cerebral disease. I must, however, speak not only of tumours ordinarily so-called—such as gliomata—but of syphilitic growths (so-called syphilitic "deposits"), of cerebral abscess, and, indeed, of many kinds of adventitious products. I speak, in short, of what I have in the lecture on optic neuritis (see this journal, August 26, 1871, *et seq.*) called "foreign bodies" and "coarse disease." However different the several foreign bodies mentioned may be among themselves, many of their doings are just the same. Each of them may, and usually does, produce severe headache, urgent vomiting, and double optic neuritis. Putting this in another way, I would say that it frequently happens that you can easily decide that a patient has an adventitious product of *some* kind within the cranium, when you cannot tell of *what* kind it is. Let us consider a particular difficulty. The symptoms of a cerebral abscess are so like those of a cerebral tumour that the diagnosis betwixt the two is admittedly most difficult. I think it is altogether impossible *from the symptoms which the tumour or abscess provokes;* you are obliged to rely for diagnosis on the presence or absence of disease of some part of the cranial wall—mostly of the petrous bone. No one fails to inquire for discharge from the ear when his patient suffers severe pain in the head or has any acute cerebral symptoms. If you find symptoms showing that there is an adventitious product of some sort, and then discover that there is offensive discharge from the ear, you may infer, having excluded meningitis, that the adventitious product is an abscess. Occasionally, although rarely, even the evidence of aural disease is deceptive; there is sometimes found in association with it, not abscess, but "scrofulous tumour," which, however, I think probably depends on aural disease.

There is one other thing which I must mention in this connexion most prominently. It is, that syphilis may produce an intracranial tumour, which, when established, can next cause just the same sort of symptoms as the common kind of non-syphilitic tumours—gliomata—do. It is of extreme importance to bear this fact in mind. It is one way of putting the statement that syphilis mostly produces nervous symptoms by a very indirect process. In particular illustration of this statement, I here mention that optic neuritis from a syphilitic mass does not differ from the optic neuritis produced by a glioma. To state the same thing epigramatically, "optic neuritis from syphilitic disease of the brain is not syphilitic optic neuritis." This kind of distinction may seem simple enough when it is thus put definitely with regard to a particular symptom; but it is often ignored. It applies to most syphilitic nervous symptoms, and very strikingly to the three kinds of Syphilitic Hemiplegia I so often speak to you about.(b)

I make the above preliminary remarks because I particularly wish you to think methodically about cases. It is true that severe headache, vomiting, optic neuritis, etc., are "symptoms of cerebral tumour"; but unfortunately they are also symptoms of cerebral abscess, of syphilitic growths, etc.

So our first step in diagnosis is to find out that there is an "adventitious product" of *some* kind—of any kind,—or, as it is occasionally put, that there is "organic disease." But, of course, we have to investigate further in order to find the position of the adventitious product: this is the second step. Next we have to discover the *particular* nature of the adventitious product: this is the third step. We classify the symptoms according to these three diagnostic steps.

Class 1. *Symptoms which show that the Patient has an Adventitious Product of some kind "within his Cranium."*(c)—The chief of these are Headache, Vomiting, and Double Optic Neuritis. Emaciation also occurs not unfrequently during some *part* of the course of a case of adventitious product. Sometimes there is an acute illness—a rapid development of symptoms—in which the pulse and respiration are altered.(d) I have now only to mention these "vital" symptoms. It is during this illness that the patient becomes thin. When the headache, vomiting, and other symptoms are over, the patient may become fat, the reason for which is in part no doubt that, being blind or defective in sight, he leads a life of enforced idleness.

Now, these symptoms—the severe headache, the urgent vomiting, and the double optic neuritis(e) are the most characteristic of them all—are almost certain proof of the existence of an adventitious product inside the head. But do not forget that they are of no value as evidence of the position of that adventitious product nor of its *particular* nature; they only tell you that there is one of *some* kind.

Before I pass on to enumerate the symptoms of Class 2, I will, at the inconvenience of a lengthy digression, advert to a common misapprehension as to the *kind* of value in diagnosis which double optic neuritis, with or without amaurosis, has. It may at first glance seem that optic neuritis (since a *cranial nerve* is affected) belongs to the same group of symptoms as does paralysis of the third nerve—that it should be considered as a localising symptom among others in Class 2. But it is *not* a localising symptom: its diagnostic value is, I repeat, as to the *nature* of intracranial disease only; it points to "coarse" disease—to a "lump," to speak in a common way. This is another thing which it is exceedingly important for you to bear in mind. It would look superficially clear, but would be really barbarous, to place amaurosis from optic neuritis in the same category as palsies of cranial nerves. There can be no sort of doubt that amaurosis from optic neuritis belongs to the same group of symptoms as do vomiting and headache. This is as important clinically as it is pathologically. To those who had not investigated many cases of nervous disease it would seem far "simpler" to place vomiting, not with optic neuritis, but with symptoms referable to the digestive system. To show that my conclusions are not hastily arrived at, I quote from an old paper. In the *Royal London Ophthalmic Hospital Reports*, vol. iv., part 4, p. 408 (1865), I say—"It is a very great mistake to suppose that this form of amaurosis [there may be no amaurosis with or even *after* optic neuritis] necessarily indicates disease primarily involving the Optic Nervous System. . . . From this form of amaurosis alone (optic neuritis or its sequela of atrophy) I could no more diagnose the position of disease within the head than I could from the purposeless vomiting." To make this clearer by contrast, let me remark that such an "eye symptom" as hemiopia is localising, for it is one which must depend on disease of some *part* in particular.(f) To put the two symptoms (amaurosis from optic neuritis and hemiopia) together would be to make a superficial arrangement, not a simple one; it would be as bad as putting gonorrhœa and primary syphilis together.

Here it may be conveniently mentioned that deafness *is* a localising symptom, provided we can ascertain that it is of nervous origin, and also, of course, that it came on at the same time as—belongs to the same group as—the other symptoms of the case. It points to disease actually involving the nervous system of hearing. Amaurosis from optic neuritis

(a) I delivered a lecture on this subject about a year ago. Cases of intracranial tumour have been spoken of at length in several other lectures delivered at the Hospital before and since. The above in its present shape is, indeed, like others to follow it, a compilation from notes of several lectures, and is therefore more systematic than clinical. I have not hesitated to add the results of my most recent experience, nor to intercalate remarks on collateral topics. As texts for this lecture and others to follow it, eight cases of cerebral tumour have been recorded in the "Hospital Reports" of this journal, the first of them on November 16, 1872. That series will be continued.

(b) See this journal, May 23, 1868, p. 552.

(c) I use this clumsy sounding expression advisedly; for, so far as the signs mentioned go, the tumour might not be of a nervous organ; it might grow from the base of the skull, not actually growing into any division of the encephalon, although it would squeeze some part of it.

(d) I use the very general expression "altered" because they are variously altered. Such alterations occur in cases of cerebral hæmorrhage and in most cases of severe lesion of the cerebrum or cerebellum.

(e) Of course, strictly speaking, optic neuritis is not a symptom in the same sense as headache is; it is a pathological condition. As I have repeatedly insisted, there may be no symptom—no defect of sight attached to this pathological condition.

(f) And probably double optic atrophy coming on slowly, and not preceded by neuritis, should (if there were such other symptoms as palsies of cranial nerves, headache, etc., to show that the atrophy was not spinal) be considered as a localising symptom.

does not necessarily, nor even commonly, point to disease (g) involving the optic nervous system. The two symptoms are not different only in the very obvious sense that two different senses are affected, but in the far more important way that one is dependent on a change *secondary* to a tumour, the other on involvement of the auditory nerve by pressure of the tumour, direct or transmitted. Deafness *does* therefore belong to the same category as paralysis of the third nerve.

To the best of my belief, deafness never occurs by any process from tumour or any other sort of disease of the cerebrum or cerebellum.

The diagnostic value of loss of smell is probably as varied as is that of loss of sight. Of loss of taste I have nothing to say beyond what will come later on under the head of palsy of the fifth nerve, except to remark that loss or defect of taste is often supposed to be present when really there is only loss of smell.

The symptoms in Class 1 may be referred to as "non-localising," because they do not help us at all in the diagnosis of position. They may be called "general," because they result from disease of any part, or of numerous parts, of the encephalon. Indeed, vomiting can occur from disease of widely separated and most different parts of the body—from renal calculi, hepatic abscess, labyrinthine disease, etc.

Class 2. *Symptoms which Localise.*—These are palsies of cranial nerves, anatomical(h) varieties of hemiplegia, affections of speech and articulation, mental symptoms, *certain* convulsive seizures, reeling gait, etc.

It is important to remember that these symptoms *by themselves* enable you to do nothing more than localise. Strictly, they are not symptoms of cerebral tumour: they are symptoms of position of lesion of any kind; they are of no value whatever in deciding whether there is an adventitious product or not; they are localising only. They may be called Special nervous symptoms.

Class 3. *Symptoms and Conditions which help to show the Particular Nature of the Adventitious Product.*—We will suppose you have correctly determined that there is one. These are age, history, or presence of external signs of syphilis, discharge from ear or nose, history or signs of blows on the head, symptoms of phthisis, etc. There are also some empirical rules.

There are certain symptoms and conditions which one does not know in which class to put. For example, enlargement of the head is a localising symptom when it occurs with reeling gait (in that association it points indirectly to disease of the cerebellum); it is partly evidence of the nature of disease when it occurs with hemiplegia, for it then points to a *voluminous* adventitious product. Some intracranial tumours diagnose themselves by coming through the cranial wall into the mouth or out at the vertex.

The above threefold arrangement of symptoms is, I think, of value. It is very important to avoid mixing symptoms which have fundamentally different significance. To think of the symptoms of cerebral tumour in such an incoherent sequence as "pain in the head," "hemiplegia," "optic neuritis," "noises in the ear," "giddiness," etc., is to think very unmethodically. It may be convenient *in taking notes of a case* of hemiplegia to put down "that the patient's tongue is much furred *and* turns to the right;" but in thinking of his case, the two facts belong to altogether separate series. The investigator who thinks of symptons in this way is probably one who has no real method: it will be found, I believe, that his method (improperly so-called) is only an elaborate *arrangement* founded on superficial resemblances. In an argument on a case of cerebral tumour, to put in the same general category such symptoms as amaurosis from optic neuritis and deafness, or to think of the vomiting as a symptom of disorder of the digestive system, is to put together symptoms, not on such a kind of method as the botanist adopts in *classifying* plants, but on the kind of plan on which a gardener *arranges* them. It is true that the gardener's *arrangement* is better than the botanist's *classification* for *some purposes*. Similarly, certain arrangements of symptoms are better than natural classifications for some purposes—note-taking, for instance; but they are of very slender value in investigating difficult cases, or in finding out new things. A true classification should be also a means of investigation. The grouping of symptoms I have suggested does not pretend to be strictly methodical; our knowledge of cerebral symptoms is not sufficiently deep to permit of full method. It is, however, I trust, something more than a mere arrangement. Yet there are certain remarks to be made against the threefold classification.

Pain in the head is of some value in localising, *if it be persistently one-sided.* Again, hemiplegia, which we have called a localising symptom, is also very strong evidence of the *nature* of internal disease—that it is tumour—*if the palsy comes on very slowly*, the parts affected getting a little weaker day by day. Strictly, it is not the palsy, but its very slow onset, which points to tumour. Again, I have never seen entire loss of speech from any sort of adventitious product; so that loss of speech would negative tumour, abscess, etc. Disease of the ear is of some value in localising, because cerebral abscess therewith associated is usually found in a lateral lobe of the cerebellum or in the middle lobe of the cerebrum. However, the three lines of investigation are largely distinct. Let me give you an example of the steps in diagnosis which corresponds to them:—

First Step.—A young, healthy-built man, who is getting thinner, comes to you for severe pain in the head and urgent vomiting, and you discover double optic neuritis, although, perhaps, his sight is good. You conclude that this man has an adventitious product of some kind within his cranium.

The second step is to find in *what* part of the encephalon the adventitious product is. But he may have no localising symptoms; he may have only the symptoms above mentioned. *This is very often so.* Then, you cannot possibly tell in what part the adventitious product lies. Be sure of this, and don't guess; you may easily deceive yourselves. Since there is, we are supposing, *no* paralysis, etc., you may be almost certain that the adventitious product is *not* of the motor tract, and that it is, therefore, either in the mass of the cerebrum or cerebellum, for extensive disease in either of these parts need not produce obvious paralysis. But if you can get so far as this, you cannot get any further. If, then, because you have seen a case "exactly like it," in which there was discovered an adventitious product in the cerebrum or cerebellum, as the case may be, you venture on a diagnosis—if you say, for instance, "It is in the cerebellum,"—you may by chance be right, for there is only one other place in which it is likely to be. In reality, you cannot decide by the evidence supplied by all the symptoms I have mentioned in Class 1. For fear of misunderstanding, I remark that I do not mean to say that there are no differences in the sequence and grouping of symptoms of the *first* class in cases of disease of the cerebrum and cerebellum, but only that, so far as I have learned, no one is yet able to declare what these differences are.

Second Step.—Now, we will suppose that there *is* a localising symptom. Let us suppose that the patient comes again; he has had since the first visit a convulsive seizure *affecting the left side of his body.* The arm and leg of this side may have been paralysed for a short time after the fit. (The last is not essential, nor is loss of consciousness nor tongue biting. It is the one-sidedness of the convulsion which is diagnostic of position.)

You may then with confidence make the second step in diagnosis—you can localise. *You may be sure* that the adventitious product is of, or affects, the surface of the right side of the brain.

The Third Step.—Of what pathological nature is the adventitious product just localised? This is the most difficult part of our task: there may be no evidence, or there may be negative evidence only. There is no discharge from the ear, no history of a blow, no sign of syphilis, etc., and then you say that the adventitious product is most probably a non-syphilitic new growth. If there be a history of a blow, followed by a puffy tumour, you may diagnose abscess. If there be signs of syphilis in the patient's body, you say it is probably syphiloma. If there be phthisis, you infer that there is a mass of tubercle. So far in mere illustration.

I would earnestly beg of you to keep the three lines of investigation distinct, *even in cases where the diagnosis is very easy.*

(g) Of course, as the expression "optic neuritis" implies, there are pathological changes in the optic nerves, but primary disease is meant; the neuritis is the secondary result of disease at a distance from the nerve.

(h) By "anatomical varieties" of hemiplegia I mean one-sided palsies depending on lesions of lateral halves of different levels of the encephalic divisions of the sensori-motor tract. For example, palsy of the third nerve on the right, with palsy of the face, arm, and leg on the left, is an anatomical variety of hemiplegia; it depends on disease of the right crus cerebri; and so on for levels above and below this point.

THE HUNTERIAN MUSEUM.—A vacancy has been occasioned in the Board of Trustees by the lamented decease of the Bishop of Winchester.

ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGY AND CLINICAL USE OF THE SPHYGMOGRAPH.

By F. A. MAHOMED,
Resident Medical Officer to the London Fever Hospital.

No. IX.

(*With Photo-lithographic Plates.*)

On Aneurism: Precautions in Application; Direct Effect of the Sac on the Pulse-wave—Aneurism of Brachial—Axillary—Innominate, pure—Innominate and Aorta—Effect of Chloroform.

The present communication and the one following it will be devoted to the aid afforded by the sphygmograph in the diagnosis and treatment of some of the more common forms of aneurism. The fallacies attending its use in these cases are very numerous. Here, more especially, the instrument in the hands of an unpractised and careless observer is certain to lead to error. No one should attempt to use it who cannot readily obtain exactly similar tracings from the two radials of a healthy person. The results obtained from it, even under the most favourable circumstances, are sometimes disappointing; but the extreme value of the information it occasionally yields, on which alone diagnoses may be arrived at, unobtainable by all other means, will well repay any trouble that may be spent over it.

To insure a reliable result it is necessary that the greatest care be taken in the application of the instrument:—

1. Guard against all causes of transient excitement, especially as regards the instrument. Put the patient quite at ease by letting him see it applied to others, or by taking one or two preliminary tracings of himself.

2. Place the patient in as comfortable a position as possible, and let the position of each arm be the same when either radial is under examination.

3. Take care that the sphygmograph is applied to exactly corresponding parts of each radial, and that the pressure employed is similar.

4. Never be content with a single application of the instrument; apply it at least twice to each wrist, and do not accept the tracings so obtained unless they exactly coincide. Where the pulse in the two radials is found to differ the precautions taken must be redoubled, and it will be well to apply the instrument again on some other occasion to make sure that a similar result is obtained.

If besides these rules those previously laid down for discovering the most perfect tracing to be obtained from an artery be borne in mind, the sphygmograph will often prove an important aid to diagnosis.

But supposing all these sources of error to have been guarded against, the tracings of the two radials may be found to differ, although no aneurism is present. The more common causes for inequality in the radial pulse are the following:—

1. An abnormal distribution of arteries in the arm, such as a large median, or an alteration in the course of the radial. Some abnormalities about the aorta will produce it. The writer has seen a congenital contraction of the aorta, just below the junction of the ductus arteriosus, produce an inequality in the radials which gave rise to a suspicion of aneurism.

2. An old fracture or injury of the arm may have interfered with the flow of blood down the radial.

3. Paralysis of the arm, by interfering with the vaso-motor nerves and with the return of the venous blood, may alter the character of the pulse on that side.

4. A tumour external to the artery, either intrathoracic or extrathoracic, may impede the flow of blood down it.

5. Endarteritis, by partially blocking up the artery in some part of its course, may diminish the pulse-wave.

The first three causes may be discovered by an examination of the limb; the last two have characteristics which will be referred to hereafter.

When comparing the tracings of either radial the following points of difference must be looked for:—First, is there any difference in percussion—*i.e.*, is one upstroke more sloping or shorter than the other, or the apex less pointed? Second, is the tidal wave equally high and sustained in each? Thirdly, is the dicrotic wave equally developed? A difference may exist in one or all of these points. If it exist in the tidal wave alone it need not, and probably will not, be due to aneurism: it is the loss of percussion and dicrotism that is the most characteristic of this disease.

In order that the immediate effect of an aneurism on the pulse-wave may be demonstrated under conditions free from any complication, two cases have been selected, and placed first on the plate, where the aneurismal sac occurs directly in the course of the radial, or rather in that of the artery of which it is a continuation. From the characteristics of these tracings it may be gathered what indications are to be expected, though in a less marked degree, in cases where the aneurism is more remote, and the diagnosis of which may be more difficult.

Figs. 1 and 2, Pl. vii., represent the tracings obtained of the radials of A. B., a woman, aged 69, admitted into Guy's Hospital November 14, 1870, under the care of the late Mr. Poland. She had an aneurismal tumour which extended above and below the elbow of the right arm. It appeared after a fall a fortnight previous to her admission, and was rapidly increasing. The aneurism was considered by Mr. Poland to be one of the brachial artery just above its point of bifurcation. Fig. 1, obtained from her left radial—that unaffected—demonstrates well the highly atheromatous condition of her arteries. This is indicated by the well-marked percussion-wave, the peculiarly sustained tidal (which terminates by an almost vertical descent, instead of the more gradual one produced by the contraction of the elastic coat of a healthy artery), the small dicrotic wave, and the succeeding almost horizontal line, occurring during the diastolic portion of the tracing, instead of the gradual collapse produced by the continued contraction of the normal elastic coat. In this condition we see how the contraction of the heart, which becomes therefore necessarily hypertrophied, is the only motor power in the arterial system—the aid of the elastic coat, which plays so important a part in the mechanism of the circulation of a healthy person, being entirely lost.

Fig. 2, representing the pulse-wave in her right radial, shows most markedly the effect produced by the presence of the aneurismal sac: all the three waves entering into the composition of the normal pulse are affected—two of them, the percussion and dicrotic, are totally annihilated; the third, or tidal, is diminished in volume and prolonged. The shock produced by the contraction of the ventricle that gives rise to the percussion-wave is lost in the aneurismal sac, which breaks the continuity of the column of blood of a certain tension that is required for transmitting a rapidly moving wave or vibration such as this. In a like manner the smaller and less marked dicrotic wave is also lost in the sac, which is dilated by and entirely absorbs it. It may here be remarked that the disappearance of the dicrotic wave, which occurs in this and other aneurismal tracings, gives evidence of the proximal origin of this wave, and disagrees with the theory of its distal origin maintained by Dr. Sanderson. The tidal wave, however, being of much greater volume than the other two, passes on beyond the sac, though retarded and diminished in size, the sac having been first filled, and by its interposition having altered the character of the tidal wave entirely.

The tracings represented in Figs. 3 and 4, Pl. vii., were obtained from H. S., a man aged 36, admitted into Guy's on February 9, 1872, under Mr. Cooper Forster. It will be unnecessary to enter into the details of this and other cases, which by the kindness of the physicians and surgeons of Guy's Hospital have been used to illustrate these papers; suffice it to say that the patient suffered from a large aneurism of the right axillary artery, which was cured by compression of the subclavian. The tracing of the pulse in the left radial (Fig. 3, Pl. vii.) has no especial characteristics beyond an indication of a large heart, while that of the right (Fig. 4, Pl. vii.) is a typical aneurismal pulse, and presents the same characteristics as the corresponding pulse in the preceding case. From this tracing it will be seen how greatly an aneurism situated directly in the course of an artery going to the upper extremity, and which does not implicate the aorta, affects the pulse of the side on which it is situate. In those rare cases of suspected aneurism of the subclavian or axillary arteries where the diagnosis in uncertain, the sphygmograph often proves extremely useful: such a case I have met with while writing this paper, but unfortunately too late to insert the tracings in the plate. A patient has been admitted into Guy's Hospital, under the care of Mr. Cooper Forster, with a pulsating tumour, corresponding in appearance and position to one produced by an aneurism of the left subclavian; indeed, it was

considered such by many. Without any particulars of the case being known or an examination made, tracings were obtained of either radial, and from the very slight difference in the pulse-wave of either side, the presence of an aneurismal sac arising from the subclavian was denied. The only difference that could be detected in the two pulses was that the left pulse required one ounce less pressure than the right, and that the percussion-wave was diminished on this side. This opinion was arrived at before any examination or diagnosis had been made by Mr. Forster, and coincided with that subsequently formed by him. The pulsation may be considered due possibly to a dilatation of the subclavian throughout its entire course.

The next two tracings (Figs. 5 and 6, Pl. vii.) are from a case of the highest possible interest, and one in which the value of the sphygmograph was pre-eminently illustrated J. B., a man aged 36, was admitted into Guy's, under the care of Dr. Habershon, November 15, 1871. He appeared to be suffering from an aneurism of the innominate, but whether the aorta was implicated or no could not be determined by physical signs; there was, however, no reason to doubt but that, following the general rule, it was. After an examination by the sphygmograph, it was stated that the opening between the aorta and innominate was extremely small, and that the former vessel was not involved. The case was, moreover, recommended as one suitable for ligature of the innominate, but, owing to an attack of bronchitis, this was out of the question at the time, and a day or two afterwards the patient died during an attack of dyspnœa.

The post-mortem revealed an aneurism of the innominate, about the size of an orange; there was half an inch of innominate between the aneurism and the aorta, the size of the opening between the two vessels being about that of a sixpence. Both the right carotid and subclavian arteries arose from the back of the tumour. The tracing obtained from the left radial (Fig. 5, Pl. vii.) does not possess any characteristic features, while that of the right (Fig. 6, Pl. vii.) is strikingly aneurismal. It exhibits a complete loss of percussion, the upstroke being sloping and the summit rounded; the tidal wave is not much if at all diminished, while the dicrotic wave is almost absorbed. It will be noticed that the pressure employed on this side (*i.e.*, seven ounces) is much greater than that on the left (*i.e.*, four ounces); but it is not to this that the difference is due,—the lighter pressure was previously tried on this side, but the tracing was found to be most perfectly developed with the higher. The question will naturally be asked, On what ground was the small opening between the vessels diagnosed? It was for this reason:—Aneurisms of the innominate, when the aorta is also involved, affects the pulse of the right side very slightly, if at all, and often no difference can be detected in the two radials; for, the innominate being connected with the aorta by a large opening, the whole sac virtually forms part of a dilated aorta, from which the innominate rises as usual: and this occurs before either of the large arteries take their origin from the aorta, and is not enough to produce a characteristic tracing on either side, or if it affects one it will often affect both. In cases of innominate aneurism this therefore forms a gauge of the amount to which the aorta is involved: the less it is implicated, the greater is the difference in the radial pulses.

The following case is a more obscure one, the diagnosis not having been verified:—T. H., a man aged 33, was admitted under Dr. Wilks on April 22, 1873. The position of the pulsating tumour rather indicated an aneurism of the arch than of the innominate, for it had caused the absorption of the first and second costal cartilages; but the constant pain, so great as to preclude the use of the right arm and shoulder, indicated pressure on the brachial plexus, and this could hardly have been caused by an aneurism of the ascending arch. The man was removed to a naval hospital, so that the termination is not known. The tracings (Figs. 7 and 8, Pl. vii.) show a very considerable difference in the pulse on either side. In Fig. 7, taken from the left side, there appears to be some diminution of the percussion-wave, and a tendency to rounding of the summits; while in Fig. 8, obtained from the right radial of the same individual, the tidal wave is much diminished, the percussion-wave is altogether absent—the upstroke being sloping and the summit rounded,—and the pulse is decidedly aneurismal. This occurring on the right side, while the left is not equally affected, evidences that the aneurism must interfere very considerably with the passage of blood down the innominate, even if that vessel be not solely involved. It is unfortunate that the result is not known, for the tracings are of great interest.

The next case is one chosen to demonstrate the fact that the presence of a large innominate aneurism, when the aorta is implicated, may produce no appreciable result on the pulse of the right side:—J. S., a man aged 33, was admitted under Mr. Bryant suffering from aneurism of the innominate involving the aorta. The tumour had existed for more than eighteen months. Mr. Bryant applied a ligature to the subclavian artery, and the man left the hospital much improved. the tumour being harder and the pulsation less. Figs. 9 and 10. Pl. vii., were obtained from his left and right radials respectively. The tracings present exactly the same characters, and no sufficient difference on which to base a diagnosis can be detected.

After ligature of an artery the establishment of a collateral circulation can be discovered by the sphygmograph before it can be detected by the finger. In this case, after ligature of the subclavian, by feeling for the cord of the contracted and almost empty artery, and applying the instrument, a tracing (Fig. 11, Pl. vii.) was obtained ten days after the operation, before any perceptible pulsation could be detected—indeed, if it had been attempted, a tracing might have been obtained previous to this, as much smaller waves than those in the plate have been traced after ligation of an artery. Seven days after this, when the pulsation could be distinctly felt, the tracing represented by Fig. 12, Pl. vii., was obtained.

The case illustrated by Figs. 13 and 14, Pl. vii., is another instance of an aneurism of the innominate implicating the aorta in which the pulse on either side does not materially differ. J. J., aged 55, was admitted into Guy's on April 3, 1872, under Mr. Cooper Forster. He gives a history of pain at root of neck for three years, and a tumour has been noticed for three months. Fifteen months ago he had been attacked during sleep by paralysis of his left arm and leg. His symptoms arising from the aneurism becoming more severe, he was admitted for operative interference. He died on the eighth day, after compression of the right carotid under chloroform; and at the post-mortem examination an aneurism was found which involved the whole of the innominate, part of the aorta, and about one inch of the carotid. The opening from the aortic into the innominate part of the aneurism was about the size of half-a-crown. If the tracings of the two radials be compared, it will be noticed that on the right side percussion is a good deal diminished; the upstroke, if carefully examined, will be found to be rather more sloping, while the sharp hook at the summit has almost entirely disappeared. The tidal wave, however, is not diminished; while the dicrotic, being more easily absorbed by the sac, is much more affected. There is, however, not sufficient sphygmographic evidence, either in this case or in the one preceding it, upon which to found a diagnosis of innominate aneurism. It is necessary to remember, therefore, that although the pulse tracings may be exactly equal, an aneurism may be nevertheless present, but that under these circumstances the aorta is almost certain to be involved.

While discussing aneurisms of the innominate and large vessels, it will be well to notice what indications the pulse gives that assist in the selection of a method of operative procedure. The distinction it affords as to whether the aneurism implicates the aorta or not, and is accordingly more or less remediable, has already been pointed out.

There yet remains an extremely important point to be noticed—namely, the effect of the prolonged administration of chloroform during the operation of compression of an artery. This appears to affect patients very differently, and to vary chiefly with the condition of their hearts and arteries—conditions which, in the presence of an aneurism, are of the gravest moment.

This important point does not seem to have been clearly recognised, yet sometimes the life of a patient may be imperilled by it; and the thought suggests itself, that a few cases must have occurred where this knowledge might have determined the choice of operation. Fig. 15, Pl. vii., represents the pulse of the same man as Fig. 3, Pl. vii., while under chloroform during the compression of his subclavian. When this tracing was obtained, he had been under the influence for some hours, and a most marked and extraordinary change had occurred in the pulse—it had increased to an enormous size; the heart was acting far more powerfully than was usually the case: for not only is there the great increase in size of the tracing to be considered, but also the fact that five ounces of

pressure had now to be employed, while two ounces was all that was previously required. The dangers to which the patient is exposed are evident:—1. Apoplexy, which will be found to occur in the following case. 2. Formation of another aneurism if the arteries are generally atheromatous or otherwise diseased, as by syphilitic arteritis. 3. If the pressure were distal instead of proximal, rupture of the aneurismal sac might probably ensue. 4. Retroflexion of an aortic valve may be induced, or, in case of previous cardiac disease existing, this may be increased. This latter probably occurred in the present instance. Previous to the operation, the heart's apex was found to be displaced outwards, and the organ appeared hypertrophied. A systolic and very faint diastolic bruit had been heard at the base and down the sternum. This under chloroform increased in intensity, while at one time the dicrotic wave in the tracing almost disappeared. After the operation the diastolic murmur appeared slightly louder than before, and although his cardiac symptoms did not increase, and the aneurism was cured, still one can imagine that a very different result might have been produced.

In the case of J. J., above referred to, a more serious consequence is exemplified. This man, it will be remembered, had, fifteen months previously, been attacked by hemiplegia. While under chloroform for compression of his right carotid, he was attacked by apoplexy. He lived after this, though without returning to consciousness, for eight days. At the post-mortem capillary hæmorrhages were found in the cortical substance of both hemispheres of the brain. His heart was hypertrophied and his arteries atheromatous. Fig. 16, Pl. vii., represents his pulse after being under chloroform for some hours, while Fig. 13, Pl. vii., was obtained previous to the operation. The pulse-wave is very much increased in size by the chloroform; but what is more important, the heart is acting so powerfully as to require a much greater pressure to develope the tracing. An ounce and a half was previously sufficient for the purpose; now it requires five ounces. The natural effect of this violent action of the heart in a subject peculiarly liable to such a result, and who indeed had already suffered in a similar manner, was to rupture the delicate cerebral vessels, and produce hæmorrhage.

Both these cases, where the heart was stimulated to such excessive action by the administration of chloroform, are similar, in that both had hypertrophied hearts and bad arteries. In other cases where the aneurism has been due to localised arterial disease, and has not been accompanied by cardiac hypertrophy and general atheroma, I have not found the same effect produced. The pulse is then but little altered in its character; it generally becomes a little fuller and harder, but not to such an extent as to deserve attention. Figs. 11 and 13, Pl. viii., in the case of T. D., are instances of this. The indication afforded, therefore, appears to be this:—In cases of aneurism occurring in patients whose hearts are hypertrophied and arteries generally atheromatous, it is better either to compress without chloroform, or else to apply a ligature if possible, rather than submit them to a prolonged administration of the anæsthetic.

(To be continued.)

List of Naval Medical Candidates who were successful at the competitive examinations held at London in February, and at Netley in August, 1873, after having passed through a course at the Army Medical School, Netley, and who will receive commissions as Surgeons in Her Majesty's Navy:—

	Names.	Studied at	Number of Marks.(a)
1.	Wellings, B. W.	Glasgow	4485
2.	White, R. D.	Dublin	4350
3.	Leech, J. R.	Cork	4335
4.	Wilson, J.	Belfast	4185
5.	Madders, H. J.	Cork	4180
6.	Lucas, E. A.	Dublin	3675
7.	Sproule, R.	do.	3521
8.	Godding, C. C.	London	3355
9.	Browne, S.	Belfast	3137
10.	Flood, A.	Dublin	2795
11.	Harrison, H. B.	London	2770
12.	Fitzgerald, M.	Dublin	2730
13.	Hamilton, S. F.	do.	2413
14.	Magrane, C. W.	do.	2402

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Medical Times and Gazette.

SATURDAY, AUGUST 9, 1873.

THE ADDRESSES AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Like time and tide, the periodical press waits for no one, but with pitiless persistence and inexorable punctuality demands its pabulum. "Copy" must be forthcoming at the fixed normal time, come what will: "*ruat cœlum*," but feed the printer's devil. And so it happens that we must set to work for the instruction and edification of our readers just when the meeting of the British Medical Association is in full—play, we had very nearly said, but perhaps the expression might be misapprehended; "full swing" hardly sounds dignified enough for such an occasion; we may be permitted, perhaps, to say—just when the meeting is at the very top of the spring-tide of business and pleasure. Every hour of the working day is given up to addresses-in-chief, addresses in the sections, papers, and discussions, or to medico-ethico-political meetings; and in the evenings and far into the nights every minute is absorbed by public or private hospitalities; while all the hours—of business and of pleasure alike—are brightened and gilded by the formation of new and the refreshing of old friendships. Under such circumstances no one can expect that our editorial calmness and judgment can remain so uninfluenced that we can coldly criticise the quality of the work being done. We do not even pretend to attempt to do so, but we feel that we must, even this week, say a few words on some of the addresses that have been given.

The President's Address demands, of course, the place of honour in our notice; but we do not propose to say much about it, except to commend it to the consideration of our readers. The annual presidency of such a body as the British Medical Association must always be looked upon as a high honour, and especially so when the Association meets in London; but we confess that we think the necessity of giving an opening address to the Association must be felt by the President to be a heavy burden. Whether he be physician or surgeon, his own familiar field of practice is handed over to some other eminent man, who has to give an address in medicine or surgery, and so the lines of thought and work

most familiar to the President are of necessity almost closed to him. He of course acknowledges the honour conferred on him by his elevation to the presidential chair, and modestly magnifies his office and underrates his own merits; he utters some words of warm welcome to the Association on the part of the profession in the city in which it meets, and of the branch of the locality; he gracefully acknowledges the hospitalities and courtesies, civic, civilian, and professional, proffered it; and he dilates, more or less, on the past achievements of the Association, and on its future greatness and glory. But all this will not serve to make an "address," and the President has to cast about for some topic that will most probably not be dealt with in any of the other addresses.

The President for this year, Sir William Fergusson, took "Water Supply" for his subject, and boldly advocated quantity *versus* quality as the great desideratum. At least that will, we think, be the general impression made by his address; as he appears to argue that by far too much stir is made about the purity of the water supply compared with its copiousness. He says, "I fancy that the pure chemist is too often taken for one of us; I fear that many of us affect too much the airs of the pure chemist"; and towards the close of his address he says, "I cannot but again express my opinion that we, in our professional capacity, may err grievously in making trivial and questionable objections to the quality of water, when there seems a fair prospect of getting that which is most desirable for man's use—a full, ever-flowing quantity which might give a perpetual current, day and night, well-nigh fresh from the dew of heaven." We suspect that many of his arguments and illustrations are very open to hostile criticism, and that his plan for an ever-flowing supply of "nature-distilled, nature-filtered" water, by the formation of artificial lakes, will hardly be generally accepted as a practicable solution of the water-supply question. But we imagine that all he really wished to urge was that we should have water free from organic impurities for drinking, and a plentiful supply of soft rather than hard water for domestic purposes. He concluded his address with a happy allusion to the motto of the College that has courteously placed its buildings at the service of the Association—"We have begun our work this morning holily, under the dome of St. Paul's, let us conduct it wisely, and thus fulfil the well-chosen motto of King's College, within whose walls we are met—'*Sanete et sapienter.*'"

No words from us are needed to secure full and attentive consideration for Professor Parkes's able and interesting Address in Medicine. Recalling the medical practice of his student days, "now not very far from forty years ago," and thinking over the progress that has been made in the diagnosis, the cure, and the prevention of diseases, he, for our instruction, passes "in brief review the principal points in practical medicine which have seemed of most influence" during his medical life; and the retrospect with which he presents us is highly interesting and encouraging. Foremost in the list of discoveries and gains he places "Richard Bright's recognition of albuminuria, and Laennec's application of the ear to discover the normal and abnormal actions of the heart and lungs"; and he points out how wonderfully great were the advances thus made, and how marvellously little of error and incompleteness there was in the work of these men; and how, while Bright's work was inevitably less complete than Laennec's, yet it included "wonderfully little error of commission." "While Laennec," the Professor observes, "in his discussion on tubercle, wished to give a complete and exhaustive account, which he could not really do, and desired to bring everything into the narrow circle of a definition, which really left half out, Bright kept to his facts. What he saw he stated, and, as far as the facts warranted, he interpreted; but he went no further; and in this he showed a more philosophical mind even than the illustrious discoverer of auscultation."

Then Professor Parkes notices the discovery of embolism and thrombosis as, to his mind, "one of the most important practical advances in the last thirty years," and he seizes the occasion to pay a graceful compliment to Virchow: "Among all the discoveries in pathology which have been made by the surpassing genius of Virchow (and he has touched pathology at all points, and never without adorning it), there is none more valuable than the recognition of embolism."

The immense advances made in the knowledge of the entozoic diseases of man, and of the mode of access and the transformations of the entozoa, are then noted, as also is the recognition of diseases owing to cryptogamic plants, and "the researches which seem to trace so many affections, in part or wholly, to the influence of the bacteroid bodies which at present we must call plants"; and the Professor ventures to predict "that in this direction practical medicine is about to make another step, and that as there is 'a disinfecting surgery,' so also there will have to be 'a disinfecting medicine.'" We cannot attempt to follow Professor Parkes through all the subjects he handles so well, but we would especially direct attention to his able notice of the changes that have been made in the doctrine of inflammation, in our views of the pathology of phthisis pulmonalis and of tubercle, and of the advances made in our knowledge and understanding of the specific febrile diseases. In speaking of the latest dissertations and discussions on phthisis and tubercle, he well observes that "it would be rash to assert how we now stand in this matter"; but we think that he not unfairly sums up the results when he states, "it seems to me that the late able discussions in this country and in Germany tend more to the idea that the tubercular character is the consequence merely of an anatomical condition, and that the greater or less amount of lymphoid tissue in the lungs, and the fact of its involvement, will account for the peculiarity of form," and again, "the tendency of the inquiry seems to me to indicate that we must look to the anatomical condition of the bodily tissues, and especially to the abundance or special condition of the lymphatics in the lungs or throughout the body, to explain the hereditary nature of tubercle in certain cases, and also to account for those instances of general tuberculosis which formed the basis on which Bayle built up his hypothesis of phthisis." It is satisfactory to observe that Dr. Parkes, while fully acknowledging the labours of our brethren in Germany, France, and elsewhere abroad, does not forget to fully acknowledge also the labours of his brethren at home, but is careful to note that not a few of the points most insisted on in the pathology of the day had been taught in England years ago, though so disregarded, ill-appreciated, or forgotten that they have been rediscovered by foreign workers. It is highly satisfactory, also, and encouraging to find that a man of Professor Parkes's full learning and ripe experience is no sceptic as to the real advances made in the knowledge of practical medicine and in the art of curing disease. He believes his review "chronicles an immense forward movement in practical medicine," that it shows "that few subjects can boast more original investigations, and that, in spite of great difficulties, and oftentimes of great differences of opinion, the general knowledge of practical medicine has advanced continuously, and has advanced greatly." He has found his retrospective view cheering and hope-giving, and is able to feel "that we have played no unworthy part in the great drama [of the last forty years], and that among the restless activity of modern times, and the growth of newly-born sciences, an old art has not stood still, but with ever increasing power is still, as it always has been, a very present help in time of need."

Of the Address in Surgery, by Professor John Wood, of King's College, we can say but a very few words this week. Its character is that of the "practical" address; indeed, we

should best point to its value and interest were we to call it a clinical address on some important subjects in surgery; and we think that its author would appreciate and accept the compliment we pay him in thus valuing his work. The main subjects dwelt on are pyæmia, septicæmia, and erysipelas, in connexion with the antiseptic system of dressing wounds, the radical cure of rupture, and the treatment by plastic surgery of ectopia vesicæ, epispadias, and other cases of deficient development or of loss by injury. On all these subjects Professor Wood speaks with the authority of a master, and illustrates them from his own large experience. But we hope to return next week to the consideration of his valuable lecture.

THE PROPAGATION OF CHOLERA.

The discussion on cholera in the Section of Public Medicine at the meeting of the British Medical Association was seasonably opened and competently maintained, and we find with satisfaction that the results of it are on the whole reassuring. Four weeks ago, in writing upon the question of the propagation of cholera, we directed attention to two disquieting circumstances. The first of these was characterised as nothing less than alarming: it was the fact that the sanitary authorities of the Russian Government, headed by Dr. Pelikau, have arrived at the conclusion that cholera is endemic in Russia, and that the disease as it is seen at the present moment there and elsewhere on the Continent deserves the name, not of Asiatic or Indian, but of European or Russian cholera. To this view the opinion of no less an authority than J. Netten Radcliffe, representing the Medical Department of the Privy Council, is distinctly opposed. If the experience of our cholera authorities in England and India, as well as of the laborious students of the disease on the Continent, was of any value, there was *primâ facie* everything in favour of the Russian opinion being a mistaken one, and of the cholera visitation of 1869 representing a wave of the disease which had arisen in India. The fact that the contrary opinion is startling shows this, and there is still more powerful evidence. In 1867 Dr. Murray, the Inspector-General of Hospitals, watched cholera arise and pass through the north-west corner of India, and he foretold that the wave which had thus begun to roll would spread over Persia and Europe. As we now know, he was no false prophet: in 1869 cholera raged in Persia and Russia. Pelikau and the Russian Government urge, as we have seen, that this and other more recent visitations were but the outbursts of the smouldering embers of their predecessors; but in the evidence which they adduce in support of their views there are several flaws of sufficient magnitude to nullify the importance of their conclusions. The first, and perhaps the chief of these, is their entire disregard in their calculations of the presence of cholera in North-Western India and especially in Persia. We have seen that it was in India shortly before, and in Persia it was both extensive and severe. There is no doubt that in 1869 the Russian authorities at Kiev were prosecuting the treatment of cholera as a local disease, oblivious to the existence of the plague in Persia, and to the free communication between their much-frequented city and their Oriental neighbours. Even granting that the 1866 epidemic had lingered on till 1869—and this is the second weak point in the Russian evidence—there is nothing to show that a fresh wave from India and Persia did not add its weight to its declining predecessor. On the contrary, Dr. Murray's observations and logical conclusions, and the presence of cholera in Persia, convert the probability almost into a certainty that such a fresh visitation did occur.

The second circumstance, which we may now regard with more composure, is one which refers to the propagation of cholera, not from country to country and nation to nation, but from man to man. In the article to which we alluded above, we entered at some length into Pettenkofer's views, and took occasion to remark that their effect is disturbing and may possibly prove pernicious. Pettenkofer's rejection both of direct and indirect contagion in the propagation of cholera reduces us to a condition of almost helpless ignorance, and stultifies many of the sanitary measures which we congratulate ourselves on having completed. It is for this reason that we feel relieved in learning that such men as Murray and Parkes still stoutly maintain that cholera is propagated by drinking-water, and by this medium chiefly. If the poison of cholera reaches the body mainly by drinking-water, we have it in a palpable form, and can deal with it accordingly. If, on the other hand, it were a miasm, as Pettenkofer would have us believe, not communicable by water or by direct contagion, we should have to do with a poison which we cannot grasp, but which, like that of ague, has such a peculiar local disposition as completely to elude us. It was interesting to hear several of the provincial speakers in this section expressing in emphatic language their belief in the communicability of cholera by direct contagion especially. At the same time, few, if any of them, refused to water in some degree or other the power of acting as a medium for the conveyance of the disease.

THE WEEK.

TOPICS OF THE DAY.

We are sorry to state that a number of cases of typhoid fever have occurred in the parish of Marylebone, and suspicion has been directed to the milk supply of the inhabitants of the districts which have been chiefly attacked. In reference to this matter we have received the following letter from Dr. Whitmore, the Medical Officer of Health to the district. As the matter is of vital importance to the population of the northern part of the West-end, we trust that any of our readers who may meet with cases of typhoid in that neighbourhood will not fail to institute the inquiries Dr. Whitmore suggests, and will communicate to him the results:—

"Department of Medical Officer of Health,
"Court House, St. Marylebone, W.
"August 6.

"Sir,—It has come to my knowledge that many cases of typhoid fever have recently occurred in this and neighbouring parishes amongst families who are supplied with milk from the same source. I shall feel under great obligation to any of your medical readers who may at the present time be treating the disease, or have recently done so, in this or the neighbouring parishes, to inform me with the least possible delay of the source from which in these instances the supply of milk to the family has been obtained.

"The great importance to the health of the community of the matter which my official position calls upon me to investigate, is my apology for asking your valuable assistance.

"I am, Sir, your obedient servant,
"J. Whitmore, M.D.,
"Medical Officer of Health for the Parish of St. Marylebone."

During the Session of Parliament which has just concluded, the only Bill affecting directly the medical profession which has passed both Houses and received the Royal assent, is the short Bill which we published in a recent number, giving the University of London the power to unite and co-operate with any two or more of the Colleges and bodies mentioned in the Medical Act of 1858 in conducting examinations. In future, then, if the conjoint examination be established in England, it will be lawful for the University to prescribe that no person shall become a Doctor, or Bachelor, or Licentiate of Medicine, or Master in Surgery, unless (in addition to passing such examinations as shall be prescribed by the University) "he shall have passed such examination for qualification to be registered under the Medical Act, and complied with such conditions relating thereto, as may be agreed upon between the said University and the College or body,

Colleges or bodies, with whom the said University may be united or co-operating as aforesaid." Another paragraph provides, as our readers know, that the assent of one of her Majesty's Principal Secretaries of State is necessary to give force to the arrangement between the University and the co-operating bodies, and also that one of such Secretaries of State may, at any subsequent time, if he shall think fit, revoke his assent—a provision which does not increase our belief in the stability of the whole scheme.

We are sorry to state on undoubted authority that there have been cases of cholera at Hamburg. No more cases have occurred on board the *Rhin*, and arrangements have been carried into effect for removing from quarantine the healthy emigrants.

In the House of Commons, on Monday, the order for the second reading of the Factory Acts Amendment Bill was discharged.

The *Times* has recently published, in its outer sheet, a long letter from Mrs. Garrett Anderson, M.D., in which the writer, after reviewing the condition of the medical profession, the conservative instincts of the Colleges, the "trades unionism" of country medical men, and the general benighted condition on the subject of female medical education of doctors who are fathers of daughters as well as of sons, recommends the aspiring damsels who wish to practise physic to give up England and Scotland as a bad job, and to go to Paris, where they can get a degree. "*Solvitur ambulando*" is the motto she would have them adopt. Of course, foreign degrees are not registrable, but this she seems to think is of little consequence, and after all it will only be for a time. When women get the franchise, one of the first things they would hope to obtain "would be the throwing open to them of the benefits of the Scotch universities." It will be seen that Mrs. Anderson still advocates a common medical education for men and women.

RECRUITING AND THE BRITISH ARMY.

We recently commented on the subject of recruiting for the army upon the occasion of a debate which took place in the House of Lords on this matter, and we pointed out that from the returns which had been furnished it was abundantly evident that, as regarded stamina and physique, our army could not be said to be on a satisfactory footing. An incident which is reported to have occurred at the Autumn Manœuvres now taking place on Dartmoor will amply explain our meaning. One of the battalions of the 9th Foot was brought by rail to within seven miles of its appointed camping-ground; it should have been met on its arrival at the station by certain commissariat waggons of the Control Department, in order that breakfast might be served out to the men. No waggons, however, appeared, and after waiting for some time the order was given to march for the camping-ground. The morning was certainly warm, and the troops fasting, but such a scene as was presented by this regiment *en route* could scarcely be considered reassuring by the most ardent admirer of the powers that be. The men began to fall out almost as soon as the column moved. They are represented to have been for the most part youths, apparently perfectly unable to make head against the weather on empty stomachs; and the corps would appear to have finally reached its camping-ground with about half the number which filled its ranks at starting. Such a state of things is matter for grave consideration, and the question which naturally arises is, What would have been the result in actual warfare if this is to be taken as a sample of a march undertaken in time of peace? It may be argued that the men were exhausted for want of food; but supplies are not always at hand in time of war, and we think all our generals will agree that the British army should be composed of soldiers who could make a march, such as this regiment was asked to do, under almost any difficulties. The Franco-Prussian war exhibited instances of enormous marches undertaken by the Germans. The advance on Paris after the battle and capitulation of Sedan was spoken of in terms of wonder by military men, on account of the rapid and continuous work which the men were called upon to get through, yet the stragglers were utterly inconsiderable. Now, we cannot for one instant allow that the stamina of our countrymen is inferior to that of the Germans; but the class of recruits obtained under the present short-service system is not up to our lowest standard. We have abolished pensions, and removed at least one inducement for men to remain in the army, and after six years' service we lose the growing youths at the very time that they have, thanks to regular feeding and good training, developed into stalwart, healthy men.

The service is not so popular as it should be. The recruiting returns show that the numbers obtained during the past year were far below what was required, hence the qualifications are reduced as regards height and chest measurement; and that army, which should be second to none for physique and stamina (when the health and hardiness of the inhabitants of these islands is taken into consideration), affords in one of its sections the example which we have now quoted.

We are assuredly a supine people, even where our greatest interests are concerned; and if at some future day, with dissatisfied officers (military and medical), weak and incompetent men, and an inefficient Control system, we meet with some huge disaster, we may possibly apply a sweeping and vigorous system of reform to the administration of our army affairs, and perhaps regain our former state of efficiency; but nothing short of such a calamity would appear to have the slightest power in arousing our rulers to a sense of the decadence of our country in a military point of view.

THE ROYAL COLLEGE OF PHYSICIANS.

The following are the names of the Members of the Royal College of Physicians of London who were elected to the Fellowship on July 31, 1873:—William Wilson, M.D. Gott., Florence; Henry Moon, M.D. St. And., Brighton; Francis Cornelius Webb, M.D. Edin., Woburn-place; Alfred Hall, M.D. Edin., Brighton; Sigismund Sutro, M.D. Munich, Finsbury-square; John Cameron, M.D. Glasg., Liverpool; Sir Joseph Ritchie Lyon Dickson, M.D. Malta, Teheran, Persia; Robert Elliot, M.D. Edin., Carlisle; Charles Coates, M.D. Aberd., Bath; Alfred Meadows, M.D. Lond., George-street, Hanover-square; Thomas Beath Christie, M.D. St. And., Royal India Asylum, Ealing; Alfred Baynard Duffin, M.D. Edin., Devonshire-street; Christopher Mercer Durrant, M.D. Ipswich; William White Williams, M.D. St. And., Cheltenham; John Beddoe, M.D. Edin., Clifton; William Coverdale Beaty Eatwell, M.D. Glasg., Oriental Club, Hanover-square; Peter Eade, M.D. Lond., Norwich; George Hare Philipson, M.D. Cantab., Newcastle-on-Tyne; Balthazar Walter Foster, M.D. Erlang., Birmingham; Thomas Tillyer Whipham, M.B. Oxon., Green-street; Thomas Buzzard, M.D. Lond., Grosvenor-street; Richard Douglas Powell, M.D., Henrietta-street; Joseph Frank Payne, M.B. Oxon., Savile-row.

EDINBURGH UNIVERSITY CLUB.

The "Capping-day" dinner of the Edinburgh University Club was held at St. James's Hall Restaurant, London, on the 1st inst.; Sir John Rose Cormack, of Paris, M.D., F.R.S.E., presided. After the usual loyal toasts, the Chairman proposed the "University of Edinburgh and the hundred gentlemen who had a few hours previously been created Bachelors and Doctors of Medicine." In the course of his remarks he read a telegram, which he had just received from Edinburgh,

announcing the number of new graduates and the names of the medallists. In continuation he said—

"In ancient days, when the University of Paris proudly and truly called herself the instructress of nations, we read that her sons counted themselves as one family, and were bound together in the closest bonds of brotherhood. When crusading bands of rival nations met in distrust on the plains of Palestine, distrust ceased on their finding that they had an equal claim to an Alma Mater on the distant Seine. "Nos fuimus simul in Garlandiâ"—we were fellow-students in the University of Paris. These magic words dispelled national antipathies, and inaugurated enthusiastic solidarity and brotherhood. Is it not with exactly similar feelings in our hearts, and with almost the same words on our lips, that we have this evening taken our seats around this social board, saying, 'You and I, and all of us, are Edinburgh men'? (Cheers.) The telegram that we have just received carries us back in memory to the old scenes of study and amusement, when life was young, and to some particular August 1, it may be many many years ago—a long past cappiug-day. Prosperity, then, to the University of Edinburgh, and may God speed the hundred graduates who have this day received their diploma."

The Chairman then proposed the toast of the evening, "The Edinburgh University Club." Dr. Sieveking proposed "The Health of the Chairman," who he said was an honour to the club, to his profession, and, as the Queen had signified, to his country, by her having conferred upon him the honour of knighthood. The Chairman, in his reply, gave some graphic sketches of incidents in which he had taken part during several of the battles around Paris during the German siege, and in Paris during the terrible days of the Commune. He stated that during the thirty or forty hours of the battle of the Faubourg St. Honoré he had received no less than sixty-four cases of gunshot and shell wounds into Sir Richard Wallace's Ambulance Anglaise. He concluded his interesting sketches by saying that those who had gone through such scenes felt perhaps more intensely than others the blessing of belonging to a nation as yet a long, long way from communistic contamination. Dr. Whitely proposed the health of Lady Cormack, whom he knew well was a true wife, a worthy helpmate of her courageous husband, and, as he had heard from many sources, she had proved an invaluable fellow-worker with her husband in the trying times of the two sieges. The Chairman, in returning thanks, said that without his wife's support he did not think that he could have emerged a living man from the ordeal. The entire want of news for months of absent loved ones, the long famine of food and fuel, and the personal danger to which he was often exposed, tried her sorely.

LUNATICS AND ALLEGED LUNATICS.

A special committee reported to a meeting of the Islington Board of Guardians held last week the result of their visit to the Hanwell and Colney Hatch Lunatic Asylums. It was stated that some of the patients were not really insane, and a Mr. Cafflin said many persons were sent to lunatic asylums in consequence of the pecuniary inducement offered to boards of guardians, as when they were kept in workhouses the allowance from the Metropolitan Common Poor Fund was 5d. a day, but when they were sent to asylums the allowance was 12s. a week. With whatever sincerity—and we do not doubt it—Mr. Cafflin made his statement, we cannot believe it to be correct. The regulations respecting the custody of lunatics in our public asylums are, if carried out efficiently, competent to prevent such a gross outrage upon humanity. We believe that these regulations are so carried out. But, whether this be the fact or not, Mr. Cafflin's statement demands a searching inquiry, and we feel confident that the Commissioners in Lunacy will take steps to test Mr. Cafflin's accuracy. Whatever abuses in times past may have existed with respect to the custody of "lunatics," either in private or public asylums, we are convinced at the present time they do not prevail. The public mind, however, is extremely sensitive on this question, and its sensitiveness is kept at a maximum by the stimulus administered by writers of fiction. Nothing is more difficult in some cases than to determine whether a person be really of unsound mind. That this question should be left to the judgment of laymen would be a great mistake. The worst and most dangerous of lunatics are those whose real mental condition is at times only to be discovered by the searching investigation of experts. If a mistake be occasionally made, it should certainly be promptly rectified. There is no class of unfortunate members of society more "hedged in" by legal protection than persons of unsound mind, whether as regards their custody or the protection of their property.

ALLEGED DEFECT IN THE ADULTERATION ACT.

Dr. Tidy, the analyst for the parish of Islington, stated to the Vestry meeting last week that in performing the duties devolving upon him under the Adulteration of Food Act he had thought it better to commence with the common food of common people—bread and milk. Of the former he had analysed twenty samples, and out of these sixteen did not contain any alum at all, and the other four such a small quantity that he did not think it advisable to recommend a prosecution in either case. He intended to proceed with the analysis of other articles of food; but with regard to spirits and beer, he thought they were not included in the Act, and that the duty of analysing these drinks belonged to the Excise officers, who had power at any time to enter publicans' cellars and take samples. He knew it was a legal question, but until it was decided he did not feel called upon to analyse beer or spirits. He did not think it would be well to push the Act to its extremity. The Act must be sadly deficient if Dr. Tidy is right in his opinion. There are no articles consumed by the public that probably are more adulterated than spirits, wine, and beer. Dr. Tidy, from his large experience, is entitled to be heard with respect on the subject. On such an important point, however, it is of the last importance that no "legal" doubts should exist.

A WORTHY TESTIMONIAL TO A GOOD MAN.

In the decline of Athens, when it became the fashion of erecting statues to "deserving citizens," it was said, somewhat ironically, that it was easier in that renowned city to find a statue than a man. What with monuments and other marks of esteem to persons who have done public service, however small or great, England may at no far distant period be open to the charge that these marks of approbation have been too indiscriminately given. An exception to this practice is therefore worthy of being recorded. Such an exception is that which we have the pleasure of recording with respect to Dr. Chadwick, of Southport. A bronze statue of Dr. Samuel Taylor Chadwick, of Southport, has been erected at Bolton. Dr. Chadwick formerly practised in Bolton, and a few years ago made a gift to the town of £20,000 for erecting a model dwelling and orphanage. Twenty-five houses have been built, and the rents—£725 per annum—are to be appropriated for the support of the orphanage, which will accommodate eighty girls. In commemoration of these gifts of Dr. Chadwick the statue has been erected by the inhabitants. The statue itself is an admirable likeness of Dr. Chadwick. The sculptor is Mr. C. B. Birch.

AN EXCEPTIONAL OCCURRENCE.

At an inquest held last week by Dr. Hardwicke on the body of George Pearce, aged 40, a commercial traveller, who was taken ill in the Wandsworth-road, a Mr. Hayward, a witness, stated that he procured a cab and took him to St. Thomas's

Hospital, where he was refused admission, the beds, as was alleged, being full. Mr. Hayward then went to the Westminster and subsequently to the Charing-cross Hospitals; at both of these admission was refused on the same grounds. The deceased was then taken to the police-station at Bow-street, and Mr. S. Mills, the divisional surgeon of police, finding the deceased very ill, sent him in a cab to the workhouse, where he died four hours after admission. A verdict of "Died from natural causes" was found, the jury appending the following to their verdict:—"We, the undersigned jurymen empannelled and sworn touching the death of George Pearce, think it highly reprehensible on the part of the officials of so large a hospital as St. Thomas's to have no beds available for the receipt of such patients as the deceased, who was brought in a cab to the hospital in a dying state by one Henry Hayward, on the evening of the 26th inst., and we consider that the other two hospitals' officials are also to be blamed in the matter. And we regret that we cannot properly reward Mr. Hayward for his good feeling and kindness towards the deceased."

PULMONARY CONSUMPTION IN TASMANIA.

After thirty years of observation (says a medical practitioner at the antipodes in a communication to the Royal Society of Van Diemen's Land), I find that in Tasmania the death-rate from consumption and other diseases of the respiratory organs is less than half that of England.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION,

London, 1873.

The meeting of the British Medical Association has undoubtedly been a great social success. There has been a vast influx of medical population to the metropolis, and we may hope that the health of the country will not proportionately suffer. We can congratulate our country *confrères* on the excellent appearance they have presented—a set of more healthy, hearty, happy-looking gentlemen it would be difficult to meet. The lecture-rooms, sections, and especially the *conversaziones* have been very largely attended, and everything has hitherto gone off most pleasantly and smoothly. The reception at the Mansion House on Tuesday evening, attended by between two and three thousand people, worthily inaugurated the festal part of the proceedings. The Lord Mayor, Sir Sidney Waterlow, received his guests with all possible kindness, and provided for their amusement an excellent concert of vocal and instrumental music, which would have been more highly appreciated, we think, had there been less conversation. But there was much to be said in excuse for the talkers, for many of them had not met for many years, and recollections of old friendship are apt to make people forget that they ought to listen even to Mattei's playing or Madame Albani's singing. The scene at the Mansion House was a very brilliant one, and it was of course heightened by the magnificence of the apartments and decorations. The suites of apartments were fitted with every kind of attraction calculated to please the most different tastes, objects of science and art being presented in agreeable combination. Pictures, sculpture, photographs, etc., were relieved by microscopes, spectroscopes, and electrical apparatus. The number of visitors being so large (it is said 1400 gentlemen and 900 ladies were present), the scene was both animated and gay, and the well-dressed crowd was occasionally very dense in the refreshment-rooms and the Egyptian-hall. Notwithstanding this, the reception was pleasant in the extreme, and the expression of enjoyment general and hearty. It was an early hour before the last of the guests took their departure.

A number of distinguished medical *savans* from the Continent have honoured the Association with their presence. Amongst them are Professor Virchow, Drs. Cornil, Krishaber, Lazarewitch, Professor Spiegelberg, Baron Langenbeck, Drs. Chauveau, Ollier, Gueneau De Mussy (of the Hôtel-Dieu), and Oscar Liebreich.

The Annual Museum of the Association is an exhibition of specimens of normal and morbid anatomy, drugs and articles of diet, recent medical and scientific literature, and professional instruments of every description. Too high praise cannot be bestowed on the Museum Committee, and especially on Messrs. Waren Tay and Francis Fowke, the honorary secretaries, and Dr. Kelly, the honorary curator. The labours of these gentlemen must have been almost superhuman to have produced such a complete catalogue and such a magnificent display of objects within a limited time.

The department of pathology is illustrated by specimens, casts, drawings, and photographs, and the combination of form and colour has been so artistically made that the whole has a most pleasing and interesting aspect. The objects are arranged according to the various systems, and in addition there are special departments for the exhibition of specimens of lymph-adenoma, diseases of the supra-renal capsules, morphœa, visceral syphilis, and leucocythæmia. Many of the objects are of historical interest, as the six specimens of diseased kidneys originally described by Dr. Bright; of the viscera in lymph-adenoma from cases which occurred in the practice of Hodgkin himself; and of diseased supra-renal capsules from Addison's own patients. We cannot go more into detail in this place; suffice it to say that all the specimens are of interest. There is a valuable selection of casts of skin diseases from Guy's Hospital. Among the drugs are preparations of eucalyptus globulus and guarana. Among the instruments, physiological and electrical apparatus are well represented. Ordinary surgical appliances are of course in great abundance, as well as instruments for all the specialities.

The serious business of the meeting commenced on Tuesday afternoon, with the farewell address of Mr. Baker, F.R.C.S., of Birmingham, and the installation of the new President, Sir William Fergusson, Bart., F.R.S., who on taking the chair was loudly cheered. He proceeded to deliver

THE PRESIDENT'S ADDRESS.

Sir William Fergusson said that on assuming that position he naturally felt impelled to express the very high sense he entertained of the great honour conferred upon him. Looking back to the long list of distinguished men who had preceded him in that position—distinguished alike by their high social qualities and eminent professional reputation—the honour of being selected to hold this chair was such as might be thought to fill to overflowing the cup of ambition upon which any member of the Profession might have set his mind. It had happened to him to have received a share of honours far beyond his humble merits, and far beyond what the wildest dreams of youth and early years could have anticipated. For these he was dutifully grateful, and for that crowning distinction which placed him for a time at the head of the largest association of medical men ever voluntarily banded together for the general good of the profession, he said with a heart full of emotion that he was thankful, far beyond the command of words to express, for this indication of their appreciation of his personal or professional merits, to hold the foremost place among them. He referred at length to the character of the addresses given in former times by the President of the year, and he pointed out that while at one time the "address" was a review of the year, at another stage of the Association's existence the orator of the year was deemed a sort of Hippocrates, a Galen, or a Celsus, who should display an amount of concentrated knowledge such as might be expected in a well-appointed University. This seemed, he said, to be followed by a feeling that this extensive range was something which overtaxed the best men, and what had before been prescribed for one man was looked for from more; hence arose the custom of separate addresses on Medicine, Surgery, Physiology, and other subjects, irrespective of what might be expected of the President. He referred them to the President's address last year, and said Mr. Baker left the ordinary beaten path, and, like some of his predecessors, adroitly seized on a subject which possessed, for the time, an interest even more exciting than ordinary professional subjects. The town of Birmingham and its surroundings, the topography of the district, its great factories, its

deep mines, out of which so much of the wealth of England had been developed, were themes which proved most attractive, and every one present felt that he was listening to a story of England's greatness, described by one whose lifelong residence in the district, and whose talents and acquirements qualified him in a high degree for the duty he undertook. Conjecturing what he (Sir William) might say on this occasion, he naturally, from the local example of last year, thought what a subject he had before him were he to take London and its environs. With a history well-nigh as old as our knowledge of the island of Great Britain, with a progressive aggregation of humanity larger than the world had ever seen, there were materials for hundreds of addresses, and it might be allowed that the valley of the Thames, however beautiful as regards its surface, or interesting as the largest and most populous in our island, lacked much of that special interest which engrossed the attention and occupied the labours of modern men in reference to the mineral products from underground. There was nothing in the London clay, nothing in the geology of the valley of the Thames which could compare in interest with under-surface matters in other parts of the country. There were, however, certain features connected with the valley of the Thames which seemed worthy of special attention; and questions might fairly be raised as to the hygienic condition of the locality. He supposed there could be little doubt that those who planted London as a post or capital looked to the ground on which the Tower stood as a good commanding position on the estuary of the Thames, and that little was thought then of the teeming millions of subsequent inhabitants who would populate the town and valley above. At that date there must have seemed a world of waters sufficient for all after years; the question of drainage would then be little thought of. In primitive times, springs, river-sides, and shallow wells were the chief immediate sources of water supply. As years rolled on where population increased, these resources were found deficient, and additional ones, in a higher style of engineering, were required. He was more impressed regarding the civilisation of the Romans, by what they had left indicative of their efforts to give supplies of water when required for health and comfort, than by any other features now extant. The great conduits which testified to the engineering skill of the time, as also to the expenditure incurred in regard to this necessity of life, and the remains of their baths, were ample proofs to this effect. To many it might seem strange that he should refer specially to such a subject on this occasion. It might be thought to pertain chiefly to water companies, engineers, and ratepayers; but, in reality, it pertains to the public at large, to public hygiene, and in the latter respect peculiarly to this profession; and for such reasons he knew of no section of what is now often called State Medicine more interesting than that of water supply "where men do congregate." It was right and fitting, in his opinion, that at a meeting such as this some special reference should be made to the subject. Next to the treatment of disease and accident, it stood foremost in professional minds, for water was as much a question of food as any other dietetic material that can be named. Our supplies of vegetables, of fish, of animal material, came possibly second in importance to this necessary of life. Mother Earth herself took nourishment from her own direct produce—effete vegetation, from the decay of fish, and the *débris* of animal life; but all these would count for nothing if she were deprived of water-nourishment. Rational physiology might be called the philosophy of life, and the profession, claiming physiology as one of the highest departments, might claim, as the most skilled conservators of public health, that their opinions regarding water supply should hold due influence over the public mind. It was to the honour of this and all other similar meetings that almost every paper in the sections was devoted to the amelioration, the mitigation, the suppression of disease. In law, man dealt with what man had done or chose to do. In diseases, the profession dealt with causes and courses which, in general terms, might be said were far beyond the ken of man; they came in contact or into collision with nature in varied aspects and phases which the wise thinker in the profession would hardly venture to explain. It was at this point, perhaps, that the profession had from time to time broken down by attempting too much. Who among them knew what miasm was? What sense was there in the idea that it might be averted or obstructed by coverings or nets, driven away by fires, or frightened off by artillery? Yet all such theories had obtained more or less favour in the profession, even in the nineteenth century. Who among them could positively, in reasonable terms, define the physical condition of miasm as it once prevailed in the fens and swamps of Lincolnshire, or possibly even now lingered, if it did not dwell, in horrid perfection, on the banks of the Niger? It was to be hoped that the profession might in time be able to appreciate the palpable physical qualities of the great enemy in this shape. They had learnt empirically in time how to knock him on the head by force of quinine, but he was as impalpable now in these days of dengue as in the time of Hippocrates. But to return to common palpable matters irrespective of rivers of biblical, classical, or strategical interest, there were few to compare with Father Thames. The wealth carried on his surface below London-bridge well-nigh defied calculation. Besides the large share of what might be called our domestic wealth, the argosies of every country in the world were welcome to his waters. There laid the true greatness of the Thames. There seemed no exaction that man could ask from such a father which had not been granted; yet it was most worthy of consideration how far those who had lived and now survived on his banks had dealt fairly with the great stream. The Thames, in his lower course, was one of the greatest highways of commerce ever known to man. In his upper reaches he had been one of the best or worst abused streams that the world had known. He had been at once called to be one of the essentials of life to the inhabitants on his banks, and the cloaca of human aggregation. His streams had been run shallow, and his clear waters had been dimmed by the filthiest pollutions, until the sense of man had, in a manner, revolted at the work. The river thus abused was, in the days of Henry VIII., declared by Parliamentary document the finest salmon stream in his Majesty's dominions. This polluted upper stream was a large source of the water supply of the south and west of London. In many respects a "water question" was one of the most interesting in social life. It was as great now as when Moses struck the rock;. water was an absolute necessary of life. Many of what were called comforts and luxuries might be absolutely dispensed with; but, without water, both vegetable and animal life would cease. Here, as in many other public and national questions, there was great diversity of opinion. The sources of supply, the quantity, quality, and expenses thereof, formed separate heads, of which various classes of the community took special notice. The quantity and quality were the features in which, perhaps, the professiou were most interested. The public at large probably looked upon the sources and expenses as the most important features; but even here the profession, as ordinary citizens, were as much interested as were their fellows. In regard to quantity and quality, all seemed to agree that there should be the largest and best imaginable of both; no stinted time supply, but a continuous run of the finest. It seemed, however, next to an impossibility to have such in that locality. The Thames could not afford a sufficient supply unless his main stream were nearly run dry; nor did it seem possible, under the circumstances, to render the purity of that quantity such as should satisfy all. Filtering in great tanks on the river-side, in cisterns or vases in houses, scarcely seemed to accomplish this; and he was tempted to say that possibly a fault lay on the side of the profession that they expected too much for themselves, and led the public to expect too much, on the score of what might be considered quality and purity. Moreover, they differed largely among themselves in regard to these points. As educated chemists, in reference to animal life and nourishment, they talked and wrote learnedly about elements. The purest water might be defined as that which held least saline, animal, vegetable, or earthy material. The physician thought so highly of this feature that in a fluid dose of medicine he ordered the bulk of the potion of distilled water; yet in that water he probably congregated an amount of saline, animal, or vegetable material which no natural spring or unpolluted stream could be compared with. He sent his patients hundreds or thousands of miles to partake of waters where the converse of purity was generally the chief feature of the fluid. (A laugh.) But this, it would be said, was in accordance with the science of combinations and a just appreciation of the efficacy of salines, especially those compounded by nature in the bowels of the earth. He did not object to those impregnated waters as curative agents in certain forms of disease; he did not quarrel with the physician when he ordered distilled waters as the purest fluid for his compound—but in either instance that physician could not fancy that his patient was about to drink pure water—it might

be admitted that he had no such idea, yet the same man insisted stoutly on the necessity for unexceptionably pure water for ordinary drinks. This "Adam's wine" might be filtered, boiled, distilled, yet certain so-called impurities would hold their place or speedily reappear. Vegetable matter, animal matter, earthy or saline matter, were the bugbear of those who wanted pure water for man. Even the presence of a few fleas, to use a familiar expression, dead or alive, in a great natural basin of water, has been held as an influential objection to a scheme offering a double supply. He then supposed a pint of absolutely pure water given to the meal of the "pet of the day," the "working man," a model teetotaler who had taken a vow against alcohol and all fermented liquors, and asked his hearers to trace the frugal meal—say water and bread—as far as their physiological imagination could, down the intestinal canal and into the blood, and fancy from their knowledge the affluents thereon. Could "pure water" be recognised beyond the teeth in this downward course? Mucus, saliva, tonsillary secretions, mucus again, and gastric juice, and pancreatic, and biliary, all joined the ingredients of the simple meal. But suppose that the working man indulged in the luxury of a bit of beef or mutton, with some of the usual adjuncts—potatoes, turnips, greens, cabbages, peas, or beans—what was the fate of the pint of pure water which was deemed the grand feature of this excellent fare? Here vegetable and animal matter were joined with pure water to an extent a thousand times beyond the imagination of the pure water theorist, and the bread and water system was simplicity itself compared with this. He supposed other cases in different classes of society, and he asked, as to the grouse and venison eaters, supposing them to be "pure water" men, what became of the water as soon as it was swallowed? What about the pleasing adjuncts to these delicious articles of food, and what (to those who were always referring to salts in waters) about the common salt which was consumed in quantities so palpably larger than those pointed out by the chemist in so-called saline waters? What could medical men say of the refinement in diet of the savage who preferred animal food in a putrid state to that recently killed, and uses such surface water, or any other kind, as chance might put in his way? He fancied that the pure chemist was often taken for a medical man, and he feared that many of the profession affected too much the airs of the pure chemist, too frequently jumbled up chemistry and physiology, so that the characters of each seemed to suffer. He asked if they were not in reality too fastidious about "pure water." While the public—no doubt considerably influenced by the opinion of the doctors—haggled over this feature, the more important of ample supply, for all the purposes of man, was overlooked. Although water for drink was essential to existence, how small in proportion was that, compared with the requirements for sanitary purposes otherwise, such as cleaning, washing, in arts and manufactures. For man's stomach, the requisite quantity of wholesome water was so small that the trouble and cost of purifying by filtering and otherwise would be as nothing compared with the advantage of having what might be called a superabundance. If that superabundance was what the simple housewife called soft, the water desideratum would be fulfilled. He had heard on the best authority that in Glasgow alone, with a population of nearly half a million, where a large and wise expenditure had been incurred, there had been a saving of something like £40,000 a year in soap, owing to the softness of the water from a natural reservoir, which doubtless was formed by the watershed of the district in which it laid. The good folks of Glasgow tapped the side of one of the most beautiful and classical of Scottish lochs, and brought the water through conduits some forty miles long to place it at public disposal. The loch was none the worse, and the benefit to the citizens of the second city in the kingdom was perhaps incalculable. It seemed almost by instinct that, in the humblest of our cottages, and in most of our moderate unpretending dwelling-houses, there was a desire to have a supply of rain-water. The pump or the nearest open well or spring might be resorted to for water to drink, but the small quantity that can be caught from a stone, tile, or slate roof was eagerly sought by the judicious housewife. The quality of this water suits domestic purposes better than the brightest from well or pump. Largely though this little luxury was indulged in—for the water-butt abounded in every district—it was curious how this sort of instinct had been neglected by many who have catered for the supply of water on a large scale. There were many who approved the project of increasing the supplies of Manchester, Birmingham, and other midland towns, including London, from the natural lakes of Cumberland and Westmoreland. But might not something be done, less stupendous, yet equally effective? Natural lakes of sufficient bulk were not to be found in many districts, but might not artificial ones be constructed, which would largely supplement our present water supplies? In most of the upland districts in this country there were spaces, hollows, ravines, and valleys, where—as much of the surface is otherwise worthless—the water might be dammed up, and lake above lake might be made to appear on the landscape. This was no new proposal, and it had been acted upon in countries of ancient historical date, whose civilisation was never equal to that we now boast of, and the custom prevailed to a considerable extent in this island. Look to the rainfall of a season in this country, and consider how much, or how little, of this gift from heaven was actually used by man. Of all the necessaries of life this was the one which came upon us in this island most bountifully, and yet how much it was neglected. Instead of letting the floods damage our best alluvial soils, destroy vegetable and animal life, endanger man himself, and finally flow uninterruptedly to the sea, might not much of this flood be impounded on our watersheds, and there form small and large reservoirs and lakes, which would be ample supplies of the best water at every season of the year, and even keep in fair volume some of those primitive streams which doubtless were the attraction of those who originally settled on their banks? It was distressing to see, in some of our large towns, to what condition these once fair streams had been reduced; the water was taken off above until the bed of the river had been dried, and then let on again in every imaginable degree of pollution. Under such circumstances, the water thus taken from the stream might be supplemented by the upper stores, or, better still, these stores might be relied upon for most of the requirements of large communities. He had seen several severe droughts in this country, and had occasionally wondered what might be the result to animal life—man and beast—if the general distress should continue a few days or weeks longer. This involved a great hygienic question; and, interested as they were in it professionally, taught as all were in the virtues of water—home-distilled, nature-distilled, home-filtered, nature-filtered,—looking to the value of water to man as regards his internal and external bodily wants, he did not know any point of hygiene of more interest. Fish, sheep, and cattle can be brought in reasonable quantity—hundreds, it may be—in conserved condition, thousands of miles, but water could not be fetched such distances in sufficient quantity at reasonable terms. And here he could not but again express his opinion that in their professional capacity medical men might err grievously in making trivial and questionable objections to the quality of water when there seemed a fair prospect of getting that which was most desirable for man's use, a full, ever-flowing quantity which might give a perpetual current day and night, well-nigh fresh from the dew of heaven. He then touched upon the programme set before the meeting, and, referring to the gathering under the dome of St. Paul's, said the meeting had begun holily, and let them conduct it wisely, and they would then fulfil the well-chosen motto of the College within whose walls they were met—"*Sancte et sapienter.*"

The great event of Wednesday was the delivery of the Address in Medicine by Professor E. Parkes, F.R.S., of Netley. We need not say that Professor Parkes's most able address was listened to with the greatest interest and attention by a closely crowded audience.

ADDRESS IN MEDICINE,

By E. A. Parkes, M.D., F.R.S.,

Professor of Hygiene, Army Medical School; Emeritus Professor of Clinical Medicine in University College.

When the Council of the Association did me the honour of asking me to deliver the Address in Medicine, my thoughts naturally turned to the progress in the art of recognising, curing, and preventing diseases which has taken place during the period over which my personal knowledge extends. I began to try and recall the medical practice of my student days, now not very far from forty years ago, and to think over the chief changes which have since occurred. I found the retrospect interesting; and, in the hope that it may prove so to others, I shall endeavour to pass in brief review the

principal points in practical medicine which have seemed of most influence during my medical life.

When I commenced attending hospital practice thirty-seven years ago, the two great discoveries of the first quarter of this century—viz., Richard Bright's recognition of albuminuria, and Laennec's application of the ear to discover the normal and abnormal actions of the heart and lungs—had hardly made their complete impression on medical practice. The urine, indeed, was tested in every hospital, and the stethoscope was taught in every school; but we were still able to see something of the old practice, and to observe how great a change had been produced. By a little effort a student of the present day may imagine what a light the discovery of renal and of auscultatory signs threw upon the chaotic practice of earlier times. Without a recognition of the state of the kidneys, diagnosis was often little better than guesswork, and in many cases was impossible. Diseases such as some dropsies and uræmic nervous conditions ran their course without their nature being in any way detected. There were still some old practitioners who did not use the stethoscope, and were obliged to rely on very uncertain indications when judging of heart or lung diseases. But everywhere these two grand advances were being diligently pushed on, and their extraordinary importance for the whole human race was recognised. Our everyday work became defined; indecision, the most harassing of our troubles, was replaced by certainty; symptoms thought to be identical were suddenly separated; what had been deemed important was seen to be useless; what seemed insignificant was shown to be full of meaning.

Nor has any advance since that time equalled these two great steps. To Laennec's work, indeed, as far as it concerns the interpretation of auscultatory phenomena, little has been added. The completeness of his investigation is nothing short of marvellous. Let anyone go over the diagnosis of the diseases of the thoracic organs in the ante-Laennec period, and then read his wonderful treatise—then let him look through the almost countless works since—and he will see how much was done, how little was left undone, by the great Frenchman. He never went wrong, except when he left the interpretation of what he heard, and attempted details of morbid anatomy, for which the time had not yet come. And, if Bright's great work was not so complete, this was inevitable from the very nature of the case. He was not merely investigating the meaning of sounds which a special instrument made audible; he was dealing with the most intricate changes within the body. It was impossible he should round off and make clear the signs of the several kidney-degenerations whose nature was not even suspected; yet all he did do was perfect. It is wonderful how little error of commission there is in Bright's essays. While Laennec, in his discussion on tubercle, wished to give a complete and exhaustive account, which he could not really do, and desired to bring everything into the narrow circle of a definition, which really left half out, Bright kept to his facts. What he saw he stated, and, as far as the facts warranted, he interpreted; but he went no farther; and in this he showed a more philosophical mind even than the illustrious discoverer of auscultation.

These two great discoveries stand high above all that has followed, nor is it likely that equal advances will be made in this century. Laennec's work has been somewhat enlarged, and here and there corrected. Bright's albuminuria, like a newly discovered country, has been separated into provinces, surveyed, classified, and enumerated. The work is not yet ended, but I presume we see now its limits more or less distinctly, and can foresee the time when, for practical purposes, it may be considered to be thoroughly known.

The value of the discoveries which have since chiefly influenced practical medicine will be estimated differently by different persons. To my mind, one of the most important practical advances in the last thirty years is the discovery of embolism and thrombosis. The immediate effect on diagnosis was considerable. To be able to separate a class of apoplexy from other apoplectic cases, to recognise blockage of the pulmonary, the ophthalmic, and other arteries, was a great gain; but the indirect consequence of the doctrine of embolism—the recognition of the effect of minute capillary blockage, and of the transference of cells which are arrested in other parts and give rise to growths there—has a still more important bearing. In the same way the doctrine of thrombosis—of so-called spontaneous clotting and arrest of circulation, and the mixed cases of embolism and thrombosis—has most important practical consequences, which are gradually becoming clear. In 1845 Virchow first got the hint for his great discovery of embolism, which he subsequently fully elucidated in his essays published in 1846 and 1848. Among all the discoveries in pathology which have been made by the surpassing genius of Virchow (and he has touched pathology at all points, and never without adorning it) there is none more valuable than the recognition of embolism.

Another advance which appears to me to have greatly influenced practical medicine, is of a very different order. The entozoic diseases of men have long been known; but the mode of access and the transformations of the entozoa have been only made out within twenty-five years. How marvellous they are—what light is thrown upon obscure diseases by the tracing of the embryo or ova through its different stages and hosts to its maturity in its last resting-place—I need not say The labours of Van Beneden, Küchenmeister, Leuckart, our own Cobbold, and many others, have given us a degree of certainty about these animals and the diseases they cause which was quite unlooked for thirty years ago. We now understand, and can therefore prevent if we please, not merely the common entozoic diseases, such as tapeworms, round worms, and the like, but we see how to deal with such wide-spread maladies as the indigenous liver-disease of Iceland, which has been traced to an echinococcus; as the chlorosis of Egypt, caused by the dochmius duodenalis; as the fatal trichina disease which has doubtless been until now confounded with the specific fevers; and as the Bilharzia affection of Natal. The importance of recognising these diseases, of bringing them out of the domain of mystery into the light of common day, and of thus freeing the class they were mixed up with from a heterogeneous element which made investigation very difficult, is too obvious to need comment.

The latest contribution to our knowledge of entozoa is by no means the least curious. That a nematoid worm shall live in the blood of a man—shall multiply there, or, at any rate, somewhere in the system—shall be in such numbers that there must be many thousands at once in the body, is wonderful; but passing wonder is the fact that these thousands of active, living, feeding worms seem to do little injury. Their discoverer, Dr. Timothy Lewis, of the Army Medical Service, has given evidence which proves that some of the persons infested with them must have had these worms for years, and yet not only live, but pursue their avocations, and are in the possession of fairly good health. How is it these thousands of worms do not cause blockage and obstruction? Why do they not take the nutriment the body ought to have? What becomes of them when they die and decay, for they must do so? Where do they decay? and in what way is the structure of the bloodvessels and other parts through which they pass influenced by their passage? What a number of singular points arise, for which further investigation must find an answer! The discovery shows us, at any rate, that the entozoic diseases are not yet exhausted, and that many things must still lie over for those who have eyes to see and energy to use their eyes.

The recognition, again, of the diseases (chiefly of the skin) which are owing to cryptogamic plants, has had important bearings on practice; it leads at once, as in the case of the discovery of the itch insect in the last century, not only to the adoption of a local treatment of a special kind, but to the recognition of the method of spread and to the means of prevention. At present, the recognised diseases from the implantation and growth of plants have been chiefly those of the surface, or of what may be called the external passages, such as the throat, stomach, or bronchi, which are in communication with the air. But what shall we say of the researches of the last three or four years, which seem to trace so many affections, in part or wholly, to the influence of the bacteroid bodies which at present we must call plants? Without venturing to decide what relationship the class of plants which, for convenience, are massed together as schizomycetes, have to the specific and infectious diseases, or to putrefaction, it seems clear that a profound study of them must be fraught with deep consequences to practical medicine. We are now certain that penetrating from without by the surface of wounds, or more rarely by the intestinal surface, these minute cells, whose numbers are to be reckoned as untold millions, pass into spaces or bloodvessels (on the walls of which they colonise and live), or enter living cells, it may be wandered white blood cells, and get carried to distant parts of the body, or grow in and block vessels and cause a sort of embolism, or adhere to and grow on the valves of the heart, and may, in one way or another, cause

various diseases and complications, and in some cases originate a disease which is mortal within a few days' time. Without exaggerating the frequency or the importance of these "mykoses," we can yet feel sure that in this direction practical medicine is about to make another step, and that, as there is "a disinfecting surgery," so also there will have to be a "disinfecting medicine."

In a class by itself, for the recognised cause of the disease cannot at present be referred to any plant, though it resembles perhaps no common animal cell, must be placed the small cell which, by its extraordinary powers of growth and attraction of food, causes the painful and obstinate sores known in India and Syria by so many names. The Delhi or Damascus sore, the Aleppo evil, and other names have been applied to a disease which is spread all over the East, affecting men and dogs, and which, though not fatal, is yet in the highest degree harassing and discomfiting. The discovery of the cause and its cure we owe to Dr. Fleming, of the Army Medical Service, and it is a good instance of the great use of the microscope in the hands of a competent man. Dr. Fleming found as a constant element in these rodent ulcers a small cell: its nature is quite doubtful; no kind of plant can be developed from it, and it is presumably of animal origin; it contains nuclei, and grows marvellously fast, though whether by cleavage or budding or exosmotic transit, so to speak, of small cells through its wall, has not been made out. By pressing on and absorbing the nutrition of the skin, it soon destroys portions of the surface, and forms most unsightly and painful ulcers. That this cell is the cause has been proved by repeated inoculations. It is very tenacious of life and resistant to chemical agents, hence the uselessness of the common plans of local treatment which have been so repeatedly tried without effect. The only cure is at once to destroy the cells with potassa fusa. In a few days a sore which has been open and extending for months is cured as by magic. The cure is infallible, and if this plan of Dr. Fleming is carried out, he will have the merit of having at once obliterated a disease which has been a plague for hundreds of years, and neither spared the great Aurungzebe in his hall of paradise nor the meanest pariah who was no more than useless dust beneath his feet.

The discoveries I have now referred to—*i.e.*, embolism and the entozoic and microphytic diseases—exert at once a great influence, not only on diagnosis but on treatment and prognosis. But to some the changes in the general doctrines of pathology in the last forty years will appear, perhaps, even more interesting. During this time we have learnt partly to know the great class of degenerations with its two divisions—viz., degenerations which are simply the result of age (*i.e.*, of the loss of the peculiar formative force, which first builds up, then maintains, and then finally dies out and leaves behind it a tissue worn out, effete, and useless); and degenerations which are the slow result of some excessively slight, but constant, failure in nutrition. Fibroid, fatty, and atheromatous changes, and wastings especially of muscular fibres, but also of gland-cells and mucous membranes and nerves, come in to complicate the acuter maladies, and largely to increase their mortality. It must be confessed that while they will account oftentimes for failures of treatment, the chance of degenerations being present in middle-aged patients is a source of great embarrassment in prognosis. Except when attacking the kidneys and the muscular tissue, they are diagnosed with great difficulty, and slow degenerations of the alimentary mucous membrane or of the nervous system are among the most puzzling of maladies. In the means of detecting the presence and estimating the amount of these degenerations, we have still much to learn, and no greater benefit could be conferred on the human race than a perfect analysis of their causes and a recognition of how they may be avoided.

The great subject of inflammation, which underlies so much of pathology, has suffered many changes, and yet the views held by some observers thirty years ago at the outset of microscopic research were to a large extent correct.

Thirty years ago the doctrine of the Vienna school, based partly on the teaching of Rokitansky, though never, I think, accepted as a whole by that great master, was dominant in Germany and in France. Everything was dyscrasia, and the belief that a profound alteration of the fluids, and especially of the blood, underlies most morbid changes, for a long time governed a large school of pathologists.

In this country it never obtained great weight, though it certainly tended to modify our ideas of the origin both of cancer and of tubercle. Gradually losing ground before the pressure of opposing facts, the doctrine of crasis at length gave way to a local pathology almost as extreme. The theory which superseded it was the celebrated cellular pathology of Virchow; that theory which looked only to the individual elements, which traced all to growth of cells, and which virtually rejected the idea of exudation in the old sense of the word. It was admitted, indeed, that nutritive celluless fluid emerged in disease from the vessels as in health, but it was caught up and appropriated by the cells met with outside the vessels, and especially by the connective-tissue corpuscles. At one time it seemed as if the time-honoured term "exudation" would be banished from pathology, and the old doctrine of inflammation seemed altogether undermined. But this cellular pathology was like the creed it superseded, pushed too far. True to a large extent, it was made to embrace conditions beyond it, and the inevitable reaction came. In 1867, Cohnheim described the transit of the white blood-cells through the unruptured walls of the capillaries, and the old doctrine of exudation had again an empirical foundation. I say Cohnheim *described*, but I did not say he *discovered*. For the discovery had long been made, and the fact that it had been made and had been disregarded is a striking instance of want of appreciation of a cardinal fact, of which so many cases are recorded in the history of all sciences. It is bare justice to record that in 1839 William Addison, now of Brighton, perfectly described the emigration of the white blood-cells as well as many other phenomena which attend inflammation. The fact did not escape notice, and one writer at least—Charles Williams, in his well-known work on the "Principles of Medicine"—appreciated its importance. But, as a practical matter, the discovery fell dead, and when Cohnheim announced the fact twenty-eight years later the world of pathology was stirred to its depths. It is also but justice to observe that the chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside vessels was not known.

At present the pathology of inflammation seems settling down on a mixed humoral and solid basis. It seems to be admitted that the albumen in the blood which feeds the organs partakes of the quality of the food which supplies it, and is modified also by the condition of the organs, whose action prepares its introduction into the main torrent of the blood. Degrees of nutritive adaptability may, therefore, exist in it, and we may fairly assume that the composition of the blood-albumen must vary, and that it is quite possible it may be sometimes so degraded as to justify the idea which underlaid the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules, so to speak, which, though without a cell-wall, can be classed with cells. The cellular pathology is, to this extent, an undoubted and valuable generalisation.

If the doctrine of inflammation has thus, as it appears to me, made the full circle of change, the same may be almost said of phthisis pulmonalis. Laennec's genius, so sure and accurate when he was dealing with the interpretation of physical phenomena, failed when he attempted a definition of phthisis. Like many a geographer, he wished to fill up his blank map—to insert a coast-line here and a watershed there,—and to have everything defined, described, and completed. It was an impossible attempt, for the country had not been surveyed.

Laennec's opinions on tubercle were widely influenced by those of Bayle, and doubtless his interest in the subject was heightened by the fact that, like Bayle, he was himself the subject of phthisis. Influenced, probably, also by reflection on the hereditary derivation of phthisis, he at last elevated tubercle into a special and peculiar product and as the only sign and cause of phthisis; he took tubercle out of the category of common inflammatory changes, and made, so to speak, an entity of what may be merely a form. His influence was so great, his hypothesis—for it was no more—so exactly chimed in with many of the facts of phthisis, and gave an explanation so simple and complete, that it met with general acceptance.

But in this country there were not wanting those who, from both clinical and pathological stand-points, never accepted Laennec's theory in its integrity. The masterly descriptions of Thomas Addison, of Guy's, published nearly thirty years ago, show how completely that great and original physician had seen the imperfection in the favourite view of

tuberculosis. But Addison was not alone in this. It is but just to the memory of a man whose extraordinary talents did not save him from mistakes which eventually overshadowed a brilliant career, and left him in old age neglected and stranded on the shallows whither a false light had enticed him—it is but just to John Elliotson to recall the fact that he constantly asserted the production of phthisis pulmonalis from common inflammation, and the identity of many so-called tuberculous and inflammatory processes. So also it is but justice to Charles J. B. Williams, a pupil and follower of Laennec, to say that he also brought into great prominence the intimate connexion between inflammation and tubercle.

But it was not until 1847 that Laennec's theory in its exclusiveness was to receive its death-blow. In that year Reinhardt, himself, like Laennec, soon to be a victim of phthisis, published his exhaustive examination of the microscopical characters of tubercle, and asserted that there was no difference between tubercle and common inflammatory products.

Then, gradually opinions seemed to settle down in three directions. There were some who held to the old theory of Laennec, that there was a specific tuberculous product or deposit; some who followed Reinhardt, that the deposit was of a common inflammatory nature; and some who steered between the two, and considered phthisis pulmonalis to be a generic term covering two, if not more, distinguishable morbid conditions. How we now stand in this matter it would be rash to assert, but it seems to me that the late able discussions in this country and in Germany tend more to the idea that the tubercular character is the consequence merely of an anatomical condition, and that the greater or less amount of lymphoid tissue in the lungs and the fact of its involvement, will account for the peculiarity of form.

Time, indeed, has added two important facts to Reinhardt's masterly description; the one is the implication of the lymphoid tissue in the most typical form of tubercle, and the other is the demonstration of the infective character of phthisical inflammation, for which we have much to thank Villemin, Simon, Andrew Clark, Sanderson, Wilson Fox, and others.

There was a moment, indeed, when Villemin first announced the production of tubercle by inoculation, when it seemed as if the specific nature of tubercle might after all be true; but the researches in this country soon proved that the inoculation of many kinds of noxious matter might give rise to tubercle, and that there need not be anything special about the introduced starting-point. And so tubercle has, perhaps, come to this: that it is merely a form of those common changes which are most conveniently grouped as inflammatory, with this addition—that the presence of a special structure impresses on it a special form. The tendency of inquiry seems to me to indicate that we must look to the anatomical condition of the bodily tissues, and especially to the abundance or special condition of the lymphatics in the lungs or throughout the body, to explain the hereditary nature of tubercle in certain cases, and also to account for those instances of general tuberculosis which formed the basis on which Bayle built up his hypothesis of phthisis.

But how in this whirl of controversy, in this endless assignment of names, and discussion of what these names mean, how has the practical physician who had to treat phthisis found his practice changed!—in some ways favourably, in others, as I conceive, unfavourably. The principal change in the treatment of phthisis has been the introduction of the supporting plan, based on the idea of tubercle being the indication of a weak and morbid nutritive condition. Cod-liver oil, practically unknown in my student days, reintroduced in this country (after long years of forgetfulness) by Hughes Bennett, and tested by Charles Williams, has become an article of commerce on an enormous scale; good feeding in other respects, and exercise and pure air to improve the pulmonary circulation, are the main grounds on which many practitioners treat phthisis. So far, the effect of the view of phthisis to which I have referred has been most useful. But, in another aspect, I doubt whether we have not somewhat lost in the little attention paid until lately to the inflammatory conditions. Formerly there was a vast amount of local counter-irritation, and even local bloodletting, which certainly seemed to be very useful, and of measures used with the idea of removing exuded inflammatory products, such as the preparations of iodine, and even mercury. There are many cases of phthisis which appear to be largely benefited by measures of this kind, or by a union of the two plans, and, in so far as the common notion of the peculiar specific nature of tubercle discouraged the use of anti-inflammatory measures in some cases, so far I conceive harm was done.

In two points late researches have, I think, influenced our view of looking at phthisis. In the first place it has been shown how many cases of phthisis are caused by removable conditions; breathing of impure air, constrained positions, syphilis, etc., are now known to produce many cases of wasting lung diseases; and, as it is possible to prevent these, and thus to lessen the prevalence of phthisis, we have now a greater element of hope than formerly. On the contrary, the evidence of the so-called infective nature of phthisis—that is, the way in which it can originate in the lungs from distant infected parts, the way in which it extends to adjoining parts, or, perhaps, to distant parts of the lung by absorption from a diseased lung centre, and thus returns and returns until fatal inroads are made on the organ or the system at large; the constant production, in fact, of fresh centres of spread—is a discouraging aspect: On the whole, the last thirty years have done much for the treatment of phthisis, but it is not all unmixed gain, and the amount of future progress is uncertain.

But I must pass from this subject of tubercle, which might occupy the whole address, to glance at a clinical advance which has done much to extend and to define our views on the great class of the specific febrile diseases. Forty years ago many of the peculiar diseases which, under the term epidemic, or endemic, or in late years zymotic, cause a large mortality among all nations, were well-known, but a large class still remained misunderstood. I can confidently appeal to those of my contemporaries who studied in fever hospitals before the year 1840 to bear me out when I say that few points in practical medicine were more unsatisfactory than the diagnosis and treatment of continued fevers. We seldom had knowledge of what existed, and none of what was coming, and no prevision of what to-morrow might bring forth. The most unexpected turns occurred in different cases—sudden recoveries, sudden relapses, sudden gushes of blood in one case; sudden sinking, or coma, or convulsions in another. No practitioner ever gave more than an uncertain prognosis, for he did not know what changes a day would cause; and the want of knowledge of morbid lesions sometimes led to the employment of improper remedies, such as the use of strong purgatives in advanced typhoid fever.

How wonderful is the change now! We can make in most cases of so-called continued fever a diagnosis as certain as in small-pox or measles; we know what to expect, and can indicate the limits within which the morbific cause acts. When I contrast this certainty with the vague, hesitating, conjectural diagnosis of former times, when I think also of the result of this accurate diagnosis—viz., a recognition of the mode and conditions of spread, a recognition which leads at once to preventive measures—I begin to doubt whether, after all, this is not our greatest advance in practical medicine. Certainly in extent of consequences it stands behind few others. We all know how many men of many countries—France, America, and Germany—have contributed to this great result; but I shall not be accused of national pride if I claim a large share of the honour for our own countrymen. A most active member of this Association, Dr. A. Stewart, was a very early pioneer in this matter, and to one of the greatest physicians of our time, to William Jenner, must be ascribed the immortal honour of the demonstration which converted dubious conjecture into certainty. The great work of Murchison has become the guide of everyone, not only in this country but abroad, for it has been largely translated, and has greatly influenced public opinion in Germany and in France. The researches of Mr. Simon and his able band of investigators have probed the causes of the fevers of England at every point, and if allowed to guide the action of the State, it is not too much to say that the diseases which caused so great a mortality in times past, and which even now kill so many persons, will become things gone by, and as little known in England as leprosy or plague.

Enough has been done in the case of all those diseases to show us how we must act in preventing or in healing them; but I cannot avoid a reference to the inquiries now going on respecting the causes of the so-called specific diseases.

It is now more than thirty years ago that a physician of singularly penetrating and philosophic mind—one of those men who influence less their contemporaries than their successors—wrote a work of remarkable power. Gathering up from all sides the numerous observations whose significance became

apparent only when they were brought together, Robert Williams, of St. Thomas's, first gave, in his work on "Morbid Poisons," a clear demonstration that the several epidemic and contagious diseases must own separate and specific causes. How gradually this belief has gained ground until it is held by most persons I need not say, nor how it bears at once on preventive measures. In all these epidemic diseases we now —or, at least, most persons now—recognise that there is a material cause; that conditions of meteorology, such as heat, moisture, and the like, or conditions of season or locality, or states of the human body itself, are merely additions which influence by aiding or retarding transmission or growth. In this belief, logically born of facts, which is no dream or invention, but a plain deduction, we have a solid ground for action. If material, those causes must enter the body through some channel and by the agency of some other substance—by the aid, that is, of air, of water, or of food, or by broken surfaces of the body. By this conception of the "morbid poisons," to use his own term, Robert Williams marked off a great class of febrile diseases from those which might be produced by alterations in meteorological conditions, by excessive radiant heat, or intense electrical conditions, or parched and burning air, all of which may cause febrile symptoms. He thus simplified and defined, and cleared the ground for future inquiry. But it must be confessed progress has since been slow. It was seen that, if the causes of the epidemic diseases be material, they must come within the scope of modern instrumental inquiry. Either by chemistry, or by microscopical research, it was hoped that they would be seized and recognised and made to give up the secret of their birth, parentage, and power. But it was not known how far behind the delicacy of the problem were the instruments of the day. The recognition of these agents is evidently a task more difficult than to seize and decompose the light of the planets or the dim luminosity of the nebulæ. At present inquiry has carried us to the very threshold. How long will it be until someone opens the door and bids us enter? In the face of so subtle a point, and of so many differences of opinion among the best microscopists, I fear to prophesy; and when Beale takes one side, and Ferdinand Cohn another, he would be a bold man who would decide between them. But I think we may safely say that the sap has been carried up to the very wall of the fortress, though how long it will be till the final assault is delivered it would be rash to say. One may conclude, perhaps, that the problem in question is not a simple one, like trichinosis, for example, where it is simply the entrance into the body of an animal with extraordinary powers of multiplication and penetration; but that in the case of specific diseases we must not only have determinate breeding-places in the body, but also possibly special conditions of nutrition, without which the agent cannot increase and cannot recur.

Closely connected, again, with this question of the nature of the agents which produce small-pox, scarlet fever, measles, typhus, and enteric fever, or other infectious diseases, is that of the causes of septicæmia. I cannot tell in what light the observations of Coze and Feltz, of Klebs, or von Recklinghausen, or Burdon-Sanderson and Klein, and others, or the singular success of Lister and his antiseptic treatment based on the germ-theory, may appear to others. To me they seem in the highest degree important. To refuse them credence, or to pass them by as immaterial, seems to me about as philosophical as it was to discredit Jenner because the protective powers of vaccination seemed at the time so improbable. The rapid multiplication of bacteroid bodies, their colonisation and emigration, the effects they produce by pressure, blockage, and embolism, the changes they cause in the white blood-cells and perhaps in the albumen and fibrine, the disintegration of the white blood-cells, and the fibrillary deposits in the vessels, are all phenomena which can be shown. Can these things be without importance when they not only are real but agree so curiously both with the symptoms of septicæmia and with the most successful treatment of surgical injuries. It does not follow that we have got to the bottom of the question, but surely we have made a step, and that no trifling one, in learning one aspect of "blood-poisoning"—a term true, yet so vague; so useful, indeed, indispensable, but yet not satisfactory, because for the most part it represents only a haze, and not an outline.

But I must pass on to notice the changes in one other branch of pathology. About forty years ago the diseases of the nervous system were very little known. The great discoveries of Bell, and the physiological and microscopical observations of Germany were gradually clearing the subject. At the commencement of the period Marshall Hall was completing his observations on reflex action, and launching into that bitter sea of controversy which poisoned his own happiness, and overshadowed the fame which was justly due to him. That he owed much to his predecessors, and that he was not careful enough to acknowledge it, must be admitted; but the work which he did was yet real and true work, and his name can never be deposed from its honourable niche in this part of pathology. Then followed in quick succession the discovery of the governing power of nerves over contraction of vessels, and over the work of the glands and the secretions of membranes. Then microscopes and experiments together paved the way for a proper understanding of the parts of the chord, and the effect of section or injuries. The recognition of nervous centres; of the comparative independence, so to speak, of ganglia; of the effect produced on these centres by reflex irritation and by direct irritation by the circulation of poisoned blood,—all these and other similar discoveries have occurred in thirty years. Consequently, with much that is still vague, nervous diseases are no longer the hopeless medley of my student days. The recognition of locomotor ataxy and of other paralyses is a step of immense magnitude; but far more than the mere diagnosis of any pathological state, is the fact that the physician has now the condition of the nerves ever in sight, and can to a certain extent explain that heterogeneous group of symptoms which, under the name of sympathies or sometimes metastases, were so great a puzzle to our fathers, and can also see to some extent the cause of those convulsive affections which are attended after death by no physical change we can at present appreciate.

In many other directions practical medicine has also made progress: diseases of the larynx are now seen and not guessed at; internal conditions of distant organs like the kidneys may be disclosed by an examination of the eye; the microscope in many ways gives us information about blood, sputa, urine, which one wonders how our forefathers could do without. Instruments to extend or perfect the senses, to aid touch like the thermometer, or sight like the microscope or laryngoscope, or to show movements like the sphygmograph, are now in constant use, and the senses are multiplied a hundred or thousand fold by their aid. Precision and mechanical accuracy are the aims of everyone, and exactness and thoroughness are becoming more and more the rule from year to year.

Here, then, I must bring this part of my long, but yet too brief, review to a close; it chronicles, I cannot but think, an immense forward movement in practical medicine, but if time had permitted me to go into details, or into a fuller examination of certain parts, I should have been able, perhaps, to bring out the matter more clearly and more completely. But I have said enough to show that we have not stood still, that few subjects can boast more original investigations, and that, in spite of great difficulties, and oftentimes of great differences of opinion, the general knowledge of practical medicine has advanced continuously and has advanced greatly.

But now will occur to all, the question which is the touchstone of all progress: Have we gained in useful power by this knowledge?—do we cure, do we prevent disease more easily and more perfectly than our fathers, or is this knowledge barren, a false light—like that pictured by Milton—making darkness visible, and showing us only that we are helpless?

We must all, I think, acknowledge that therapeutics form the most difficult part of our work, and that it is only slowly that the discoveries of pathology become worked into our daily practice of healing. At first, indeed, pathological discoveries may even perplex therapeutics; and many of us can remember what scepticism (scepticism which was untrue and hurtful) seized many people when the profound alterations of tissue produced by disease were first clearly seen. The reparative powers of nature, the wonderful agencies of drugs, were alike thought to be useless in the face of such profound disorganisations, and at one time it seemed as if the physician's art was to be reduced to a useless diagnosis—useless because sterile of results. But this was a phase merely, and no period has witnessed so many new and useful drugs added to our pharmacopœia, and so much more knowledge of their use, as the last twenty-five years. The essential distinction, however, between the old and the new practice arises, I conceive, from a difference of method. Forty years ago it was only in a comparatively small number of cases that a practitioner could make an accurate diagnosis. What was to be done when the exact nature of the disease remained uncertain? For the most part he took note of the prominent

symptoms and treated them, and looked especially to the general condition. The first thought of many men was whether the patient was plethoric or the reverse; whether he was to be reduced or sustained. I knew intimately a physician who was most successful in his treatment, and who always, when he could not determine the disease, put this question to himself: "Which of these two courses must I take?" and, if he thought the patient required reducing, he bled and gave aperients and diuretics, and restricted the diet. If he thought the patient anæmic and in bad nutrition, he gave good food, bitter tonics, and iron. It was astonishing how many of those ailments, which we all know are difficult to bring under a determined category, were cured by this simple plan when judiciously carried out, and how much benefit was done even when no diagnosis had been made out.

Other men, when a diagnosis was difficult, invariably followed the eliminating plan, giving aperients, and acting on the skin and kidneys, and then after a time changed the plan, and gave tonics and iron; dropsies were treated by digitalis or purgatives or diuretics, without reference to their cardiac or renal cause; cardiac palpitation was treated by rest, blisters, and opium, no matter whether it owned neurotic or organic cause; dyspeptic symptoms, however arising, were treated by prussic acid (then lately introduced by Granville, and made popular by Elliotson); vague, uncertain symptoms which could not be referred to their source were often combated by a succession of remedies termed "alterative," the main drugs being purgatives and then mercury, iodine and antimony, and neutral salts. On looking back as well as I can to what I can remember of the practice of my early student days, it seems to me that a vast amount of good was done by men whose diagnosis we should now look upon as very incomplete. That much was left undone we must allow; but even now there are many cases in which we have to fall back on such a general plan as I have referred to, and often find our cases benefited.

There is of course no doubt that among the measures resorted to in those days depletion was far more commonly practised than it now is. It was of daily occurrence to bleed, and often to bleed largely, and there can be little doubt that the plan was pushed to excess, especially in the period from 1820 to 1840. But I think it would be a mistake to suppose that all practitioners used depletion so largely as is commonly supposed. Some men, like Broussais in Paris—partly from a theory, partly from opposition to others—were bleeders on a scale of magnitude we now shudder at; and even in this country there were men who were followers or rivals of this great Sangrado. But the generality of practitioners practised small bleedings, and seldom carried them to excess—in fact, at one time bleeding was so little used that the head of the Naval Medical Department issued instructions to his surgeons to make more use of the lancet. A great change has now taken place, and the lancet is seldom used, and the time-honoured practice of cupping is almost a thing of the past; and this, in my view, has not arisen from any change of type, of which I can see no proof, but to an improvement in diagnosis and a more direct mode of treating the disease. But I am disposed to agree with some of our best practitioners, who believe that we have too much abandoned an agency which, when well used, is often powerful for good, and that it is not unlikely the pendulum may soon commence to swing the other way, though not, we may hope, ever to reach the extreme point which some of us can remember.

In the present day our practice is, I conceive, differently conducted. Our first thought when we investigate disease is to know precisely the parts affected, to estimate the amount of local injury, and to determine the effect produced on the constitution at large by the abnormal condition. We aim at a diagnosis as accurate and large as possible, and, though this is not always practicable, I think all will allow that there is a considerable degree of certainty. Then, being better acquainted with the course and tendencies of the special condition, we are able to form a better judgment of what is likely to take place, and how it is to be combated. Of course, a vast deal of our treatment is still empirical, and no doubt will be so for many years to come, and oftentimes we must fall back on general rules and treat a constitutional condition without recognising its cause. But, on the whole, we diagnose, I conceive, fairly, and have a tolerable knowledge of how the state we discover can be best dealt with.

If, as I believe, the art of cure has really advanced greatly in the last forty years, the art of prevention has also made great progress, and this has directly arisen from the improvement in diagnosis. The recognition of a disease and its reference to a particular category inevitably lead the mind to probe its causes. This seems an instinct of our nature, probably divinely implanted to impel us in the path of knowledge and improvement. We cannot rest satisfied with seeing the thing; we must know its origin. Hence, during the last forty years has arisen the School of Sanitarians, whose creed is that every disease, as we see it, has its antecedent, and that the problem they have to solve is to reach this antecedent, and to prevent the seed from bearing its fruit.

Either in the action of external nature, or in social habits, or in nutritive conditions, or in conditions proper to the individual, and arising from his mind or mode of thought, the seeds of the diseases are sought, and by degrees the conviction is gaining ground among all classes that we have ourselves to thank for a large number of those maladies which destroy health, embitter life, and rob us of the blessings which we feel ought really to be ours. I need not say to what proportions this belief has grown, and how it is beginning to affect every class in the community; but it is only right to point how directly it springs from the progress of medical science. Let us hope that, as preventive medicine is really the child of curative medicine, and is indissolubly linked to it, those who are conducting the vast plans which the Legislature has devised for improving the national health may remember that the profession which has so far searched out the causes of individual and national ill-health must be entrusted both with the execution of the plans and with the continued search into a subject which is yet almost in its infancy.

And now, gentlemen, I have passed in review, far too briefly, the points which appear to me most interesting when the eye glances back over the varied, smooth and rugged, light and dark, fertile and sterile regions which a man passes over as time carries him, but too quickly, from youth to age. To me the retrospect is cheering; it has given me fresh hope for the continued advance of our knowledge and for the progressive usefulness of our profession. I feel, as I have lightly passed over the records of the profession's work and gains in the last forty years, that we have played no unworthy part in the great drama, and that among the restless activity of modern times and the growth of newly-born sciences, an old art has not stood still, but with ever increasing power is still, as it has always been, a very present help in time of need.

We cannot at the present follow the work of the various sections which after Professor Parkes's address commenced their work. In the Section of Medicine, the President of the Section, Dr. Sibson, F.R.S., delivered an admirable address of a thoroughly practical tone, in which we were glad to notice that he insisted upon the benefit the Association might confer on medicine and mankind by assisting and employing competent observers to investigate various unsolved problems in disease and its treatment. The discussion on cholera in the Health Section we have commented on elsewhere. It was one of the principal events of the day. The day was well closed by the *conversazione* at the Royal College of Surgeons.

This entertainment, given by the President, Vice-Presidents, and Council of the College, was a great and well deserved success. Mr. Curling as the President, Mr. Le Gros Clark and Sir James Paget as Vice-Presidents, were early in attendance to receive the 2000 or nearer 3000 metropolitan and provincial members of the profession who attended. On entering, the halls were seen filled with choice plants from the gardens of Messrs. Veitch, of Chelsea; in the inner hall were more, with Defries' fountains amongst them playing chlorozone all the evening, rendering the air fresh and pleasant. On entering the library, where the President received his guests, was another fine display of rare exotics and medicinal plants, which many members saw growing for the first time—*e.g.*, the cinchona plant, those of the croton oil, coffee, patchouli, vanilla, etc.,—also from the hothouses of the same horticulturists; here, also, were Rimmel's perfume fountains and vaporisers dispensing sweet odours of summer flowers throughout the rooms. The walls were covered with some charming oil and water colour paintings, kindly contributed by Sir Henry Thompson, Messrs. Curling, Prescott Hewett, Hilton, Stone, Vokins, Professors Flower, Erasmus Wilson, etc. Mr. Frank Buckland sent a remarkably fine collection of the *Salmonidæ*, alive and represented by casts splendidly coloured after nature by Mr. Ralfe. Amongst the living specimens were salmon from eggs kept in ice 112 days, and opened the same day as the *Oberon* arrived in New Zealand with her consignment of eggs from England; American

brook trout, great lake trout from Neufchâtel, trout from Norway, hybrids between salmon and trout—the father being a salmon and the mother a trout. In addition to these Mr. Buckland sent a large general collection from his museum. The Rev. Mr. Mayhew contributed some superb specimens of Venetian glass, bronzes, etc., from his fine collection.

In the Council-room was displayed the College plate, consisting of the fine mace, just regilt for the occasion by Messrs. Elkington; John Hunter's flagon; the loving-cup presented by Ranby; autographs of Hunter; and many curious relics, including two of his drawing-room chairs, made of an unknown wood, brought home by the celebrated circumnavigator, Captain Cook, F.R.S., and presented to Hunter (exhibited by Mr. T. M. Stone). Microscopic science was well represented: amongst other interesting specimens was some of Mr. Buckland's oyster spat. Messrs. Baker and Pillischer's photography was illustrated by charming specimens of Vernon Heath, Barraud, Fradelle, the Stereoscopic Company, etc. Messrs. Atkins's admirable filters, well supplied with iced-water, were in great requisition. The refreshments, which were excellent, were supplied by Messrs. Gunter.

We must conclude our notice of the meeting this week with the excellent Address in Surgery delivered by Professor John Wood, of King's College, on Thursday.

ADDRESS IN SURGERY.

By John Wood, F.R.C.S., F.R.S.,

Professor of Surgery in King's College, and Surgeon to King's College Hospital.

Mr. President and Gentlemen,—The responsible duty of delivering to so important an audience an address upon a subject well worthy of more able powers, has come upon me at short notice as the *proximè accessit* to one whose reputation as an author and teacher of surgery had entitled him to the first place in your consideration. The indisposition which led to this, I fear, somewhat unsatisfactory alteration in the programme of our proceedings, has been, I am happy to say, but temporary in its nature. I trust that it will entail upon him no consequences more painful than your disappointment and his own, and upon me nothing more disadvantageous than those comparisons which you may not be able to repress, and which the short notice I have had has not enabled me to diminish, except by an appeal to that liberality which is rarely wanting in our profession. A stimulus to increased mental effort (of which your professional experience will well enable you to estimate the value in critical cases) was supplied to me by the knowledge of the place in which we were to assemble, and the feeling which I entertained of the great worthiness of the occasion. Within these walls and under these auspices I could not refuse to tax my powers, and even to risk that suspicion of temerity which may be attached by some to the undertaking.

The present state of surgical knowledge indicates quite as much as that of any department of human progress, that thorough movement in the dry bones of systems, which, we may hope, is the prelude to more perfect constructions, to an advance in directions more likely to lead to the attainment of that satisfaction which comes from clear knowledge of what we can and ought to do. As our notions are at present, we require the exercise of a shrewd judgment acting upon an extended acquaintance with facts, and in many cases a very delicate balance of opinion indeed, to determine what is the right thing to do, even in the commonest cases. The prime wisdom is now, even more than in Milton's days—

> "Not to know at large of things remote
> From use, obscure and subtle, but to know
> That which before us lies in daily life."

The multitude of counsellors and the diversity of counsel are so great that a surgeon can find authority for almost every variety of opinion and practice. And I believe that no opinions which are honestly advanced, and with due regard to the elements of truth and probability, will remain long without supporters even in the living generation.

In medical science, gentlemen, we have no Pope and no Syllabus. Our councils are liberal assemblages, such as that we form to-day, and our appeal lies to an educated jury,—the public opinion of the profession,—and this jury, moreover, is fortunately by no means compelled to be unanimous in its decisions. And if, by reason of great originality, or of that sort of miscarriage which is not uncommon in the production of men of genius—viz., that of being born before their time—a man's views and deeds are not rightly estimated by his contemporaries, there still remains that ultimate appeal to the judgment of posterity which the possession of a free press and the facility of publication place within the reach of everyone.

It is no wonder that those who have lived to see the rise and fall of many theories and many systems are tempted to become converts to the doctrine of finality, and to consider it very probable *à priori* that whatever is new is therefore not true; and, if by any chance it should happen to be true, it would certainly prove not to be new. When this frame of mind grows upon us, it is well to consider that our past was once a future, and had a more undeveloped past before it, and that the old ways have been led up to by ways still older and, no doubt, worse to travel over.

The study of pathology and the natural history of disease has been leading to a simplification of medical treatment which has in some quarters advanced to the extreme phase of the "expectant" system, which prescribes little beyond the primary necessaries of food and drink, with a regimen which allows the patient ample scope to be comforted by faith and supported by resignation. In the present condition of public intelligence, deplorably wanting in the knowledge of the laws of health and disease, there is required an amount of natural gifts which is not conferred upon every man to inspire in the patient such a robust quality of the former blessing as to enable him to nourish the latter upon so simple a thing as orange-flower water. While we are looking for the coming rain-cloud which brings relief to, or release from, suffering by the operation of laws of which we know more or less perfectly the course and certainty, but which our patient cannot see, it is but natural that he should speculate from our conduct upon the perfection of our eyesight. The talented author of "Middlemarch" has fairly recognised the ideas which prevail in what truth compels us to call the greater portion of our population in Mrs. Mawmsey's remark upon the new medical light who had appeared in her native town, and who, as she was told, went about saying that physic was of no use. "Does he suppose that people will pay him only to come and sit with them and then go away again?" Such are the intelligences that a doctor has even far more frequently to deal with than those of the calibre of Mr. Trumbull, who characterised himself as "one who was not altogether ignorant of the *vis medicatrix*," who "went without shrinking through his abstinence from drugs, much sustained by the application of the thermometer, which implied the importance of his temperature, by the sense that he furnished objects for the microscope, and by learning many new words which seemed suited to the dignity of his secretions."

In the practice of surgery we meet happily with fewer difficulties of this kind than in the sister art of medicine; but occasionally, in obtaining the advantages which result, especially in cases of joint diseases, from the intelligent application of the principle of "rest" so conclusively set forth by our distinguished President of Section, Mr. Hilton, we have to contend with the impatience of the patient or his friends, and perhaps may even fall into the error of giving too much of a good thing, and thus may reach, not the "be thankful" stage, but that of fibrous anchylosis. Here we may have the ill-luck, too, to leave our patient open to the temptations of the quack bone-setter, lately subjected to the serviceable exposure of Dr. Wharton Hood. That last infirmity of long-suffering patients applies his material force upon the hit or miss principle, and, hey presto! the bone which had been "put out" is set with an audible snap, which proves the evident correctness of the remarks upon the numerous fallacies of the faculty, with which the operator improves the occasion, and piles up the agony of his *éclat*.

In face of the latest developments of surgery, it becomes more and more difficult to endorse the opinion of the eccentric veteran surgeon Vincent, "that it was doubtful whether the human race would be worse off than it is if there were no doctors, no accoucheurs, no physic, and no instruments at all." The utter extinction of the weak and sickly might indeed improve the race physically, if not numerically, as is said to be the case among savages; but, as in them, it would in the meanwhile press very hard indeed upon individuals, and ultimately improve the whole tribe off the face of the earth. To a civilised community, hard-heartedness and cruelty are so abhorrent, and the instinct to heal and to relieve pain is so deeply inrooted, that a reaction against such a law of neglect

would infallibly reproduce that kind of superstitious remedy which has already caused in the world's history more suffering than it has relieved. In this respect this innate feeling resembles that instinct of religion with which it was so closely interwoven by the greatest Exemplar of both. We could no more prevent the growth of doctors than of preachers and moralists.

The noblest function of the wisest among us is to enlighten and guide this innate impulse, to keep it under the control of the calm, reflective intellect and of the tender conscience, to prevent the crystallisation of ideas into fixed dogmatic formulæ, which hinder development in science and art as well as in language and literature, and to maintain the honour and true interests of the healing art. There is no better way of doing this than by the promotion of friendly intercourse among the members of the profession; and this I take to be the aim of the great Association under whose auspices we now meet.

On the occasion of the visit of so many leading provincial surgeons to our great metropolitan centre it would seem to be incumbent upon me to allude especially to subjects which chiefly occupy attention at the present time and upon which the foremost minds throughout our own country and the civilised world are now employed, and I do not hesitate to say, as successfully employed in the provinces as in London, and in our own country as in any part of the world. Time will not permit me to give more than a glance at some of these topics, several of which are dealt with, in papers read in the Surgical Section, much more in detail than I can hope to do. In their selection, I am naturally disposed to take those to which my attention has been most practically directed during the past year. I shall thus speak, and I trust that my audience may listen with that interest which attaches itself to subjects of actual experience.

Pyæmia, septicæmia, and erysipelas are undoubtedly the greatest troubles of modern surgery. Without their baneful influence the success of our improved methods would be enormously increased. By their occurrence the best-laid plans go wrong, and may result in the death instead of the restoration of the patient; and this is more deplorable when, as often happens, the operation is one which is not absolutely necessary to save life, but to remove a disability which might be an ill "better to bear than fly to others that we know not of." When, therefore, a system of dressing wounds is brought before us, sanctioned by worthy names, and supported by the results of cases, offering a means of escaping these terrible enemies, it is our bounden duty to give it a fair and full trial.

Such is the antiseptic system of dressing wounds originally developed by Le Maire, in 1860 and 1865, in the use of coal-tar, and its derivative carbolic acid, as an application to wounds. As long ago as 1815, French chemists had proved the antiseptic qualities of oil of tar. As long ago as 1834, Runge discovered carbolic acid and its properties. So slow is the growth of improvement. Coal tar itself, made into an emulsion with saponine by Le Bœuf, and combined with plaster-of-Paris by MM. Corne and Demaux, in 1858, has continued to be used by French surgeons, and has lately been employed in combination with charcoal by Beau, of Toulon ("Du Traitement des Plaies," Baillière and Fils, Paris, 1873). A great impulse was given in this country to the use of carbolic acid by Professor Lister, in February, 1867, well known to the Association from the exposition of his method by that talented surgeon to the meeting at Plymouth. Since that time I have given his system, I believe, a fair trial at King's College Hospital. At the same time, and under the same conditions as far as could be obtained, I have employed the solutions of carbolic acid in oil and water, and those of metallic salts, as well as substances such as chlorozone, etc., but without the elaborate attempts to exclude the unpurified atmospheric air which Lister deems essential.

I shall not attempt, gentlemen, to discuss the question of atmospheric germs, or of indwelling bacteria-like bodies, and their influence upon disease. This question is one of a far wider nature than can be conveniently discussed here, and it involves other departments besides that of surgery. In common with, and in relation to, the question of suppuration in general, and its connexion with tubercle, it can only be solved by the prosecution of those lines of research in pathology and medicine which have been followed so skilfully by Drs. Burdon-Sanderson and Wilson Fox, and which may prove to be lines converging towards an important discovery. As an experimental and scientific mode of research, which may turn out to be also a converging line in surgery, I have the highest possible respect for Professor Lister's system of treating wounds.

Upon his theory of germs, it is consistent and simple enough: but it is as a practical method of treating open wounds, available under ordinary circumstances in hospitals and private practice, in emergencies, and on the battle-field, that it must be estimated and will ultimately take its place; and it is with that view that I have put it, as far as possible, to the test. I began it at a time when the hospital was in a good hygienic condition, and the cases for that time did admirably. I had some cases quite equal to any described by Professor Lister himself. I, at the same time, tried the application of dry lint, without any moisture whatever, to the wound, and in many cases, especially in breast cases, the results were also perfect. In one breast case union by adhesion occurred throughout the wound. I also tried the application of the chloride of zinc solution in the manner originated by Mr. De Morgan, and very good results ensued—viz., healing with the formation of little or no pus. After about six months there came into the hospital a very unfavourable change, and, from inquiries made at the time, I concluded that a similar condition prevailed in most or all of the London hospitals. Erysipelas and its concomitant pyæmia began to show themselves, the former not springing up in the hospital itself, but imported with patients. The wounds now began to suppurate more, primary healing was less common, and the erysipelatous blush appeared with blameworthy impartiality in cases treated in all kinds of ways, and almost as impartially on my own antiseptic side of the hospital as on my colleague Sir William Fergusson's non-antiseptic side. But this I feel bound to say, that there was little or no putrefaction, as evidenced by the odour, in any of my cases, which my eminent colleague shrewdly attributed to the carbolic smell overpowering all others. Upon this point, however, I must say I did not agree with him. I had one case of amputation of the thigh for a tumour of the lower end of the femur, in a man about sixty. I treated it by Lister's method, carefully carried out, and, from beginning to end, there was very little discharge and no putrid or offensive smell whatever; but the wound did not heal, the end of the bone remained unadherent and devoid of granulations, and the man lingered for two months in a declining and emaciated state, and finally succumbed to chronic pyæmia with secondary abscesses in various parts. The occurrence of many other cases similar in character to this has convinced me that the agencies, whatever they are, in pyæmia operate in the general system, or, if through the atmosphere, in other channels besides the wounded part, as in cases of pyæmic poisoning from deep internal glandular pus deposits and in other acute and chronic tubercular affections.

Some time afterwards I had a case of compound fracture of the tibia and fibula, with a limited aperture in the skin, in a man nearly seventy years of age. I put it up carefully in Lister's method, carbolic spray, prepared gauze, and jacquinette complete. On dressing it several days afterwards, suppuration was found to have occurred, and the pus had accumulated considerably in the dressings. The treatment was continued, and kept the wound free from all unpleasantness, but still the amount of suppuration was very considerable. There was burrowing of pus along the muscles and bones, and a total want of union. In this case I was ultimately obliged to amputate below the knee. The amputation wound was also treated antiseptically, but still the amount of pus was considerable, and although from the man's age and reduced condition the progress of healing by granulation was slow, the case did ultimately exceedingly well, and made an excellent stump.

In some cases of psoas abscess treated by Lister's method we had marked success so long as the hospital was healthy. When erysipelas and pyæmia appeared, however, we had others in which the pus in the abscess became putrid and offensive after the first evacuation under the spray and with all the precautions, and I was obliged to make free openings and introduce drainage-tubes through which the abscess could be washed out thoroughly with antiseptic lotion. Such cases show me that we could not without danger depart, in the generality of wounds, from the old rule of providing a free exit for all purulent and offensive discharges, and for the want of this the exclusion of air is not a sufficient compensation. I cannot, consequently, approve of the plans originated by Baron Larrey and followed by Gosselin,(a) and more lately by J. Guérin and Maisonneuve, of

(a) "Des Pansements Rare," 1851.

"occlusion pneumatique" (*Gazette Médicale*, 1866, p. 7), the amount of resemblance to which, in Lister's method, constitutes, it seems to me, some part of its deficiencies. To a great extent, this objection also exists to the plan followed during the second siege of Paris by Alphonse Guérin, of using thick investments of compressed cotton-wool after washing the wound with alcohol, and then leaving it, without disturbance or removal of the deeper layers, for periods varying from a fortnight to two months, or even more. This plan for keeping from the wound injurious atmospheric influences seems to have been deduced from Professor Tyndall's experiments upon the purifying results of the cotton filter of Pasteur. It was shown by Hervey (*Archives Générales de Médecine*, December, 1871) that, as used by Guérin, it neither prevented putrefaction and fetor in the wound, nor the formation of abundance of microzoa therein. Here, again, we have instances of the propriety of that regular and systematic inspection of wounds which the practice of hermetically sealing them up prevents us from obtaining.

With respect to the employment of cotton-wool, combined with due drainage, I look forward with interest to the paper promised for this section by Mr. Callender, who has (he informs me) obtained much success from its use combined with his own form of drainage-tube. Cotton-wool has one great advantage as a dressing in cases of emergency. It is usually easily to be obtained in the necessary quantities after battles and railway accidents, when it is necessary to remove patients directly after injuries or operation; it provides better than most other methods for the protection of the wound or stumps from injury. Tarred oakum possesses all these advantages to an equal degree, and has the superior quality of being also cooler and more antiseptic. Mr. C. Heath, of University College Hospital, tells me that he prefers it to any other dressing, and in the cases in which I have used it it has answered admirably. In the free use of cotton-wool as a dressing during hot weather, I have found patients to complain of the heat of the wound or stump. At these seasons I believe oakum to possess a greater advantage. In cold weather cotton-wool is comfortable enough, and affords an admirable elastic support and due compression to the wound; but in my opinion it has, if used without antiseptics, one great disadvantage which is shared by charpie and other absorbent applications, and which is increased tenfold when used, as in the French hospitals, for stuffing the interior of wounds and stumps to prevent union by adhesion and to absorb discharges. While kept in the wards in readiness for the dresser, these substances, as proved by the experiments of Chalvet and Reveil, as well as those of Eiselt and Kallman, absorb the infective and putrefactive particles which float about in times of epidemic influences, or as exuviæ in a crowded aggregation of wounded patients, and so may become direct vehicles of communication of local infection. The same may also be said of the water and lint used in the wards for the simple water-dressing. Warmth and moisture without antiseptics are very favourable to the diffusion of contagion. And the risk is increased by the carelessness or thoughtlessness which you cannot entirely eliminate from nurses and dressers in passing from one patient to another.

Professor Humphry has informed me that he is quite satisfied with the plan of leaving wounds and stumps uncovered by dressing and entirely undisturbed, having only the discharges wiped or washed away. I am informed by Dr. Werl, late assistant to Billroth, that this plan is uniformly followed in the large hospital at Vienna. Here atmospheric influences have full local play, aided by the accidental contaminations of water, sponges, or tow; and yet, in the spacious and well-ventilated wards and pure air of Addenbrooke's Hospital at Cambridge, the results are far from being unsatisfactory. In a time of bad hygienic influences, epidemic erysipelas, pyæmia, or of an accumulation of wounded patients in a London hospital, it is probable that this would not be the case. After frequent trials, I have come to consider that the free use of Chassaignac's drainage-tubes issuing from the surface of the wound, or from its interior if deep and sinous, and with their outer extremities embedded in cotton-wool or oakum, well permeated with MacDougall's or Calvert's powder, as a disinfectant and absorbent of discharges, the surface of the wound washed over after bleeding has ceased with a mixture of solutions of chloride of zinc and carbolic acid or sulpho-carbolate of zinc, the same solution to saturate the lint dressing, applied in the same way as in water dressing, enveloped in thin guttapercha tissue, and supported by strapping and a light bandage, affords the most readily applied, the lightest, coolest, and the most generally useful application of the antiseptic method; an outer envelope of cotton-wool or oakum, and dressing every day after the first opening of the primary dressing, complete the plan, from which I have obtained as good results as from any other that I have tried, and, what is perhaps important, I have found it less difficult to insure its being properly carried out.

From this you will gather that I agree with Mr. Lund's view, as expressed in his able paper of "Observations" (printed in the *Manchester Medical and Surgical Reports*, 1870), as to the general efficacy of antiseptics, and in his position with respect to the germ theory explanations, although I do not consider the great elaboration of the carbolic or other dressings to be so necessary as he appears to do. I hope to learn somewhat more from his forthcoming paper on the same subject.

In clean incised wounds, where formation of pus is not likely to occur, as in some plastic operations, the hermetically sealing plan will no doubt maintain its position in general use in its most useful form of collodion. But when suppuration ensues it must be got rid of. Its absorption by dry earth, as advocated by Dr. A. Hewson, of Penusylvania ("Earth as a Topical Application in Surgery," Philadelphia, 1872), has the disadvantage of being dirty and offensive to the patients, and of obscuring by its colour the natural appearance of the wound when in contact with it; but as a substitute when better absorbents cannot be obtained, it seems to be of some value. Much the same may be said of charcoal. When this substance is combined with coal-tar, however, as in the way advocated by Dr. Beau, of Toulon, in the work already referred to, it would seem that a great part of the antiseptic vapour would be absorbed by the charcoal, and the two remedies to some extent thus neutralise each other.

Erysipelas does not seem to be much influenced by antiseptic measures. Such cases as are recorded by M. Chédevergue (*Bulletin Général de Thérapeutique*, 1864) as an instance of the detergent power of alcohol as a topical application—viz., of erysipelas appearing upon the body of a patient, but not at all invading the wound itself—have several times occurred to me, and I daresay to most surgeons; and it proves no more than that erysipelas is a constitutional disease; and that though usually, like scarlatina, when happening to wounded patients, showing itself first at the wounded part, it does not invariably do so. But when

> "The life of all the blood
> Is touched corruptibly,"

and pyæmic symptoms force upon us the momentous question, "What should we do to save the patient? and can we do anything?" the answer which was made to me by a surgeon of experience in a case in which the patient got well, "You can do nothing, it is useless trying," would, I suspect, be given by many. In at least four cases of which I have notes, of undoubted pyæmic infection, as evidenced by exacerbations of temperature, secondary abscesses, lobular pneumonia, rigors, the treatment to which I subjected my patients, with little better hopes at first than those which drift into the law of neglect I have just illustrated, was attended with success. They were far from being slight cases, and I had not the advantage of being able to send them away to the benefits of purer air and beyond the reach of hospital influences, as so powerfully inculcated by the teaching of Sir James Paget.

Besides persevering in the antiseptic local treatment, and giving free access of fresh air, I surrounded my patient with a highly antiseptic atmosphere, by placing muslin bags of McDougall's powder around and within the bed, and in abundance about the wound, so that he should both breathe the carbolic and sulphurous vapour, and imbibe it as far as possible through the skin. If the stomach were not feeble or irritable, and able to take abundant nourishment (the primary element of restoration), I also gave three to six grain doses of the sulpho-carbolate of iron, with a view of testing the practice so ably and exhaustively advocated by my friend Dr. Sansom. I took care, as far as possible, not to give the drug soon after nourishment was taken, so as not to interfere with the first stage of digestion, and I discontinued it at once if the appetite fell off, or if there was pain after taking it. Three of the cases showed, in from a week to ten days' time, that peculiar slate-coloured or olive-green coloration of the urine, the cause of which was attributed in a description given by me of one of these cases (in 1868), after a chemical examination by the late Professor Miller, to a modification of the yellow indigo-like colouring matter of the urine by the

action of the carbolic acid upon it. This curious and well-known change has been noticed by Mr. Berkeley Hill, Drs. Fuller, Stevenson, and Wallace. These cases are completely recovered; but I am bound to say that in some other cases, not apparently more serious, but perhaps more insidious, the patients died out quite as comfortably as under any other plan, whether officious or let-alone in character.

I believe that cases of recovery frequently occur under other methods, or no methods, and that at least as much depends upon the age and reparative power of the patient, the amount of blood-poison formed or absorbed, and the general conditions of the atmosphere as upon any system of treatment whatever.

I attach much importance, as I have said, to free drainage in dressing wounds, and when made by the surgeon a good deal more may be done to favour this by a judicious choice of the direction of the incision in resections, etc., and the position of the flaps, etc., in amputations. The plan of making a puncture in the popliteal space, proposed and practised by Mr. Jonathan Hutchinson in excision of the knee-joint, is one which illustrates my meaning. The wound would, if possible, be made to slope towards that part which is most dependent when the patient is laid in bed. In amputations of the thigh, I think for this reason that the circular operation is most objectionable, on account of its forming a hollow, funnel-shaped wound, which, in the necessarily raised position of the stump upon a pillow, holds the discharge like a bucket only slightly tilted. Very good drainage is accomplished in the late Mr. Teale's excellent plan of a single square anterior flap. I have practised Mr. Teale's method with the best results in the leg and forearm, but for other reasons I prefer in the thigh an oblique double flap, with the outer end of the incision placed lower than the inner, and the front flap placed somewhat outside the limb and longer than the hinder. After many trials, I am quite convinced that this gives the most complete drainage, prevents the bone from protruding, and makes a very shapely and serviceable stump, with the cicatrix placed well behind the point of pressure. Another important point bearing on this matter in favouring the escape of discharges from the interior of a wound lies in the manner of securing the arteries. When an artery is twisted in, as in the ancient Roman system, revived by Amussat and Velpeau, and lately tried by Mr. Cooper Forster (*Trans. Clinical Society*, 1870) and Mr. Bryant ("On the Torsion of Arteries," *Medico-Chirurgical Transactions*, ii., p. 199), or when it is secured by a pin or wire, as advocated by the late Sir James Simpson, and practised at Aberdeen and elsewhere; or when it is secured by an antiseptic catgut ligature, cut off short on the vessel, as revived by Professor Lister, and tested and practised by Mr. T. Holmes, the theory is, that the wound should heal in the deeper parts as well as in the more superficial by the direct adhesive process. But this, in the amputation of an extremity or a large resection, is not the rule, and, moreover, in large cities is not usual.

Now, the parts that are most disposed so to heal are the smoothly cut, self-adapting, and vascular tegumentary structures, and these sometimes close up by adhesion, leaving interior cavities, especially about the bone and between the muscles, containing decomposing blood or pus, which afterwards accumulate, burrow, give trouble, and delay the cure, or cause by pyæmia the death of the patient. To prevent this subsequent inconvenience after experience of it seems to be the only rational explanation of the Continental method still employed, of stuffing the whole wound with charpie, so as to insure healing from the bottom, which seems so strange to our notions. If we could be quite sure that by torsion, metallic or antiseptic ligatures, we could secure complete adhesion throughout, the case would be made very much stronger in their favour. But this is certainly the exception, and not the rule. There are other elements at work influencing this, even more powerful than the local treatment. Now, I believe with my esteemed colleague, Sir W. Fergusson, that so long as we have this want of entire union, ligature-threads may have the advantage of keeping open channels for the escape of discharges from the close neighbourhood of the tied arteries, the accompanying veins of which are frequently the sources of effusions of blood after the wound is dressed, which afterwards clot, and may putrefy. These ligature-threads I usually have well steeped in carbolised oil, and saturated so as to be unable to absorb discharges, but utilised to spread around an antiseptic influence. Sometimes, in deep narrow wounds, I place them within or alongside of a drainage-tube. They can thus be made into channels for the introduction of antiseptic agents to the deeper parts, and this consideration may add to the much greater sense of security given to the patient as well as to the surgeon's mind on leaving him, by the use of a safe knot and a string to remove it by when it has performed its work. There is one point in the section of flaps which may, I think, have influence sometimes upon the introduction of pus or septic matter into the cut veins. When these are cut obliquely with the face of the flap, they are opened in a large conic section, and left in an attitude in the shape of a pea, especially when placed on the underlying flap, well adapted for receiving and conducting into their interior matters which gravitate from the surrounding hollow and often funnel-shaped sides. To obviate this, I invariably, in a flap amputation, cut off short the larger veins transversely.

The next subject I shall touch upon belongs to one to which I have directed attention for some years—viz., the radical cure of rupture. I have long thought that we might, in favourable cases, safely do more than we now attempt, to prevent a return of the protrusion after the operation for the relief of strangulation. After performing operations for the radical cure more than two hundred times, I had grounds for the belief (which other operations on the peritoneum also favoured) that, in a healthy subject, the peritoneum might be dealt with as freely and as safely as any other tissue; and also, that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in strangulation, rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided that good drainage be secured. In cases where the bowel and omentum are congested only, and most likely to recover when placed into their natural cavity, in young and healthy lads, with strangulated inguinal hernia, I concluded that the attempt would be justified, and would probably be successful. If so, the advantage of preventing a lifelong trouble and danger from rupture by the operation which relieves strangulation is obvious. The kind of cases I selected for such an attempt, and the nature and results of the proceeding, will be best conveyed to your minds by a short *résumé* of the three cases where I have had the opportunity of carrying it into practice.

On June 29, 1868, was admitted into King's College Hospital a young man, Alfred Fuller, aged 21, 61, Warden-road, St. Pancras, with a strangulated right oblique scrotal hernia. The tumour had occurred suddenly from lifting. It was of the size of the fist, and had been strangulated twenty-four hours. He had constipation, violent retching and vomiting, not fæcal, quick pulse, and anxious face, pain in the epigastrium, and much pain and tenderness in the tumour, upon which several ineffectual attempts at taxis had been made. I put him well under chloroform, and made a fair and full attempt at reduction by the taxis, but in vain. I then made an oblique incision over the tumour, dividing the layers in the usual way, and laying open the sac to the extent of three inches. The sac contained a moderate amount of omentum, covering a knuckle of bowel, all congested, and the bowel slightly ecchymosed, and there was about an ounce and a half of bloody serum in the sac. The point of strangulation was at the deep inguinal ring, and it was divided by an upward cut. The bowel was then drawn down slightly, and carefully examined. It presented the usual indentation, but was smooth and shining. It was then returned, and after it the omentum, the latter being carefully spread over the deep opening. The sides of the sac were then brought together, so as closely to embrace the cord over the whole length of the canal. The handled curved hernia needle used in my operation for the radical cure, armed with silvered wire, was then employed to bring together the sides of the sac, together with the aponeurotic structures along the whole length of the canal, in the way I have described in my work "On Rupture." A good view of the conjoined tendon was obtained, and the wire fixed in it in two places. The loop and ends of the doubled wire were then brought out at the upper and lower ends respectively of the incision. Four interrupted wire sutures were then placed in the skin between these points. The wound was dressed with carbolic lotion, and covered with gutta-percha skin, and cotton-wool powdered with McDougall's powder to absorb the discharges. The interrupted sutures were removed on the fourth day, primary union having been by that time obtained throughout, except where the thick wires passed through the extremities of the wound, and effectively kept up the drainage. These were kept in for ten days. There was not the slightest sign throughout the case

of the peritoneum being inflamed, and the abdominal tenderness which was present at the time of the operation passed away entirely. The sickness ceased directly after the operation, and the bowels were opened naturally two days afterwards. Erysipelas being present at this time in the ward, the patient was attacked by it on the sixth day. A partial reopening of the wound was the consequence, together with suppuration in the fundus of the sac of the hernia. The pus passed freely along the wires, and there was no burrowing.

The suppuration in the sac caused obliteration and shrinking of that structure, and the testis was drawn by the subsequent contraction into the upper part of the scrotum. Some delay in the convalescence was thus produced, but finally the patient was discharged, wearing a light truss, on August 15, 1868.

During the first year after the operation I saw him twice or three times. There was no cough impulse whatever when last seen, all the parts being very firmly traced up in the groin and around the cord. As he was repeatedly enjoined to show himself at once if any pain or weakness showed itself, and seemed fully impressed with the danger from strangulation which he had escaped, I have, I think, some right to conclude that there has been no return. The difficulty of following cases for a number of years in the nomadic habits of that part of our population which furnishes the most numerously favourable cases for the radical cure, is one which I experienced in this case.

The next case was in a patient who had wished much to be operated on for the radical cure before the rupture became strangulated, in consequence of the impossibility of keeping it up with a truss, and the consequent disability from following his employment. I had refused to do so because of his age and the direct nature and great size of the openings.

Martin Webster, aged 52, had suffered from a large right direct inguinal rupture for twenty-six years, which, though at first entirely reducible by rest and the recumbent posture, could not for many years past, on account of the large size of the opening, be entirely pushed back or kept up by any of the great number of trusses which he had tried. He was admitted on April 14, 1872, had been vomiting for eight hours, and was very weak and low. The tumour filled the scrotum, was of the size of the two fists, and was tense, tender, and painful, with the skin of the scrotum red and inflamed from handling. A somewhat prolonged trial of the taxis being made under chloroform, after the application of ice for three hours, and by inversion of the patient without success, the operation of herniotomy was proceeded with by a single oblique incision four inches long. On opening the sac a very large mass of omentum was found adherent at the neck, but not elsewhere, and covered by it was a large fold of small intestine, dark and congested, but still smooth and glistening. After division of the strangulating band at the deep opening, the bowel being found not much damaged at the strictured part was easily reduced. The omentum was congested, but not gangrenous, and, on account of its size and the adhesions somewhat recent at the neck, could not be fairly reduced or retained in the abdomen. The mass of fat, about three-quarters of a pound weight, was then cut off close to the adhesions at the neck of the sac. Such vessels as bled were tied separately, and, the stump being enclosed between the sides of the serous sac, four interrupted sutures of carbolised hemp were applied through the sac and tendinous parietes, and tied up so as to embrace the cord pretty closely. The two uppermost sutures were passed through the stump of omentum itself. These and the ligatures upon the arteries were then tied up in one knot, and left hanging out of the lower angle of the wound to act as a drain for the discharges from the face of the omental stump. Lateral pads of lint and a spica bandage were applied, and the patient placed with his knees drawn up and shoulders raised, and five grains of pilula saponis cum opio given every four hours. The vomiting and distress at once ceased; there was no tympanites and but little tenderness, and the bowels were freely acted on the third day. An abscess subsequently formed in the lower part of the enormous sac, and a small slough formed in the scrotum over the testis. Through the aperture left by this the gland showed some tendency to protrude, but was easily kept in place by strapping and pads. By the use of a drainage-tube through the lower part of the primary incision and out at the aperture left by the slough the matter flowed away freely, and there was no tendency to burrow. The ligatures and sutures had all come away by April 29, and on June 22 he left the hospital with the parts much thickened, firmly braced up, and wearing a truss with a large ring pad. I have seen this patient several times since then, once in this present year. There was then a bulge felt in the groin when he coughed (and he has always a bad winter cough), but there was no sign of any descent into the scrotum, and a light truss kept him very comfortable and able to do a good day's work without inconvenience. He also promised to come to me at once if he had any more trouble with it.

The third case was that of Edward Brown, a waiter, of 14, Surry-street, Strand, aged 21, in whom the rupture, a right oblique scrotal one, had not been observed till the day before his admission, when, after lifting a heavy box, he felt pain and sickness, and felt a lump in his scrotum. A doctor to whom he applied gave him an aperient, after which he began to vomit, and pain was worse, and the tumour increased in size and filled the scrotum. This rapid appearance and increase of the rupture were afterwards explained by its proving to be a congenital hernia with the sac formed by the tunica vaginalis, of which these peculiarities are very characteristic. On March 28, twenty-four hours after the occurrence of the rupture, the symptoms were very intense, and the taxis, with inversion and chloroform, having been fairly tried after two hours' application of ice-bags, I performed herniotomy exactly as in the first case I have described. The omentum and bowel were found in the tunica vaginalis, both congested and slightly ecchymosed, with some effusion of bloody serum. The knuckle of bowel was strangulated, not only by the deep ring, but also by a band of the omentum, necessitating the drawing down of both until the constricted part could be seen and released. It was a case in which the bowel might easily have been passed into the abdomen with the stricture undivided. After the operation the patient was at once relieved; the bowels were opened normally on the third day; no tympanites or tenderness became apparent. The central part of the incision healed by adhesion; a little discharge passed along the wires, which were withdrawn on the fourteenth day after the operation. He was sent out of the hospital April 26, 1873, with a firm adherent cicatrix, and no bulge whatever. On May 12 he showed himself, wearing a light horse-shoe pad truss; not the slightest sign of a return was evident. This patient is here to-day awaiting your inspection.

It has been said, with respect to this operation, that evidence is wanting as to the permanency of the cure, and I am free to confess that it is exceedingly difficult to watch a couple of hundred cases for the space of ten or eleven years. The constitution of human nature is such that you cannot hope for the generality of patients to show themselves occasionally for this length of time, or even to write if they are not further troubled with the ailment of which he has cured them. It requires that powerful spring to gratitude which was said by the cynical French philosopher to consist in "a lively sense of favours to come," which is wanting in a case where there is no more for the doctor to do. I have found that the unsuccessful cases are more likely by the law of gratitude just enunciated to return upon your hands than the successful ones are, as a bad shilling expects to be replaced by a good one. I think, therefore, we have the better right to the position of reckoning in the same proportion of failures and cures cases which have not been seen twelve months after the operation, as those which have been examined after that time.

Now, out of 188 (most of them unselected) cases of inguinal hernia out of the 200 and upwards I have operated on to the present time, of which I have notes—including 7 females and 4 cases of double rupture, both operated on—in 107 cases the results are more or less perfectly known. I find that 51 of these were more or less unsuccessful; of which 42 returned in the first year after operation—that is, the great majority of these were such as would do without wearing a truss after the first year. By far the greater number were so much improved that they were made comfortable by a truss, which was not the case in most instances before the operation. Some, but not many in number, were as bad as before the operation. Mr. Kingdon, of the London Truss Society, kindly forwarded to me in 1863 the names of three of those who had applied to that institution, since the operation, for the supply of a truss.

Out of the 107 cases, 56 continued to be successful subsequently a year after the operation, as ascertained either by direct examination by myself or other surgeons, or satisfactory to the patient himself, and either wearing no truss at all, or only occasionally, as a precaution, after the first year from the operation. Of these—7 were noted from thirteen to twenty-one months after the operation; 7 from two years; 7 from three years; 7 from four to six years; 7 from six to eight

years; 4 from nine to eleven years. Reckoning operations on both sides and repetitions of the operations, I have done the operation more than two hundred times. Out of these, I have had three deaths; one from pyæmia, one from erysipelas, and one from peritonitis. These have been made public to the profession on more than one occasion, because I judged it right and fair that in an operation of this kind the facts should be made known as far as possible. In the last case, as shown by the post-mortem examination (published in the *Medical Times and Gazette* in 1866), the peritonitis was found not to have originated in the parts operated on, but in a knuckle of bowel which had been lodged in the hernia before the operation, while the patient was wearing a strong truss. The cases in which any signs of peritonitis were observed were not more than about twenty in the whole number. One and a half per cent. is not a high average of deaths from purely accidental surgical incidents, and there are very few operations of like kind—as, for example, for the removal of deformity, the cure of prolapsus of viscera, or of hæmorrhoids—which could show more favourably either in this respect or in respect to the somewhat severe test of the length of time in which they have been known to be without a relapse after the operation. And since 42 out of the 51 known unsuccessful cases proved to be so within the first year after operation, and most of the cases were examined once or more at various intervals of time after the operation, I think that in respect to this point we have a right to claim the probability of more, and the certainty of at least as many, good results for the 81 of which I have not been able to get notes after the first twelve months as for the 107 in which I have done so. Under the age of twenty-one years the results in known cases are much more satisfactory, and amount to 75 per cent. of successful cases. But of dry statistics you will think that I have given you, perhaps, more than enough.

The determination of the question as to whether the operation for the radical cure is an appropriate alternative to a lifelong wearing of a truss, and a valuable supplement to the slow and very uncertain cure by truss pressure, will continue to depend upon the age, habits, circumstances, mode of life, and, to some extent, the cruel experience of trusses and wish of the patient after having the matter fairly put before him, and perhaps nearly as much upon the anatomical knowledge, skill, energy, and experience of the surgeon, or his disposition to the finality frame of mind I have alluded to. In any case, whether universally or only occasionally resorted to, it forms, I think, a valuable addition to the resources of surgery.

Cases of ectopia vesicæ and epispadias possess an interest for surgeons who have a tendency to plastic efforts which results, partly from the well-known futility of all operations to relieve them until recent years, and partly from the piteous appeals for relief from the very miserable condition to which the unfortunate patient labouring under this deformity is reduced. During the last ten years that my attention has been directed to this deformity, I have met with between forty and fifty cases, and many more have been recorded by my fellow-labourer in this direction, Professor T. Holmes, who first practised in this country in March, 1863,(b) the plan followed successfully by Pancoast and Ayres in America in 1858. It had been suggested, apparently, by M. Richard's unsuccessful application, in 1853, of Nélaton's principle of laying a flap upon the parts to be covered, with the skin surface downwards, and covering it up with another. Cases have been operated on by Messrs. Simon, Lloyd, Sydney Jones, and Thomas Smith, with, I believe, but little success. I have operated, up to the present time, for the relief of sixteen cases. All except three were males. Of the three females, one, aged 9, died from uræmic poisoning, the kidneys being found extensively affected with cystic degeneration, one being entirely converted into a membranous sac. The other two unsuccessful cases were operated on at too young an age for the extent of the deformity which was present, the constant efforts of crying after the operation acting upon the very protruding bladder and causing entire separation of the flaps after they had partially united.

My first case was operated on by lateral flaps only, not reversed, in October, 1863, and was, after two supplemental operations, entirely successful. The boy died afterwards from erysipelas of the head and face; and I had an opportunity of preserving the parts operated on, which may be seen in the adjoining museum of preparations collected for the purposes of the present Association. It is interesting, as showing the formation of a smooth mucous surface, the deep surface of the superimposed flaps.

All my other cases were more or less successful. Two were shown in the course of last year at the Pathological and the Medical and Chirurgical Societies, in one of which especially the artificial covering was so complete and perfect that for a short time the boy could be made to hold his water by the application of an indiarubber ring around the penis and artificial preputial covering of the urethra. All the thirteen successful cases could be kept dry and comfortable by the application of a guard and indiarubber tube and bag, as in a railway urinal. Eight cases (seven male and one female) were published in the *Medico-Chirurgical Transactions* of 1868, vol. lii. Eight more (six male and two female) have been operated on since that date.

Time will not allow me to give further details of the various methods I have employed to obtain these results. Some of these had been previously employed by Nélaton and his pupils, MM. Richard and Follin, and followed by Pancoast, Ayres, and Holmes. A full description of my methods has been published in the *Medico-Chirurgical Transactions* just alluded to.

I am able, I am glad to say, to give the members of the Association an opportunity of seeing here, or in the neighbouring wards of King's College Hospital, three cases, one of which has been operated on unsuccessfully, one in which the first stage of operation has been reached, and one in which the two operations have been done. From these, they can judge for themselves of the value and utility of the work done.

For the analogous but less disabling condition of *epispadias*, I have operated twice by Nélaton's method with favourable results. For *hypospadias*, in which the urethra was deficient below as far as the scrotum, I have operated three times, upon a plan somewhat similar—viz., a reversed flap from the side of the opening, with another from the scrotum superimposed upon it. In one case—a boy of $1\frac{1}{2}$ years—which had been interfered with considerably by a former unsuccessful operation, the result was an entire failure. In another, a boy of 6 years, the result was so far successful after one operation, that another slighter one will complete it. In a third case, that of an adult male aged 24, the result after two operations was an entire success, enabling him to pass his water comfortably over his trousers, and aiding to some extent the power of sexual connexion.

A similar plan, combined with internal section and dilatation of the strictured urethra, I have found to succeed admirably and completely in two cases of penile urinary fistula communicating with the urethra in front of and close to the scrotum, accompanied with a hard cartilaginous stricture of the urethra. One was a bad traumatic case, which had before been operated on unsuccessfully by another surgeon. Cases of this kind have been long considered to resist all the efforts of plastic surgery; and, before adopting this plan, I had frequently been baffled in attempts to close the fistula.

In connexion with the subject of the treatment of stricture of the urethra, I may mention that among surgical novelties is the plan of M. Demarquay, of passing a long flexible hollow bougie through a perineal urinary fistula previously enlarged by the bistoury, and then one end forwards through the stricture and out at the meatus, and the other end backwards into the bladder.

The ingenious plan of Mr. Furneaux Jordan, of Birmingham, of treating obstinate impassable strictures by attacking them in the rear through an opening from the rectum into the dilated urethra behind the stricture, is a valuable contribution of the year to surgical resources in troublesome cases (see *British Medical Journal*, November 9, 1872, No. 619). Mr. Jordan informs me that he has operated in three cases of the kind with complete success.

In other kinds of plastic surgery much has been done of late years. Since my own successful case of transplantation of skin from the abdomen to the arm for the relief of a frightful deformity of the wrist (published in the *Medico-Chirurgical Transactions* for 1863, vol. xlvi.), I have had two more successful cases. A similar operation has been also successfully performed by Mr. Thomas Smith in the wards of St. Bartholomew's Hospital; and my colleague, Mr. Henry Smith, has quite lately had a very good case of operation upon the same plan, for the relief of an extreme contraction of the elbow after a burn in the left arm of an adult female. In rhinoplasty, in which so much good work has been done by Hamilton and Lichtenburg, I have had some good cases of restoration of the nose from the cheeks and upper lip. Some of those are found

(b) See "Lancet" for June 27, 1863, and his work on "Surgical Treatment of Diseases of Children."

among the photographs laid before the meeting. The last case I have undertaken is about the most difficult one I have ever had to deal with, in the width of the chasm and the extensive loss of substance. The nasal bones, the vomer, ascending portion and a considerable part of the alveolus of the superior maxillary, the whole of the ethmoid except the cribriform plate, have necrosed away, as the result of scrofulous lupus. The great prominence of the frontal sinus also constitutes an element of difficulty. To afford a basis for the new nose turned down from the forehead, I have resorted to the plan frequently followed successfully by Sir William Fergusson, of dissecting off and bringing towards the median line of the whole of both cheeks. To secure the union of these, and to afford a prominence to the point of the nose, I followed a plan that I have employed in three bad cases with very satisfactory results, two of which are shown in the photographs which lie upon the table. At the same operation I turned up the middle third of the upper lip, and split it up from its lower edge, turning over the borders, so as to afford a bridge of support and an extended raw surface for union with the apposed cheeks. This was rendered necessary, to enable the cheeks to meet in the median line, as well as to insure their union to each other. When this was entirely healed, by a second operation I dissected up the mucous membrane from the bridge made of lip-tissue, and reflected it over the gap still left between the eyes, so as to form another bridge of support for the root of the new nose, preventing it from sinking into the gap so as to become too much depressed. I then turned down the new nose from the forehead after the Indian method, fitting it on to the raw surface, which gave it admirable support; and kept up the point of the new nose in a manner which one does not commonly see after this operation. This patient I have in attendance for the inspection of the members, and is still under treatment in the wards of King's College Hospital.

The very original and ingenious method of M. Reverdin I have practised with advantage in many of these rhinoplastic cases, to eke out any deficiencies of skin in corners where it was desirable to prevent puckering, if possible, from contraction, or to substitute skin-tissue for mucous membrane exposed by reversal of the upper-lip structure, which for some time is rather apt to show its parentage too plainly, unless subjected to more friction than is agreeable or possible upon a newly formed nose. In applying this method to large sores of the leg, or those resulting from burns, where the contraction of cicatrisation is impossible or injurious, a certain amount of success has been obtained. Perhaps the healing is somewhat expedited, but it is certainly more accomplished by the cicatrisation and contraction of the original edges of the ulcer than by the increase of the transplanted patches. We have also found a tendency in the resulting cicatrix to ulcerate again readily. I do not think that this method will supersede the necessity for larger transplantations of skin in those severe cases which call most urgently for surgical interference.

Among the recent innovations in operative surgery, I have barely time to notice one which "*l'audace*" of the French school is applying in a manner which those who have reached the rest-and-be-thankful stage of development may well call daring, if not rash. I refer to the use of the *aspirateur* of M. Dieulafoy to relieve distension by puncture of the bladder in cases of retention of urine, and of the intestine in cases of abdominal obstruction, and in joints affected with hydrops articuli, and even to evacuate the fluid contents in strangulated hernia. In the first named of these conditions, it is no doubt valuable as an adjunct to other remedies. In intestinal obstruction Demarquay has not found it of much practical use, because of the rapid re-formation of flatus, which quite corresponds with my own experience of puncture in desperate cases without the aspirator. In the puncture of joints and in the cure of hydatids I have used it, but not frequently enough to pronounce upon its capabilities. I have not yet arrived at the measure of audacity to use it in strangulated hernia. It scarcely agrees with my own impression as to the importance of avoiding any additional injury to the bowel in dealing with strangulated or other herniæ. The propriety and the limits of the use of this instrument are only entering upon the *sub judice* stage, and we must wait for more of those bad consequences following its employment than those which have already occurred, before we can pronounce fairly upon its legitimate use.

In the use of anæsthetics, we find now rising a revival of the rivalry between chloroform and ether, which the fame and support of the late Sir James Y. Simpson had decided in this country in favour of the former. We follow but tardily, in this old country, in that combination of pleasure with utility, which has led lately the inventive genius of our Transatlantic brethren, "ever charming, ever new," to the association of æsthetics with anæsthetics in the performance of operations under these agents to an obbligato accompaniment upon the organ, and an appropriate address by a popular preacher, improving the occasion on behalf of morals. The comparative safety of these agents is unquestionably a most important point, and one that must ultimately decide the matter in favour of that anæsthetic the use of which involves the fewest casualties. The chief difficulty in determining this important point is the natural disinclination to make public such cases. It is less objectionable, however, to do so when a certain lapse of time has occurred after the accident; and it is to be hoped that, in the not very far future, we may arrive generally at that philosophic frame of mind which will consider it as much a duty to publish unsuccessful cases as it is a gratification to achieve the glory of a brilliant result.

In the domain of surgery, gentlemen, are so many regions now undergoing exploration and re-examination, that I may fairly claim an excuse for having led you chiefly over ground which I have myself travelled, and for omitting many equally important territories perhaps more effectively mapped out, and to some of you more interesting. In exploring this domain many pioneers are required, and many very qualified ones are busily at work. Those who have skill and pluck enough to find a new road of investigation, even if it be only to prove that it leads nowhither, deserve commendation for this proof, which is itself good work none. They demand our sympathy perhaps more than those who are lucky enough to lead up to the most auriferous diggings. The age we live in is too much given to the worship of success to afford much of this sympathy; and it accords, usually, too little merit to such as have contributed to prepare a way for the honour which another has reached, profiting, it may be, by their mistaken vestiges in travelling upon the same errand. As we advance, our horizon itself extends; the very multitude of objects brought into view perplexes the perception of them; and even our instruments for detecting and examining them become so numerous as to be themselves *impedimenta* to our progress. The difficulty of deciding upon any given point becomes greater as differences become more minute, and proof more complex and further from our stand-point. The use of the imagination in science has already been powerfully justified; and the time may yet come when a complete and logical proof will be as little possible in scientific knowledge as in dogmatic theology. The theory of probabilities will doubtless be more employed to compensate for the imperfection of the record, and may be turned to advantage in Bastian's archebiosis and Pouchet's germ-theory, as much as in the Darwinian hypothesis. It will thus become easier for the critic to fall into the error of asking for more evidence than the nature of the subject admits of —a sure sign of the limited area of his habitual observations. But even this tendency is productive of good. It is merely the redundant energy of a single-minded instinct in this natural enemy of inventors and innovators—sent, doubtless, as hawks to keep down sparrows, to insure proper limits and decent order among the more imitative minds who follow, prove, and sometimes improve, upon originators, and form schools and fashions. They thus accumulate a chastened experience. When weighted by the synthetical faculty, this instinct constructs eclectic systems, more than ever needed in the present chaos of crude ideas and undigested opinions, to which these swift-winged writers are fearsome scourges. By their keen research they discover when and how things are re-invented and re-discovered, show the limits of their application, give warnings of danger and excess, which, if often falsified, at least inspire a useful caution, or lead to a more insured confirmation. Still more useful are they in deciding when discoverers disagree about priority. Whether right or wrong, they ultimately have the effect of consolidating and rendering more certain a well-grounded reputation. Misled by the Chasles forgeries, they found out that Newton had been preceded in his discovery of gravitation by a French *savant*, and thus elicited an elaborate and conclusive proof of its great originality. They have lately asserted that Harvey had been forestalled in his discovery of the circulation of the blood by Walter Warner, and have thus given us the benefit of the profoundly learned vindication by the Linacre Professor of Anatomy and Physiology at Oxford.

A still greater influence and responsibility than heretofore

will rest upon these labourers in science. The fruition of really great discoveries has been, and will no doubt continue to be, postponed by the blind opposition of these who form the scientific opinions of the age, and, though they usually check one another, so as to act, on the whole, with advantage, yet their neglect or prejudices may undoubtedly prevail, so as to inflict injustice upon individuals, and do injury to science and to mankind, the more lasting in proportion to their position, ability, and conscientiousness.

The following are a few of our distinguished *confrères* who are attending the present meeting from the sister kingdoms and the provinces:—Mr. Porter, Dr. Denham, Mr. Joliffe Tufuell, and Professor Mapother, of Dublin; Dr. Gairdner, Dr. Buchanan, and Dr. Macleod, of Glasgow; Grainger Stewart and Batty Tuke, of Edinburgh; Drs. Ogston, Fraser, and Struthers, from Aberdeen; Chadwick, of Leeds; Southam and Roberts, of Manchester; Husband, of York; Baker and Bartleet, of Birmingham; Swain and Square, of Plymouth; Elliot and Barnes, of Carlisle; Cadge, Cross, and Copeman, of Norwich; Rumsey, of Cheltenham; Desmond and Steele, of Liverpool; Baker, of Derby; Philipson, of Newcastle; Eyton Jones and Griffith, of Wrexham; Ceely, of Aylesbury; Dyke, of Merthyr Tydfil; Ransom, of Nottingham; Waters, of Chester; Hall, of Brighton, etc.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XXIX.

By J. F. CLARKE, M.R.C.S.

For nearly forty years on the Editorial Staff of the "Lancet."

LONDON UNIVERSITY.

(*Continued from page* 49.)

Quarrels of the Medical Officers, and their Influence upon the Success of the North London Hospital.

At the time when University College and Hospital were in the full zenith of their fame and usefulness, the medical officers of the Hospital were constantly quarrelling. On more than one occasion disagreements rose to such a height that they threatened seriously to injure both College and Hospital. So long as the combat was carried on in the board-room of the Hospital the students were unacquainted with the grave differences which existed amongst their teachers. But unfortunately the operating-theatre and the wards of the Hospital became the arena for displays, which, whilst they afforded a fund of amusement to the students, were painful to those who could not fail to perceive the danger to which they exposed the institution. The two foremost men in the Hospital were Elliotson and Liston. Whatever might have been the cause of the quarrel between these two eminent persons, I can affirm that for three or four years they were constantly at daggers drawn. I think there can be no doubt that jealousy was the mainspring of this unfortunate condition of things. Elliotson and Liston were both supreme favourites with the pupils, and neither could bear "a brother near the throne." Elliotson was in the majority on all questions on which a vote was taken. Elliotson's party consisted of Samuel Cooper and Richard Quain; Liston and Anthony Todd Thompson formed the minority. The scenes that took place at the Board were of the most exciting character, and occasionally threatened personal violence. At this time I was in the daily habit of accompanying Liston on his rounds after his visits to the Hospital. He complained to me constantly of the indignities to which he was subjected. "Cantab," he would say, "has attacked me again. It's too much for my temper; I cannot long endure it."(a)

I ventured, on returning home, after reflecting on the false position in which Liston had placed himself, to address a note on one occasion to him, begging of him in the future to restrain his temper, whatever the provocation to which he was subjected might be. I asked him not to feel offended at my freedom in thus tendering him advice. He replied that he never could be offended at anything I could do respecting himself, as he was well assured I had but one object in my interference, which was for his benefit. I have his note now before me in reply to my remonstance, in which he says "for the future I will act on your advice." To some extent he kept his promise, but his impetuous nature led him into many further difficulties, and "the schism" prevailed until Elliotson was forced to resign his appointment, in consequence of his introduction of animal magnetism as a curative process in the treatment of patients submitted to his charge as a physician to the Hospital. In some of my former articles I have discussed this subject; I shall enter more fully into it in future contributions.

(*To be continued.*)

(a) At one of these meetings Liston so far forgot himself as to threaten personal chastisement on his opponent, "Elliotson Cantab,"—which, it should be explained, was Elliotson's cognomen.

REVIEWS.

A Treatise on the Continued Fevers of Great Britain. By Charles Murchison, M.D., LL.D., F.R.S. Second edition. Longmans. Pp. 729.

This new edition of Dr. Murchison's treatise on Continued Fevers appears at an opportune time. Eleven years have elapsed since the publication of the first edition, and during that period a large number of observations on continued fevers have been made and recorded in all parts of the world. In England the labours of the medical staff employed by the Local Government Board have given us carefully investigated records of a number of local epidemics, and have added something at least to our knowledge of the manner in which epidemics of typhoid fever frequently—we do not say always—arise. The same period also has seen London visited with great epidemics of typhus and relapsing fever, and the records of the Fever Hospital during that period are of very great value. Fortunately, the Hospital has possessed in Dr. Murchison and the other members of its staff a set of competent and industrious observers, who have not allowed the pathological harvest which the late epidemic seasons have given to their hands to be lost. The Fever Hospital is now superseded by the new Fever Asylums, but during the period of its usefulness it has been made to contribute a full quota to the advancement of our knowledge of the class of diseases for the treatment of which it was erected.

The present volume is not a mere reprint of the former. Much of the work has been entirely rewritten, and the statistics on which the conclusions in the first edition were based have been largely extended. In his preface Dr. Murchison tells us that "the statistical tables in the first edition were based on 6703 cases of continued fever admitted into the London Fever Hospital during ten years (1848-57), while those in the present edition are based on 28,863 cases admitted during twenty-three years (1848-70)." This latter period comprises the entire modern medical history of the Fever Hospital, for it was not until 1848 the continued fevers were distinguished, and the transfer of the pauper patients to the new Fever Asylums in 1871 cut off the chief source of supply to the Hospital.

The questions which at the present time are mainly attracting the attention of the medical world are those of etiology. The old mists of doubt and dispute as to whether it were possible to cut short fevers, and whether fevers were best treated by heroic bloodletting or by drugs supposed to possess a specific action, have vanished completely from the medical horizon, and their place is taken by the great inquiries, the solution of which is alone capable of raising preventive medicine into an exact science. Such questions are—What is the essence of these diseases? what is contagion? what is a specific morbid poision? what zymotic diseases do in the present day originate *de novo*, and what proportion does the mode of fresh origination bear to the mode of origination by the introduction of specific poison-germs? what part, if any, do microzymes play in the production of zymotic diseases? what are the varieties of typhoid and typhus fevers? and what, on the one hand, is their relation, and what is the relation borne by typhoid fever to miasmatic diseases, on the other? The nearer we can approximate to the true answers to these and the like inquiries, the more certainly shall we arrive at the best means of freeing civilised man from these dire historic scourges.

Very recent experience in our own metropolis unfortunately proves afresh that the poison of enteric fever is sufficiently rife amongst us, and that, however it may get there, it finds its way into quarters where its congeners typhus and relapsing fever rarely, if ever, penetrate. The reader will turn with interest to the pages which contain Dr. Murchison's conclusions

on the much debated subject of the etiology of typhoid. He thus sums them up:—"1. Enteric fever is either an endemic disease, or its epidemics are circumscribed. 2. It is most prevalent in autumn after hot weather. 3. It is independent of overcrowding, and attacks the rich and the poor indiscriminately. 4. It may be generated independently of a previous case, by fermentation of fæcal and perhaps other forms of organic matter. 5. It may be communicated by the sick to persons in health, but even then the poison is not, like that of small-pox, given off from the body in a virulent form, but is developed by the decomposition of the excreta after their discharge. 6. Consequently, an outbreak of enteric fever implies poisoning of air, drinking-water, or other ingesta with decomposing excrement." Of these conclusions—which, if our memory serves us, differ but little from those advanced in the first edition—the fourth, fifth, and sixth are those which are likely to raise controversy.

Dr. Murchison has now for the last fifteen years persistently advanced the possibility of enteric fever having an independent origin from fæcal decomposition and miasma, and his view is supported by a number of authorities, amongst whom he quotes Griesinger, Niemeyer, Liebermeister, Hudson, and Stewart. A large number of observations of local outbreaks are quoted in the work before us in which the poison could not be traced to importation or to any cause more specific than fæcal contamination of water or air. On the other hand, we know that the thesis maintained by Dr. Budd, of Bristol, in this country—that the contagious nature of enteric fever (using the term contagious to signify the production of the fever from a pre-existing germ derived from the sick) is the "master truth" in its history—has certainly gained adherents of late years. It is supported by the history of several of the outbreaks recently observed by Dr. Ballard, and we may fairly say that, supposing truth be divided between the maintainers of these opposite opinions, it seems probable that as much of the precious commodity is possessed by those who assert that at least enteric fever is most frequently disseminated by contagium derived from the sick and conveyed to the healthy through the medium of ingesta, as by those who assert its more frequent independent origination. Dr. Murchison's fifth proposition, although it conveys a general truth, seems to us too sweeping. He himself (p. 460) records several cases in which the attendants on the sick have contracted typhoid fever, and in none of them has there been evidence to prove that the poison which entered into their system was "developed by the decomposition of the excreta after their discharge." It is undoubtedly true that attendants very rarely take typhoid, but, in the rare instances in which it has been communicated, it is an open question whether the poison emanates from the bodies of the sick or is derived from the decomposing alvine excretions. This, in fact, Dr. Murchison himself acknowledges.

We need hardly say that we commend Dr. Murchison's work as the best and most exhaustive treatise on the subject of Continued Fevers in our language. It is a perfect mine of carefully observed and recorded facts. The present edition is illustrated by numerous charts of temperature, and the excellent coloured plates of the cutaneous eruptions of the continued fevers which appeared in the first edition have been reproduced in this. We know of few more valuable treatises on a limited group of diseases in the whole range of practical medical literature.

GENERAL CORRESPONDENCE.

ON THE TREATMENT OF HYDATID CYSTS IN THE VISCERA.

"Palmam qui meruit ferat."

LETTER FROM DR. S. D. BIRD.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your report of the proceedings of the Clinical Society of London on November 8 of last year, there appears an interesting paper by my old friend and fellow-student Dr. Duffin, on seven cases of hydatid of the liver treated by tapping with the fine trocar and canula; and in the discussion which followed, Dr. Greenhow is stated to have said that "Dr. Murchison first brought this plan forward." This is a very great mistake, as it is easy enough to show. When I first arrived in this colony, in February, 1861, I found that diseases of this kind (which are almost as common here as they are in Iceland) were habitually treated in this manner, and with great success. On inquiring amongst the older practitioners, it appeared that tapping had been their usual remedy in almost all cases. The risk of the operation is almost *nil*, and I have many times tapped cysts both in the lung and liver in my consulting-room, in patients who returned to their homes in the country the same day. As much of the fluid as possible is evacuated; and we are in the habit of tapping such cases as soon as the presence of a cyst is detected, or indeed sometimes when it is only suspected. Both liver and lung may safely be explored with the fine trocar, with certain precautions.

I enclose the *Australian Medical Journal* for March, 1871, in which is the report of a paper read by myself before the Medical Society of Victoria, on the diagnosis and treatment of hydatid in the lung. Since this was published I have met with many curious cases of such disease, and as they may be to a certain extent novelties to many of your readers, I will with your permission give short notes of a few of them.

J. W., servant girl, aged 19, was admitted into the Alfred Hospital with a well-defined cyst in the upper lobe of the left lung; I tapped it under the clavicle, but before six ounces of the fluid had escaped by the canula, the cyst gave way into a bronchus (which had probably been perforated by the trocar), and the remainder of its contents were coughed up. The cure of this case occupied an unusual time, as she continued to cough up matter and portions of cyst for several months, but was eventually discharged quite well. I examined her yesterday, and could detect no remains of the disease.

E. G., aged 9 years, a highly nervous little girl, daughter of a country gentleman, was brought to me twelve months ago suffering from a large cyst in the liver, which a homœopathic practitioner had been treating for some months with similars and the external use of vinegar and water. I tapped the cyst at once, and gave bromide of potassium and kamela in full doses. The child never had another symptom connected with the liver, but six months afterwards reappeared with a large cyst in the top of the right lung. This was tapped by Mr. Fitzgerald, the aspirator being used. The same internal remedies were given. I have recently examined the patient, and can find no traces of either cyst, the general health also being perfect.

Some months ago I was consulted by an elderly gentleman for a large hydatid of the liver which had been several times tapped but always refilled. He now declined any further operation. I gave him large doses of bromide and kamela, and in six weeks the tumour had quite subsided and has not since reappeared.

In May, 1871, a man aged 40 was admitted to the Alfred Hospital under my care, suffering from a large cyst, which I diagnosed as occupying the convex surface of the liver rather far back. I tapped him under the ribs, keeping the point of the trochar well up. More than four pints of fluid escaped. A similar operation was required in a few weeks, and subsequently the opening was enlarged, and an elastic catheter introduced. Shortly after each operation the patient had urgent heart symptoms, irregular and intermittent pulse, and lividity, and died suddenly. The liver was found to be small and healthy; the hydatid was above the diaphragm, and had in fact occupied the cavity of the pleura. The liver had not been wounded by the trocar. The following is Professor Halford's account of the heart:—"Hydatid cysts occupy the whole of the outer surface of the heart, extending from the upper surface of the auricles surrounding the large vessels, where some of them are of the size of small oranges. They seem to me to have arisen in the visceral layer of the pericardium, not encroaching much into the muscular substance. The cavities of the heart are untouched by the parasites. The visceral layer of the pericardium is much thickened, and studded with little cysts. It may be said that the echinococci occupied the cavity of the pericardium."

Mr. Fitzgerald, Surgeon to the Melbourne Hospital, recently cut into an old cyst in the lung between the ribs, and emptied it with the finger and scoop. The patient made a rapid recovery.

I have from the experience of a large number of cases quite convinced myself that the bromide of potassium and kamela have a decided influence over the vitality of the parasite when given continuously in large doses. I am, &c.,

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"SLEEPING SICKNESS."

Letter from Mr. George Gaskoin.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have just seen in your number of July 19 a notice of the "sleeping sickness," or rather the disease of lethargy as found on the African coast, quoted by Dr. John W. Ogle from a letter by Dr. MacCarthy, whose observations appear to have been made in 1869. In the following year, a Lisbon journal, the *Correio Medico*, published some few cases of this extraordinary complaint as occurring in the islands San Tomé and Principe on that coast, from observations by Portuguese physicians made much about the same period of time. There are also a few scanty records, of earlier date, by English physicians. So far the existence and nature of the disease are established and confirmed. The cases described by the Portuguese doctors are of a far more prolonged and serious nature than would be judged from the accounts furnished by Mr. MacCarthy: in none of them is any reference made to extirpation of cervical glands or pressure on the great vessels. I merely mention this fact, having no feeling but that of curiosity on the subject and thankfulness for his contribution. Since my attention was directed to the perusal of these cases, I have felt persuaded that the Arabian physicians, with all their minute divisions of lethargy and head oppression, must have been acquainted with the disease. In some of our own medical dictionaries, even of the present century, *Carus* is described at length. An anæmic condition habitual in the negro first suggests itself, or some poisoned condition of the blood seems, in the absence of further data, a ready way of accounting for it. The alarming coma that occasionally precedes the eruption of small-pox, the excessive head oppression in some cases of malarial fever, would afford an analogy for this. Boerhaave speaks of *Carus* as an apoplexy, which brings it very near to sunstroke. If it were merely a falling to sleep, as Mr. MacCarthy describes it, one need not go out of London to find most singular instances of sleeping sickness, as idiosyncrasy, not as disease; and I have known a sort of imbecile whom nothing could arouse from his slumbers till nature broke the chain. In the course of military operations now in full activity on the West African coast, it would be interesting to learn more of this disease.

I am, &c., George Gaskoin.

OBITUARY.

SURGEON-MAJOR RAMSEY,

Of the 75th Regiment, died at Maritzburg on June 16. A short time before his death he had a severe fall from his horse, and it was at first thought that had caused his death, but a post-mortem examination has proved that this was not altogether correct, though the accident may have hastened the sad event. His funeral was attended with full military honours.

MEDICAL NEWS.

University Intelligence.—University of London.—The following are lists of the candidates who have passed the recent examinations:—

First (B.Sc.) Examination.

First Division.—Peter Phillips Bedson, Owens College; Edward Boyce Cumberland, private study; Thomas Frederick Harris, private study; Samuel Alexander Hill, Royal School of Mines; William Hudson, private study; John Viriamu Jones, University College; Oliver Joseph Lodge, private study; James Gordon MacGregor, Edinburgh University; William Rushton Parker, Caius College, Cambridge; Thomas Slater Tait, Owens College; Claude Metford Thompson, University College; Arthur Thomas Wilkinson, B.A., Wesleyan College, Taunton.

Second Division.—William Brown, Birkbeck Institution; George Christopher, University College; George Simmonds Dunn, B.A., private study; John Gilliott Garhutt, M.A., St. Mary's Hospital; Charles Hopkinson, Owens College; Peter Horrocks, Owens College; John Neville Keynes, B.A., Pembroke, Cambridge, and University Colleges; William Henry Munns, B.A., University College; Frank Prior Purvis, private study; Prasanna Kumár Ráy, University College; Charles Robinson, Owens College; Herbert Rohson, University College; Alexander Simpson, B.A., F. C. Divinity Hall, Aberdeen; Arthur Hewett Spokes, B.A., University College; Charles Alfred Weber, B.A., University College.

Preliminary Scientific (M.B.) Examination.

First Division.—John Wallwork Ashworth, Owens College; William Banks, private study; Arthur Barclay, University of Edinburgh; Peter Phillips Bedson, Owens College; Charles Edward Beevor, University College; Frederick Lucas Benham, University College; Henry Robert Heather Bigg, University College; Samuel Ferguson Bigger, Liverpool School of Medicine; Samuel Herbert Burton, University College; John Joseph Byrne, Owens College and Manchester School of Medicine; Charles Henry Cuming, University College; Henry Davy, Guy's Hospital; Percy Herbert Edmund Freund, St. Thomas's Hospital; John Gilliott Garbutt, M.A., St. Mary's Hospital; William Gristock, University College; Thomas Ernest Hayward, St. Bartholomew's Hospital; Samuel Alexander Hill, Royal School of Mines; Peter Horrocks, Owens College; Boyd Burnett Joll, University College; David Rhys Jones, University College; Oliver Joseph Lodge, private study; John William Mees, Owens College; Richard Shalders Miller, University College; John Francis Nicholson, St. Thomas's Hospital; William Rumney Nicholson, University College; John Priestley, Manchester Royal School of Medicine and Owens College; Walter Pye, St. Bartholomew's Hospital; Charles Ernest Richmond, Owens College; Charles Robinson, Owens College; Herbert Robson, University College; James Ryley, University College; Harrington Sainsbury, University College; Charles Edward Sheppard, St. Thomas's Hospital and Royal School of Mines; Arthur Quarry Silcock, University College; Leader Henry Stevenson, Guy's Hospital; Charters James Symonds, Guy's Hospital; Harold Gilbertson Taylor, King's College; John Todd, University College; Charles John Watson, private study and tuition; Charles Alfred Weber, B.A., University College; Frederick Willcocks, King's College.

Second Division.—James Stanley Newton Boyd, University College; William Brown, Birkbeck Institution and private study; Daniel Catlin Burlingham, University of Edinburgh; Henry Laurence Champneys, Guy's Hospital; Frank Aspland Cooper, University College; Alfred Daniel, University of Edinburgh; Thomas George Davy, St. Bartholomew's Hospital; James Hudson, private study; Edwin Hughes, University College; John Samuel Joule, Anderson's Medical School, Glasgow; David Lloyd, University College; William Pope Mears, London Hospital; John Mortimer, University College; Richard Rundell William Oram, Guy's Hospital; Edmund Howard Paddison, Guy's Hospital; William Rushton Parker, Caius College, Cambridge; Reginald Paul, Middlesex Hospital; Prasanna Kumár Ráy, University College; John Reynolds Salter, University College; William Frederick Shain, Liverpool School of Medicine; William Joseph Spratling, private study and Royal College of Chemistry; William Robert Stewart, London Hospital; John Raglan Thomas, Epsom College and St. Bartholomew's Hospital; John Hinks Vinrace, private study; William Henry Weddell, St. Mary's Hospital; Hubert Foveaux Weiss, St. Bartholomew's Hospital.

Royal College of Physicians of London.—The following is a list of College officers elected on July 31:—*Censors:* William Richard Basham, M.D., George Fincham, M.D., John William Ogle, M.D., and Samuel Osborne Habershon, M.D. *Treasurer:* Frederic John Farre, M.D. *Registrar:* Henry Alfred Pitman, M.D. *Harveian Librarian:* William Munk, M.D. *Examiners:* Anatomy and Physiology—John Burdon Sanderson, M.D., and George Harley, M.D.; Chemistry, Materia Medica, and Practical Pharmacy—William Howship Dickinson, M.D., and Thomas Stevenson, M.D.; Medical Anatomy and the Principles and Practice of Medicine—George Johnson, M.D., and Andrew Whyte Barclay, M.D.; Midwifery and the Diseases peculiar to Women—John Clarke, M.D., and William Smoult Playfair, M.D.; Surgical Anatomy and the Principles and Practice of Surgery—George William Callender, F.R.C.S., and Jonathan Hutchinson, F.R.C.S. *Curators of the Museum:* Frederic John Farre, M.D., Thomas Bevill Peacock, M.D., William Wegg, M.D., and Francis Sibson, M.D.

The following gentleman, having passed the required examinations, will be proposed for admission as a Member:—John Curnow, M.D. Lond., 12, Mitre-court Chambers, E.C.

The following gentlemen were admitted Licentiates:—

Barnard, Charles Edward, 5, Tamworth-road, Croydon.
Bedford, Robert, 85, Hereford-road, W.
Bomford, Gerald, King's College Hospital, W.C.
Curtis, Arthur, Alton, Hampshire.
Davis, Harry, Callington, Cornwall.
Deakin, Charles Washington Shirley, Kingston Grange, Hereford.
Dodd, Alexander Russell, 8, Westbourne-terrace-road, W.
Drake, Arthur John, Stratford, E.
Dyer, John Edward, 21, Guildford-street, W.C.
Eskell, Maurice Clifford, 8, Grosvenor-street, W.
Fowler, Breame Weston, 46, Castle-street East, W.
Gillingham, Alfred, Guy's Hospital, S.E.
Godrich, Alfred, 140, Fulham-road, S.W.
Goodchild, John Arthur, Heathfield House, Ealing, W.
Gray, Frederick Archibald, 5, Charrington-street, N.W.
Green, James, Landport, Portsmouth.
Haig, Percy de Haga, 10, Gilstone-road, S.W.
Harvey, Charles William, University Hospital, W.C.
Hartridge, Gustavus, Shrewsbury.
Keetley, Charles Robert Bell, St. Bartholomew's Hospital, E.C.
Kitchen, Charles Frederick Hewick, 38, Ogilvie-street, Manchester.
Lawrence, George Edgar, 31, Claverton-street, Bath.
Lindsay, William Baltimore, 44, Camden-road, N.W.
Millar, William, 23, Cathcart-road, S.W.
Morris, Sydney, Hayes, Kent.
Murphy, John Francis, Ardravinia, St. John's-hill, Wandsworth, S.W.
Osler, William, 155, Stanhope-street, N.W.
Reid, Alexander, Towlaw, Darlington.
Risdon, George Owen, 24, Charlwood-street, S.W.
Sobey, Arthur Lyne, West London Hospital, W.
Symons, John, 4, Manor-villas, Hackney, E.

Apothecaries' Hall.—The following gentlemen

passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, July 31:

Carter, Albert, Belvedere, Kent.
Carter, Francis Richard, Potter Newton, Leeds.
Corbin, Edward Kinnersley, Guernsey.
Davies, James Harries, Llandyssal, South Wales.
Griffiths, David, Aberayron, South Wales.
Hawton, James Wm. Humbly, Devonport.
Jones, Thomas Evan, Buarthyfoil, Anglesea.
Welch, Wm. John Joseph, Stourbridge.

The following gentlemen also on the same day passed their primary professional examination :—

Bate, George, St. Thomas's Hospital.
Duke, Edgar, Guy's Hospital.
Fox, Richard Hingston, London Hospital.
Jepson, Edward, St. Bartholomew's Hospital.
Spark, John, St. Bartholomew's Hospital.
Spooner, Fredk. Henry, St. Bartholomew's Hospital.
Watts, Fred, St. Bartholomew's Hospital.
Thomson, Samuel John, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bruce, J. Mitchell, M.D. Lond., M.R.C.P. Lond., M.A.—Assistant-Physician at Charing-cross Hospital, W.C.

Finzi, L. M., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.—Surgeon to the Westminster General Dispensary, *vice* Alfred Ashby, M.B. Lond., F.R.C.S. Eng., resigned.

Paradin, D., M.R.C.S. and L.S.A.—House-Surgeon to the Stamford and Rutland General Infirmary, *vice* A. T. Gibbings, M.B. Lond., M.R.C.S., resigned on account of ill-health.

BIRTHS.

Clover.—On July 31, at 3, Cavendish-place, W., the wife of J. T. Clover F.R.C.S., of a son.

Denton.—On July 29, at Leicester, the wife of Mr. E. R. Denton, surgeon, of a daughter.

Gairdner.—On July 31, at Ardrossan, Ayrshire, the wife of Professor Gairdner, M.D. Glasgow University, of a son.

Simpson.—On August 3, at 52, Queen-street, Edinburgh, the wife of Professor Simpson, of a son.

Watson.—On the 3rd inst., at Tottenham, the wife of Tyndale Watsou, M.D., of a son.

MARRIAGES.

Churchill—Butler.—On July 30, at All Saints', Knightsbridge, Frederick Churchill, M.B., F.R.C.S. Eng., third son of John Churchill, Esq., of Pembridge-square, Bayswater, to Frances, fourth daughter of the late Charles Salisbury Butler, Esq., M.P., of Cazenoves, Upper Clapton, and 48, Prince's-gate, W.

Coates—Beckett.—On July 31, at St. John's Church, Moulsham, Chelmsford, Frederick Thomas Coates, M.R.C.S.E., of Euston-road, London, to Anna Maria, the only daughter of Mr. William Beckett, of Mildmay-road, Chelmsford, late of Walpole, Suffolk.

Croly—Pennington.—On July 31, at Ivy-bridge, South Devon, Richard Croly, M.D., third son of Henry Croly, M.D., F.R.C.S.I., Greenfield, Rathfarnham, Dublin, to Annie, third daughter of Albert Pennington, Esq., of Ivy-bridge.

Field—White.—On July 31, at St. James's, Paddington, George Purdey Field, M.R.C.S., eldest son of Octavius A. Field, Esq., of 43, Sussex-gardens, W., to Pauline Anne Caroline, second daughter of Robert Faulder White, Esq., 35, Sussex-gardens, Hyde-park, W.

Gray—D'Arcy.—On August 2, at Ballymaeward Church, county Galway, George Gray, M.D., Castlewellan, county Down, to Jane Adelaide, daughter of the late Thomas Richardson, J.P., of Fyaquin, county Galway, and widow of Chas. Vesey D'Arcy, J.P., of Bryansford, county Down, and Lieut. H.M.'s late Indian Navy.

McLeod—Dinwiddie.—On July 29, at Teviot Lodge, Hawick, N.B., Donald McLeod, L.R.C.S. Edin., to Jessie, eldest daughter of the late James Dinwiddie, Esq., J.P., Dumfries.

Venning—Pearson.—On August 2, at St. Paul's Church, Brighton, Edgcombe Venning, Surgeon 1st Life Guards, second son of James M. Venning, Esq., of Surry House, Norwich, to Frances Edith, only daughter of Captain Pearson, of 13, Adelaide-crescent, Brighton.

DEATHS.

Alford, Mary Andrews, wife of Henry Alford, surgeon, at The Mount, Taunton, on July 29.

Anderson, William Henry, L.R.C.P. Edin., L.R.C.S. Edin., L.S.A., third son of Wm. Anderson, Esq., of Theddlethorpe, suddenly while bathing in the Thames at Marlow, on July 26.

Fuller, Hugh Pitter, M.R.C.S., for many years Honorary Surgeon to the Royal Asylum of St. Anne's Society, at his residence, Bramerton House, Abbey-road, N.W., on July 29, aged 61.

Glanville, Henry Bateson, infant son of Dr. Glanville, of Spring-grove, Isleworth, at Brighton, on July 31, aged 2 months.

Reade, Henry Cooper, retired Deputy Inspector-General of Military Hospitals, at Clifton, on August 1, aged 56.

Rodwell, George, M R.C.S.E., L.S.A., formerly of the *Edinborough*, E.I.C. Service, at Loddon, Norfolk, on August 5, aged 54 years.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bournemouth Dispensary.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

Brighton Hospital for Sick Children.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

Essex and Colchester Hospital.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Committee, on or before August 21.

Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.—Registrar. Particulars may be obtained from the Hospital.

Herefordshire Rural Sanitary Authorities.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to T. Llanwarne, St. John-street, Hereford, on or before August 19.

Liverpool Royal Infirmary School of Medicine.—Demonstrator of Anatomy. Applications, with testimonials, to R. Harrison, Registrar (of whom particulars may be obtained), before August 13.

Newton Abbot.—Medical Officer of Health. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to John Alsop, East-street, Newton Abbot, Devon, on or before August 16.

Royal South Hants Infirmary, Southampton.—House-Surgeon. Candidates must be M.R.C.S. and L.S.A. Applications, with testimonials, to the Assistant-Secretary, on or before August 16.

Wolverhampton and Staffordshire General Hospital.—Physician's Assistant. Candidates must be graduates in Medicine of a British University, or be possessed of such medical qualifications as are satisfactory to the Medical Committee. Applications, with testimonials, to the Chairman of the Medical Committee, on or before August 9.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Aston Union.—Mr. Orford has resigned the Deritend District; area 280 population 26,860; salary £60 per annum.

Tendring Union.—Mr. Robert Latten has resigned the Seventh District; area 13,951; population 2918; salary £50 per annum.

Wantage Union.—Mr. A. M. Robinson has resigned the Ilsley District; area 18,950; population 3718; salary £55 per annum.

APPOINTMENTS.

Aberystwyth Union.—Jacob Roberts, M.R.C.S.E., L.S.A., to the Llanfihangel District; Morris Jones, L.R.C.P., M.R.C.S.E., L.S.A., to the Aberystwyth District.

Basford Union.—Wm. Terry, M.R.C.S., L.S.A., to the Kirkby District.

Bath Union.—Thomas McClure, L.R.C.P. Edin., L.R.C.S. Ire., to the Sixth District; Wm. Edward Stainton Stanley, L.R.C.P. Edin., L.R.C.S. Edin., to the Seventh District.

Cardigan Union.—James Mathias Phillips, M D., M.R.C.S.E., L.S.A., to the Second District.

Hinckley Union.—Thomas Sutton Ludlow, M.R.C.S.E., L.S.A., to the Burbage District.

Liskeard Union.—George Kerswill, L.R.C.P., M.R.C.S E., to the Second District.

Liverpool Parish.—Alexander M. S. Hamilton, M.D., M.R.C.S.E., Assistant Medical Officer of the Brownlow-hill Workhouse.

Manchester Township.—Thomas Price, M.R.C.S.E., L.K.Q.C.P. Ire., to the Cathedral District.

Mile-end Old Town Hamlet.—Thomas Loane, M.R.C.S., L.S.A., to the Northern District, the Workhouse, and the Schools.

Norwich Union.—David Simpson Penrice, M.R.C.S.E., L.S.A., to the Third District.

St. Marylebone Parish.—Frederick Wm. Spurgin, M.R.C.S.E., L.S.A., L.R.C.P. Edin., to the All Souls and Cavendish District.

Stockton Union.—Wm. Hodgson Oliver, L.R.C.P. Edin., L.S.A., to the Norton Union.

Woolwich Union.—Robert H. Lloyd, M.R.C.S.E., L.S.A., to the Workhouse and Infirmary.

Royal Medical and Chirurgical Society.—The Library will be closed for one month from August 11 to September 10 (both days inclusive).

A memorial window has recently been put up in Ruabon Church to the memory of the late Mr. William Jones, a surgeon, of Plas Newydd, Ruabon.

Dr. John Lee, of Ashborne, on retiring from practice, has been presented with a chest of silver plate and a fern-engraved silver salver. The following inscription is on the salver:—"Presented to John Lee, Esq., M.D., with a small chest of plate, by his old friends and patients, as a testimonial of the high esteem in which they have held his unvarying kindness during a practice of many years.—July, 1873." The testimonial was accompanied by a book having an illuminated title-page, and the names of the subscribers.

Cholera in Vienna.—"And how about cholera? you will naturally ask," writes the *Times* Vienna correspondent last week. "Well, owing to the energetic measures taken on the part of the authorities in this respect, too, things have greatly mended. All through the latter half of last week the number of attacks ranged from nine to twelve a day, with from one to ten deaths a day, the greatest part of the deaths being earlier cases where patients died of exhaustion. Monday's returns showed, as usual,

the influence of Sunday, and the number of cases went up to twenty-five, and that of deaths to twelve. They were almost all in the poorest districts, and among the poorest classes, five of the nine districts into which Vienna is divided being quite free, and in three there being only one case in each; the hospitals and one district—the second—dividing the rest between them."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Infra Dig.—The circumstances related quite justify the course proposed to be adopted.

Dangers of Obstetric Practice.—The name of the defendant in the action referred to was Rumboll. We believe the patient was attended by an assistant.

G. J. M.—"Digest of the English Census of 1861," compiled from the official returns, and edited by James Lewis, of the Registrar-General's Department (London: Edward Stanford, 1873). This volume is more complete than any previous analysis of a census.

A Six Years' Reader.—The forty-sixth annual gathering of German naturalists and medical practitioners will be held this year at Wiesbaden, from September 18 to 24.

Lex, Spalding.—(B) We have no doubt that an M.B. of Aberdeen, if registered, can recover for medicines prescribed for his patients and supplied by himself. (A) We will endeavour to furnish the required information in our next issue.

DR. C. B. TAYLOR'S INSTRUMENT FOR THE EXTRACTION OF CATARACT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I find in your list of surgical instruments exhibited at Vienna a description of my wire spoon for the extraction of cataract. The writer of the notice in question remarks that this instrument is used for the removal of soft cataract. As this is an error, allow me to remark that I use it only to assist the exit of hard cataracts, and that its chief advantage is that it enables us to do this without perceptibly adding to the bulk of the lens. I am, &c., CHARLES BELL TAYLOR, M.D., F.R.C.S.,

Surgeon to the Midland and Nottingham Eye Infirmary.

9, Park-row, Nottingham, August 3.

COMMUNICATIONS have been received from—

Mr. FOWKE; Mr. GASKOIN; Dr. WHITMORE; Mr. FINZI; Mr. J. H. THOMAS; Dr. MALINS; Dr. C. B. TAYLOR; LEX, Spalding; Dr. EUSTACE SMITH; Dr. J. HUGHLINGS-JACKSON; Mr. F. A. MAHOMED.

PERIODICALS AND NEWSPAPERS received.

Anti-Game-Law Circular—Nature—Pharmaceutical Journal—Jewish World—Monthly Homœopathic Review—Report of the Broadmoor Criminal Lunatic Asylum—The Practitioner—The Edinburgh Medical Journal—Monthly Journal of Microscopical Science—American Journal of the Medical Sciences—Food, Air, and Water—Manchester Guardian—Le Mouvement Médical—L'Union Médicale—La France Médicale—Le Progrès Médical—Gazette Médicale de Paris—Public Health—Guy's Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

August 9. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

11. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m., Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

13. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

14. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 2, 1873.

BIRTHS.

Births of Boys, 1199; Girls, 1100; Total, 2299.
Average of 10 corresponding years 1863-72, 2057·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	779	729	1508
Average of the ten years 1863-72	847·4	791·8	1639·2
Average corrected to increased population	...	...	1803
Deaths of people aged 80 and upwards	...	...	28

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	2	1	...	5	...	4	1	60
North ...	751729	...	3	1	1	7	1	1	...	106
Central ...	334369	...	4	1	2	4	...	1	1	35
East	639111	...	6	4	...	11	1	2	1	98
South	967692	...	13	1	...	14	4	5	...	78
Total	3254260	1	28	8	3	41	6	13	3	375

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·869 in.
Mean temperature	63·7°
Highest point of thermometer	83·6°
Lowest point of thermometer	49·9°
Mean dew-point temperature	53·7°
General direction of wind	S.W.
Whole amount of rain in the week	0·27 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 2, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Aug. 2.	Deaths Registered during the week ending Aug. 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2299	1508	83·6	49·9	63·7	17·61	0·27	0·69
Portsmouth ...	118280	12·4	75	40	77·2	45·2	61·1	16·17	0·00	0·00
Norwich	81677	10·9	59	20	80·0	47·0	61·7	16·50	0·15	0·38
Bristol	189648	40·4	130	57	74·0	50·1	...	...	0·34	0·86
Wolverhampton ...	70084	20·7	57	32	74·5	49·1	60·7	15·94	0·44	1·12
Birmingham ...	355540	45·4	258	154	74·3	50·6	60·8	16·00	0·37	0·94
Leicester	102694	32·0	75	52	79·5	49·7	62·1	16·72	0·17	0·43
Nottingham ...	89557	44·9	65	47	77·0	47·9	61·0	16·11	0·12	0·30
Liverpool	505274	98·9	418	291	71·0	54·7	59·7	15·39	0·29	0·74
Manchester ...	354057	78·9	271	222	80·0	51·0	62·0	16·67	0·51	1·30
Salford	130468	25·2	115	73	75·4	48·0	59·2	15·11	0·70	1·78
Oldham	85141	20·4	71	32	71·0	...	...	...	0·89	2·26
Bradford	156609	23·8	114	71	72·4	44·2	60·8	16·00	0·11	0·28
Leeds	272619	12·6	199	154	74·[illegible]	50·0	61·4	16·33	0·05	0·13
Sheffield	254352	11·1	232	146	75·7	51·0	59·5	15·28	0·06	0·15
Hull	128125	35·9	112	79	76·0	49·0	61·5	16·39	0·38	0·97
Sunderland ...	102450	31·0	7·	34	...	...	..	...	...	...
Newcastle-on-Tyne	133246	24·9	79	73	...	...	...	...	...	...
Edinburgh	208553	47·1	127	64	68·9	47·3	57·8	14·33	...	...
Glasgow	498462	98·5	334	298	66·8	48·2	57·9	14·39	1·45	3·68
Dublin	314666	31·3	144	109	73·5	49·3	60·6	15·89	0·88	2·24
Total of 21 Towns in United Kingd'm	7507575	34·5	5304	3556	83·6	45·2	60·7	15·94	0·40	1·02

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·87 in. The highest was 30·03 in. at the end of the week, and the lowest 29·73 in. on Tuesday evening.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture VI.—Valvular Diseases.

In my last lecture I completed what I had to say in reference to the inflammatory affections of the heart, and I now proceed to speak of valvular diseases, which in so many cases are the effects of previous inflammation. With a view to illustrate the circumstances under which these diseases generally arise, and their relative frequency, I have compiled the following table of cases which I have treated during life, and have had the opportunity of examining after death. The table includes particulars of 107 such cases:—

Table of Cases of Valvular Disease of Heart.

Form of Disease.	Cases.	Ratio per cent.	Males.	Ratio per cent	Females.	Ratio per cent	Mean age.	Range of age.	Mean age.
Aortic Valvular	39	36·44	31	79·4	8	20·5	43·06	21 to 62	Males, 43·07; Females, 44·2.
Originating in malformation ...	12(a)	30·7	10	..	2	...	38·4	18 to 76	
„ injury	2	5·1	2	...	...	...	34·5	33 and 36	
„ rheumatism ...	8	20·5	6	...	2	...	43·5	32 to 56	
„ other causes ...	17	43·5	13	...	4	...	46·7	21 to 64	
Mitral Valvular	36	33·64	18	50·0	18	50·0	26·7	9 to 68	Males, 29·05; Females, 23·4.
Originating in malformation ...	1(b)	2·7	...	...	1	...	...	16	
„ rheumatism ...	23(c)	63·8	10	...	13	...	21·4	9 to 56	
„ other causes ...	12(d)	33·3	8	...	4	...	37·6	9 to 68	
Aortic and Mitral	23	21·64	13	56·5	10	43·4	27·1	11 to 52	Males, 30·4; Females, 22·9.
Originating in malformation ...	3	13·	2	...	1	...	32·3	25 to 37	
„ rheumatism ...	9	39·1	6	...	3	...	17·2	11 to 40	
„ other causes ...	11(e)	47·8	5	...	6	...	33·9	12 to 52	
Mitral and Tricuspid	1	...	...	...	1		...	37	
Aortic, Mitral, and Tricuspid ...	2 } 4	3·7 } 9	...	...	2 } 4	44·4	...	18 and 32	
Pulmonic	1	... } 8·4	1 } 5	55·5	...		...	23	
Do., with obvious malformation...	5(f)	4·6	4	...	1		...	2 and 5 months, 15, 17, 19, 20	
	107	...	67	62·61	40	37·37	32·3	2 and 5 months, and 9 to 76	Males, 34·8; fem. 28·1

The first circumstance which may be observed in the table is that valvular diseases are chiefly confined to the left side of the heart. Thus, of the 107 cases, in nine only, or 8·4 per cent., was the disease situated on the right side, and in three of these the left side also was affected; while in five there were other defects in the heart, obviously of congenital origin. Indeed, I regard all these nine cases as instances of congenital defect. If this be correct, the conclusion follows that serious valvular disease (and these remarks apply only to cases of serious disease—for some slight affection of the valves on the right side is often met with when there is aggravated disease of the left valves) is entirely confined to the left side. For this fact various reasons have been assigned, but probably the true explanation is that the arterial blood being more stimulating, and containing a larger proportion of fibrine, is more apt to excite inflammation and cause fibrinous deposits; certainly the lining membrane of the left auricle, for no other reason that I know, is very constantly found thickened and opaque. It is not however, so clear why the valves of the right side of the heart—those of the pulmonary artery more especially—should so frequently be affected during intra-uterine life, and the only explanation of several which have been given which seems satisfactory, is that the pulmonary artery, being in direct connexion with the umbilical arteries, is specially influenced by exposure to variations of pressure, by which the process of development may be deranged.

The next observation which may be made on the table is the relative frequency of the different forms of valvular disease. Thus it will be seen that of the 107 cases 39, or 36·44 per cent., were cases of aortic valvular disease; 36, or 33·64 per cent., were cases of mitral disease; and 23, or 21·64 per cent., cases of combined disease of the aortic and mitral valves; and the relative frequency of the several forms of disease may, I think, be traced to the different causes which are influential in their production.

The causes which are chiefly conducive to valvular disease may be classed, as in the table, under the following heads:—First, irregularities in the mode of development of the valves, not necessarily at once impairing their efficiency, but predisposing them to become the seat of disease in after life; secondly, injury of the valves during violent muscular exertion; thirdly, inflammatory affections of the heart, originating during the progress of rheumatic fever; and fourthly, various other causes combined, such as changes in the valves (often inflammatory), connected with gout, chorea, renal disease, injuries of the chest, etc.; slow interstitial changes, such as fatty degeneration; alterations in the capacity of the cavities and state of the valves from long-continued overstrain in persons following laborious occupations, etc.;—the effect of these various conditions being often aggravated by habits of intemperance.

It will also be seen on referring to the table that these several causes operate to different degrees in different forms of disease. Thus, of the cases of aortic valvular disease, 12, or 30·7 per cent., are ascribed to irregularities in the development of the valves, though in two of them there is some doubt how far this is correct; 2, or 5·1 per cent., were the result of direct injury to the valves during violent muscular exertion; 8, or 20·5 per cent., are ascribed to rheumatism; and 17, or 43·5 per cent., to the other causes named, of which the effects of hard work and hard living were probably the most influential. Of the cases of mitral valvular disease, one only is stated in the table as due to malformation, and of this there can be no doubt, the intra-uterine origin of the valvular disease being shown by the foramen ovale having been incapable of closing after birth. It is, however, quite possible that other forms of mitral contraction may have thus originated, though the constriction may not have been at the time of birth sufficient to prevent the closure of the fœtal passages. 23 cases, or 63·8 per cent., were ascribed to rheumatism, and 12, or 33·3 per cent., to the various other causes. Aortic and mitral valvular disease combined occupies a somewhat intermediate position between the two other forms of affection. Of the 23 cases of this kind, 3, or 13 per cent., are ascribed to defective conformation of the valves; 9, or 39·1 per cent., to rheumatism; and 11, or 47·8 per cent., to the other combined causes.

The table also illustrates the relative liability to the different forms of disease in the sexes, and so throws further light upon the causes which conduce to them. Of the whole of the 107 cases, 67 occurred in males and 40 in females, or in the proportion of 62·61 and 37·37 per cent. respectively, indicating the much greater tendency to these diseases in men than in women, doubtless partly owing to their greater exposure to various forms of disease connected with constitutional causes, and especially to the influence of over-exertion. Men, it will be observed, are especially liable to suffer from aortic valvular disease, which is obviously the form which would be the most apt to be induced by overwork. Thus it will be seen that of the 39 cases, 31, or 79·4 per cent., occurred in males; and while the proportion of cases originating in malformation and in rheumatism is about equal, there is a great excess in men in the cases traceable to injury and to the various other causes named.

The cases of mitral valvular disease were equal in number in

(a) The origin of two cases in malformation is not quite clear. Two men and one woman had also had rheumatism.
(b) With open foramen ovale.
(c) Two cases in men and two in women are returned as *probably* rheumatic.
(d) One case in female, chorea.
(e) One case in female, chorea.
(f) With contracted pulmonary orifice and an aperture in septum ventriculum, three; with ditto, and also contraction at commencement of infundibular portion of right ventricle, one; with contraction of pulmonary orifice and open foramen ovale, one.

the two sexes, though those traceable to rheumatism were in larger proportion in females, and those arising from the other causes in males.

Combined aortic and mitral valvular disease occupies in this, as in other respects, an intermediate position between the two simple forms of disease—disease of both sets of valves being more common in men than in women, though the difference in the relative frequency in the sexes is much less marked than in aortic valvular disease. The proportion of cases originating in malformation and rheumatism is about equal in the two sexes, but there is a slight excess in the number of cases traceable to the other causes in females.

The influence of age on the prevalence of valvular diseases, and on the tendency to the several forms, is also shown in the table. The general result is that all forms of valvular disease are more common in middle age than at any other period, though they occur throughout the whole of life. Of the different forms of disease, aortic is more common at a somewhat late period of middle age, mitral disease and combined aortic and mitral in early manhood and womanhood, with, however, a wide range of age in each case.

The frequency of rheumatism as a cause of simple and combined mitral disease is very marked; indeed, disease of the two sets of valves, when it occurs in young persons, is very generally traceable to rheumatism.

(To be continued.)

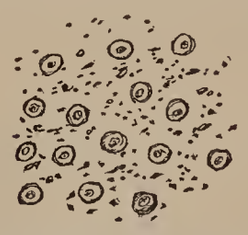
ORIGINAL COMMUNICATIONS.

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, &c., &c.

(*Continued from page* 91.)

I SHALL take as the type of the poison of Australian snakes that of hoplocephalus curtus. This is a faintly yellowish fluid, varying in consistence from thin syrup to thick gum-water. Whether thick or thin, it is always pellucid. Under the microscope, with a power of 420, it appears to contain no cellular or molecular elements, but upon the addition of magenta numberless free nuclei or minute cells at once come into view, their diameter being about 1-4000th of an inch; between these very fine granular matter is seen. The clear fluid, as it is expelled from the fang, contains these microscopic elements, whilst that which is pressed from the gland itself possesses them in much greater numbers. Upon exposure the fluid rapidly thickens, and finally becomes like hard gum, and its colour deepened to a light gamboge. In this state it may be transmitted to any part, and, upon being moistened as we do gum to make gum-water, is found to possess its powers unaltered. For this knowledge of it retaining its powers, which I have since verified in the case of the poison of our snakes, I was originally indebted to Dr. Weir Mitchell, of Philadelphia, U.S. He sent me a pill-box full of dried rattlesnake poison, with which I was enabled to experiment and to ascertain that, excepting the local mischief, the effects upon an animal and the changes occurring in the blood are similar to those caused by the venom of our own snakes. Moreover, I was enabled to prove that they were alike in their remarkable resistance to destruction and in the effects of reagents upon them.



Poison expressed from the bottom of the gland of a recently killed powerful hoplocephalus curtus. It was somewhat turbid. Acid reaction. On applying magenta, millions of the nuclei or poison-cells came into view, which before were invisible. Average diameter 1-4000th inch.

The following observations on this point are from Dr. Weir Mitchell's "Researches on the Venom of the Rattlesnake" ("Smithsonian Contributions to Knowledge," vol. xii.), and although relating to crotalus venom, are strictly true of hoplocephalus poison:—

"When a drop of venom was thrown into cold distilled water it fell rapidly and presented a white appearance, which became marked as it dispersed through the fluid. It finally dissolved in the water without residue. Nitric acid threw down from crotalus venom a dense precipitate. Added in excess, it redissolved the larger part of the precipitate and formed a thin yellowish fluid, in which floated undissolved minute yellow flocculi. Liquor ammoniæ added in excess did not reprecipitate the dissolved material. Chlorohydric acid threw down a dense white precipitate, and, added in excess, completely redissolved it, forming a solution colourless or of a pale yellow, from which ammonia in excess reprecipitated the dissolved substance in opaque white masses. Sulphuric acid threw down from the venom a white precipitate, which, if the acid were hastily added, or if heated, became yellow or brown. Acetic acid caused no precipitate from the venom, whether added to it in large or small amount. Tannic acid produced a dense white precipitate, which proved to be insoluble in water and in an excess of the acid, but was redissolved on the addition of a small amount of ammonia. Ammonia was without visible action upon the venom, as was also lime-water. Alcohol invariably produced in the venom a heavy flocculent precipitate, which, when carefully dried, turned of a pale yellow, and was still more or less soluble in water."

I was enabled to make a few experiments with the venom of the cobra, and when we find, chemically and physically, that that from an Australian snake differs not from that of a snake further removed from it than is the cobra, we should expect there would be an equal similarity, if not a greater, between the latter and hoplocephalus curtus. With either of these poisons it is not necessary in order to produce death that it should be actually injected. Just as I have seen some surgeons vaccinate by simply debrading the cuticle and smearing on the moistened lymph, so have I repeatedly inoculated dogs by a similar process. The result is nearly as certain as, though less speedy than, direct injection. It is remarkable what a small quantity will kill an animal the size of a dog; but, of course, the greater the quantity thrown in, the greater the danger. The poison-glands of snakes that have been years in spirit, as in the museums the world over, will still yield by decoction venom sufficiently powerful to kill.

We now come to consider the effects of the venom upon animal life. They are usually not long in showing themselves. The venom must mix with the blood, the life of man, in order to destroy that life. Indeed, post-mortem examinations reveal that, primarily at least, nothing else but the blood is affected.

In the majority of cases of death from the bite of hoplocephalus curtus the blood is found fluid, sometimes with a trace only of coagulating power; but most frequently that power is destroyed. In man, I think, it is nearly the rule; in dogs, with few exceptions, the same; in birds less fluid; in pregnant animals also less fluid. The fluidity of the blood is attended with another change that has always struck me, more especially in the blood of man. Its colour is altered, and a sort of pale tint possesses it. Shaken with atmospheric air it rapidly absorbs oxygen and regains its arterial character. Beneath the micro-spectroscope it yields the spectra of ordinary blood, as it is oxidised or deoxidised. The fluidity of the blood is owing to the disappearance of its fibrine. In pregnant mammals the amount of this blood element is increased. In birds its quantity is greater than in mammals. In this we see a sufficient cause in these animals for the greater coagulating power of the blood retained after snake-poisoning as compared with mammalian blood.

The fluidity of the blood has always attracted attention. On this subject Dr. Weir Mitchell states, referring to rattlesnake-poisoning, as follows:—

1. That in animals which survive the poisoning for a time the blood is so altered as to render the fibrine incoagulable.

2. Experiments in and out of the body have given proof that this change is gradual, and that the absence of coagulation is not due to checked formation of fibrine, but to alterations produced by the action of the venom in that fibrine which already exists in the circulating blood.

4. The altered blood retains its power to absorb gases, and thus to change its own colour.

From this it would seem, as I have before stated, that cases may occur in which, owing to the presence of a large quantity of fibrine, the power of coagulation may still be retained after death.

But this subject has lately been handled by Dr. Fayrer, of Calcutta, who says—"The blood of animals poisoned to death by the colubrine snakes coagulates after death; that of animals poisoned by the viperidæ remains permanently fluid." This appears to me too sweeping an assertion, for it is contradicted by facts. Dr. Weir Mitchell gives a table of eight

dogs killed by rattlesnakes (viperidæ), in which it is stated that in Case 1 the blood "coagulated pretty well," in Case 4 "coagulated well," in Case 7 "perfectly well"; whilst I have myself seen frequently after death from our snakes (colubrine) perfectly uncoagulable blood; and in a case of cobra-poisoning (another colubrine snake) in a man the blood was everywhere fluid, and remained so in my possession for days. The fact is, there are all degrees of coagulability of the blood after death from either viperine or colubrine snakes; but, in order to arrive at more accurate results, animals of the same species should be experimented upon for one result; of another, for another—man with man, dog with dog, cat with cat, bird with bird, and so on; for it is not possible to obtain the same results with fluids so different as the blood of men and birds.

This fluidity of the blood shows itself occasionally during life by blood-spitting, coughing it up from the lungs, and occasionally passing it in large quantities by the bowels. After death ecchymoses are found along the intestinal track and air-passages. A case is recorded in the Indian journals of a Sepoy having been bitten by a cobra. Three hours after the bite blood-spitting came on. He was then cupped, and the eight ounces of blood taken from him remained perfectly fluid. He subsequently recovered. Dr. Weir Mitchell also mentions the recovery of a dog after hæmorrhage from the bowels and gums; that which was drawn from him at the time of the bleedings remained fluid, but as the dog recovered his blood regained its power of coagulation.

From other records we should regard hæmorrhage as a serious symptom occurring soon after the accident of snake-bite, as showing that a great change had come about in the physics and chemistry of the blood. Dr. Weir Mitchell says:—"A dog was accidentally dropped into my snake-box. He was bitten in a dozen places by as many snakes, and perished in about eighteen minutes. His blood was entirely fluid, and so remained. This was the most rapid case of alteration of the blood with which I have met."

It is not uncommon also to find after rattlesnake-bites, extending upwards from the place of the bite, great discoloration of the skin, depending upon bloody extravasations in the connective tissue surrounding the veins beneath. This is a symptom I have never seen after the bite of an Australian snake, and have only read of once; but it was present to a great degree in the case of the man who was accidentally bitten by a cobra di capella in Melbourne a few years since. I have seen it follow to a very considerable extent the bite of the little English adder.

Pain does not usually accompany the bite of Australian snakes, but is frequently severe after the inoculation of rattlesnake poison. But the changes in the blood, according to my own observations, are similar after the bites of cobra, crotalus, and Australian venomous snakes. When we microscopically examine the poisoned blood shortly after the death of dogs or cats we see the red corpuscles apparently unaltered; they may at times be paler, and crystals of hæmatine may form in greater number than usual. The discs also may assume a more globular character. None of these changes are, however, constant. A still more important alteration or addition soon takes place. A very fine granular matter is seen lying in the spaces between the red corpuscles, and these granules by cohesion form little separate masses, which gradually become converted into cells of 1-1700th inch diameter. Each cell contains a nucleus 1-2800th inch broad, and upon applying magenta the nucleus becomes coloured; at the same time somewhere in the circumference of the cell-wall a brightly-tinted macula appears.

Whatever may be the meaning or importance of this cell-growth, of one thing there is not the least doubt—viz., that it replaces the original nebulous granular matter first seen in the blood; and that first the nucleus becomes visible, then the cell-wall. Now, as I have witnessed these changes occur in the blood after death from cobra and rattlesnake poisoning, and always after death from our Australian snakes, and as it appears they have never been seen upon careful examination by either Dr. Weir Mitchell or Dr. Fayrer, it will be as well for me to insert some original notes out of very many which I possess. I do it only as a matter of microscopic fact, and probably of more histological interest than we at present suppose.

The cells are very liable to be overlooked until once seen; and what is more, the cell-wall is so extremely delicate, appearing before magenta dye is added as a mere film, that the unpractised eye only detects the nucleus, which looks like the ordinary pale opaque white or lymph corpuscle. Of this I will give an illustration. Two of the most scientific men in Melbourne—viz., the Government astronomer and the assayer to the Mint—at the time I was experimenting wished to make observations themselves on the changes occurring in the blood of snake-bitten animals. Accordingly, one morning I had a dog bitten by a tiger snake; within one hour it was dead, and sent untouched by me to these gentlemen. I called on them the same evening about five o'clock. They told me they had been examining the blood from all parts of the dog's body, but could see nothing of the appearances I had so often described. They had just left the laboratory as I entered. I asked them if they had a slide of the blood they had been examining. There was one still on the stage of the microscope. I begged them to return. They did so; and upon my examining the slide I at once saw hundreds of the cells as well formed as could be. After directing their attention to a particular part of the field they presently detected one—the nucleus only first, the cell-wall with more difficulty; and then, one having been mastered, they saw just as many as I could see myself. These observers reported to me the prodigious increase in the number of the cells by the following morning. Now, I have had many instances of a like difficulty in recognising the delicate forms among the red corpuscles.

Copy of Original Notes.

February 10, 1868.—10 a.m.: Dog bitten by a tiger snake (hoplocephalus curtus). Fell in five minutes; became convulsed, but in half an hour got up again. 10.20: Drew some blood—red, coagulable; nothing abnormal beneath the microscope. 11: Dog *in articulo mortis;* drew more blood—colour dark. Under the microscope much nebulous or granular matter, and a few white corpuseles in the intervals of the red corpuscles; other white corpuscles about the field. On applying magenta the nebulous matter takes it readily. 1.15 p.m.: A little blood from brachial vein. The nebulous matter between the red corpuscles aggregated into little masses; nuclei fast appearing; cell-wall becoming visible in some. White corpuscles about the field, pearly and granular. 2.15 p.m.: Blood from femoral vein. Very great quantity of nebulous matter about the field; nuclei becoming very abundant. With one-eighth inch objective and B eye-piece, saw distinctly the cell-wall appearing in a few. 3.15: Still more nuclei seen and cell-wall with same power. 4.15: Cell-wall plainly seen with quarter-inch objective. 5: Abundance of cells appearing. (N.B.—Nothing can exceed the delicacy of the cell-wall. It is certain the cell-wall is the last to appear. The whole business is progressive.) 7.15: Nuclei and cells in immense quantities; the cell-walls so indistinct that only a good observer could see them. On applying magenta the maculæ became evident and the nuclei coloured.

It must be explained that at each of the above times a little fresh blood from the dead animal was taken, not the same drop of blood examined over and over again. It would be useless to tire the reader with more than this one sample of the manner in which my observations have been made. I should not exaggerate by stating that I have given more than one hundred hours of microscopic work to this one point—viz., the origin of these cells. If they be merely the white corpuscles of the blood, at first obscured and then becoming apparent, it is difficult to understand what becomes of the granular matter, which as certainly disappears as these cells appear—unless we adopt the view that white corpuscles may arise out of nebulous matter after the death of an animal. Are we to look upon this nebulous matter in fluid blood as taking the place of fibrine in coagulated blood? If so, it would show a certain relation between the fibrine and white corpuscles, which by many physiologists is believed to exist. After poisoning by prussic acid, Mr. Ralph, of Kew, near Melbourne, saw similar cells in the blood of dogs, and I have myself seen like cells in other blood of dogs and cats which had been kept fluid. So that their presence is not, as I first imagined, peculiar to snake poisoning. The great interest that attaches to them now is their origin and apparent increase after death from nebulous matter. In fact, the process is like that originally detailed by Schwann, of the growth of cells in blastema.

(*To be continued.*)

A NEW convalescent hospital at Woolton, Liverpool, was opened by the Mayor of Liverpool on Saturday last.

GLEANINGS IN WAR SANITATION

FROM N. PIROGOFF'S "BESICHTIGUNG DER MILITAIR-SANITÄTS-ANSTALTEN IN DEUTSCHLAND, LOTHRINGEN, UND ELSASS."

By NATHANIEL ALCOCK, L.K.Q.C.P.I., A.M.D.

INITIATED in war sanitation during the expedition to the Caucasus, and matured in the Crimean campaign, this distinguished Russian surgeon brings to the disinterested study of the Franco-Prussian war a mind educated by the most valuable experience, and therefore commands for his writings universal attention. It is on this account that the effort is here made to translate and epitomise the results of his extensive observations.

Surmounting the various difficulties by road and rail, Dr. Pirogoff reached the vicinity of Metz, and there met with Professors Frerichs and Niemeyer, both intent on the investigation of typhus. In all the villages around Metz cattle-plague, typhus, and dysentery prevailed. In some of the hospitals typhus was treated with good results by cold douche, and in many small doses of calomel and castor oil were given for dysentery with (Dr. Pirogoff says) success; but he adds—"nevertheless the mortality from this disease was considerable." It is evident, therefore, that the German surgeons are either unacquainted with, or sceptical of, the curative effects of large doses of ipecacuanha which have been so completely verified by the experience of English surgeons in India, who, since the adoption of ʒj. doses of ipecacuanha, preceded by ʒj. tinct. opii, and repeated even twice within twenty-four hours if necessary, seldom meet with the destructive and uncontrollable forms of dysentery described by the older writers as occurring in spite of the most active mercurial treatment.

Dr. Pirogoff from the first lays the greatest stress upon the necessity of "isolating" and "distributing" the sick and wounded, and expresses a feeling of personal satisfaction that efforts are now being made, as far as the possibility of accommodation and the propinquity of towns to battle-fields render it practicable, to carry out this measure which he so strongly recommended as long since as 1863.

The working of the private and international help is said to be a "real progress of our time"; but this has reference more to what it may be made capable of in the future, than to what it has already accomplished.

The inspection of seventy military hospitals and the sanitary arrangements connected therewith suggests to the author the five following questions:—1. In how far were the principles of the international philanthropy, which found expression in the societies for the help of sick and wounded soldiers, realised in fact? 2. In what relation stood, during the past war, the private and international help to the military administration, and what influence did the "private aid" exercise on the condition of the sick and wounded in the course of the war? 3. In how far has the condition of the wounded in, and immediately after, the battle been improved by the present mode of carrying on war? 4. What success attended, during the past war, the so-called conservative and expectant treatment in general, and especially of those wounds which, according to former belief, demanded an immediate removal of the injured limb? 5. What useful application can our Russian military medical department and our private help draw from the war of 1870 for the benefit of sick and wounded soldiers?

With reference to the question of how far the principles of international help were realised, notice is at once taken of the all-important fact that from force of circumstances arising out of the results of the early battles, and the consequent conversion of the armies into besiegers and besieged, by far the largest proportion of neutral help fell to the lot of the Germans, and this may be of necessity repeated in any future war.

For the correction of this such proposals as those offered at the Berlin Congress—viz., that "before the beginning of the war the foreign aid should be equally divided between the intended belligerents," "that the foreign aid should be used exclusively on behalf of the wounded of the retiring army," or "that it should operate only in the rear of each contending force," are shown to be impracticable. In the first place, a determination to go to war would never be admitted before its declaration; in the second, the action of the society would be still one-sided; and lastly, in these days of rapid manœuvring, the rear of to-day may be anywhere to-morrow.

It is evident, therefore, that the first precept of international help—even-handed neutrality—has not yet been attained, and that the more efficacious the working of the society becomes, and the greater the number returned by its assistance in health to the ranks, the more certainly will the Power which derives least advantage from its benefits insist on the suspension of an influence which daily adds numerical and moral strength to its opponents.

So long, then, as the enclosure of one army by another, the refusal of all communication to the besieged, and the enforced accumulation of sick and wounded within an iron ring as a means of exhausting provisions and of demoralising the uninjured, form the leading features in war, the equal distribution of international help cannot be effected.

Dr. Pirogoff concludes that except by "mutual agreement before the beginning of the war" the difficulty cannot be obviated, and that the "object of the Geneva Convention will be fulfilled only when the surgeons of both contending parties are completely neutral, and the possibility is given them of interchanging their scientific experiences for the welfare of the sick entrusted to their care."

Undeniable as this is, still the reflection arises that when two nations are found who would permit the presence of so large a body of neutrals in the midst of their military operations, by diverting the exercise of so much trust into political channels, war might be altogether averted.

It practically remains that the very success of international philanthropy endangers its existence, unless means be devised for the equal division of its advantages.

As to the second question—viz., the relation in which the private help stood to the military administration, and its influence on the condition of the sick and wounded,—Dr. Pirogoff, in tracing the history of the private help societies, claims the priority of their introduction for Russia, in that she anticipated England in the formation of a sisterhood of nurses early in the Crimean war, but he concedes to America the honour of having first organised private help into an important power, and attributes its success in that country to the fact that the government was not in a position to obstruct, but was compelled to go hand-in-hand with, the society.

In the Franco-Prussian war the opinions regarding the utility of private help varied in accordance with the sources from which they came.

The military surgeons in Prussia were conscious of the inconveniences which spread from the undisciplined ambulances as from so many centres of irregularity, and felt also that the members of some societies, presuming on their high social position, had acted both towards them and towards the more humble societies in a supercilious and dictatorial manner. Yet the very society which was in this respect most culpable acquired, by its aristocratic connexions, an immunity from official restriction that enabled it to render "enormous services." It alone could have broken through the objection of the administration to independent lay interference, which it was feared must, by its irregular constitution, of necessity endanger order and discipline.

Contrary as the system of private help was to the idea of military subordination, nevertheless its greatest value arose from this freedom, inasmuch as while the administration supplied nothing except under the observance of strict control formalities, for complying with which there was no possibility, the societies furnished the means of help without difficulty.

Dr. Pirogoff pays the highest compliments to the work done in the hospitals by the ladies' societies, but at the same time does not conceal the fact that "the majority of German military surgeons unwillingly assent to their independence," and that this feeling, which was "perceptible in the Holstein war, is now more audibly outspoken."

Doubtless, most valuable assistance can be rendered in time of war to the over-taxed medical department of any country by volunteers lay and professional; but it is not too much to expect that if the feelings which prompt their offers are purely humane, patriotic, and unselfish, they may enable them to endure without a sense of lessened dignity the supremacy of those who have adopted as a profession the speciality of military sanitation in all its branches. If, however, any should seek the seat of war with the object of condensing into a few weeks opportunities of practice unattainable in civil life in many years, it is unreasonable that they should expect, by parading the sacrifices at which they have surrendered their services, to supersede those who are unostentatiously discharging their legitimate duties.

Although conscious that the government arrangements succumbed here and there to the press of difficulties, yet Dr.

Pirogoff makes no reproach against the wonderfully arranged Prussian military organisation, but, on the contrary, admits that these failures only show how hard it is in the present condition of the military medical system for any government in time of war to come through blameless; and, sensible of the delicate position of the public departments towards the private societies, he trusts that the teachings of the past will help to define their most suitable relations to each other in the future,—concluding, however, with the opinion that until experience points a way of amalgamating one with the other they ought to work in entire independence, since excessive restraint will choke private efforts in the bud.

It is therefore apparent from all this, that to the mind of an impartial observer two very serious obstacles present themselves against the acceptance of international help as an already fixed institution of civilised communities—firstly, the unsolved difficulty of its equal distribution; and secondly, the inevitable collisions of irregular volunteer societies with the established government services. Under these circumstances it will be improvident for any country to allow, for economical or other reasons, its medical service to languish in the hope that when an emergency arises the deficiency can be more cheaply supplemented by accepting offers of unpaid work. When contemplating the influence which private help exercised "on the condition of the wounded," Dr. Pirogoff enumerates the various temporary hospitals furnished by the societies with all the newest hygienic improvements, the material comforts provided, and the moral influence exerted, and adds that it was all accomplished because they were "sufficiently independent and could act, not in conformity with the will of the Government, but against it."

By the results of the late war the imposing palace-like buildings have been unconditionally condemned, and everything points to the desirability of adopting the detached barrack hospital system in their stead.

The barrack hospital consists of a series of one-storeyed huts standing on supports several feet in height and having openings in the floor for the admission of air. In winter the supports were converted by the addition of boards into complete walls, and a small cellar or ventilation compartment was thereby formed. This communicated by windows with the outer air, and thus the current of air to the floor-ventilators could be regulated. Besides this, above the ceiling of the inhabited room a little attic was enclosed, which also communicated at its sides with the external air, and thus a thorough draught through floor and roof could be at will established.

Dr. Pirogoff believes in the existence of various hospital miasms, some of which are not volatile, and draws a distinction between the air-impurity resulting from simple overcrowding, which sufficient ventilation can disperse, and the "contagious infection," the source of pyæmia and wound diphtheritis, originated by the aggregation of suppurating surfaces, by the admission of fæcal effluvia into sick wards, and by delay in removing soiled dressings, and against which no amount of cubic space can be relied on as a preservative.

Impressed with these ideas, Dr. Pirogoff lays the greatest stress on the necessity of, as much as possible, distributing the sick and so preventing the most potent cause of the development of this poison. He agrees with the American surgeons that a hospital after ten years' use becomes unserviceable, and cannot be freed from infectious germs, and points out the consequent advantage of temporary over permanent hospitals, inasmuch as the former can be periodically broken up, sold, and replaced.

Taking into consideration the fact that this miasm, despite all ventilation, can saturate the walls of occupied apartments, and that its effects are apparent even on those in health, it is not improbable but that the advantages of the detached system may receive serious attention from the civil as well as the military medical authorities.

In addition to the outfitting of hospitals, the private help provided also railway transport waggons for the wounded. Some of these contained but straw for bedding, while others were more elaborately fitted up with screws or strong elastic bands for the suspension of the stretchers on which the patients came. In fine, the good effects of private help were enormous, and its success in the treatment of the sick was mainly attributable to the good food which it could add to the usual hospital diet, to the introduction of hygienic improvements hitherto unknown to female nursing and supervision, and to its having the command of a sufficient number of surgeons. "Neither hospital typhus, nor gangrene, nor hospital infection, found conditions for their spread where private help could act without restraint."

Dr. Pirogoff devotes the third chapter of his book to the question—"In how far has the condition of the wounded on the battle-field immediately after the action been improved by the present mode of warfare?" and concludes with the opinion that "their condition is, under these circumstances, nothing better than in former wars."

In the first and most important particular—the removal of the wounded from the field—all efforts at improvement have been more than counterbalanced by the precision, range, and rapidity of the latest firearms; so that, in the race between the means of saving and the modes of destroying life, the former have been completely outstripped. At the beginning of the war the Prussian Government enrolled 2700 surgeons and provided hospital effects for 40,000 beds, and yet after the first battle medical aid was wanting. The "sanitary detachments" belonging to the corps engaged had not arrived, and, even were they present, would not have been sufficient.

At Saarbruck the natives for two whole days drew the wounded from the fields in country carts, and brought them to their own homes. After the battle of Weissenburg some of the wounded lay for two days where they fell, and in Remilly a street was pointed out in which 1000 wounded were laid down, having been travelling thither for two days and two nights from the field of Gravelotte. From the scene of action at Metz 3000 wounded were sent to Gorze, where Professor Langenbeck with but four assistants was; and such was the pressure that they could receive only the most temporary dressing prior to being passed on to places of greater accommodation.

The self-evident cause of the delay in removing the wounded from the field was of course a deficiency of carrying power. For each severely wounded man four stretcher-bearers are required; and as the ambulances for affording the first and most temporary assistance cannot, owing to the extended range of present weapons, be placed nearer to the battle than three-fourths of a mile, it consequently follows that each set of bearers would be unable to accomplish the distance to and fro more than ten times in one day: this, too, is supposing that they can proceed in each case directly without being turned aside by unevenness of the ground or the approach of heavy firing, and assumes also that they are not impeded by the caution needed in carrying such burdens.

At the lowest calculation, then, 400 bearers will be required to bring in 1000 wounded. This being the case, and as only 400 bearers were allowed to each Prussian army corps, it is easy to understand why the wounded lay whole days and nights upon the field of battle.

However, even in the most civilised country devoting the greatest attention to the development of its military resources, the government will be naturally unwilling to surrender so large a proportion of fighting men to a non-combatant duty. Still the fact is no less established, that unless stretcher-bearers be provided to the extent of 400 to every 1000 helpless men, the wounded must suffer unduly prolonged exposure after every important action. There is therefore but one approximate solution of the difficulty possible—viz., a preconcerted arrangement between the resources of the medical administration and those of private help; and this is a necessity so pressing that one cannot comprehend how it continues to be deferred when so many wounded are seen to die from being left too long to their fate on the battle-field. In the last war the authorities admitted with reluctance the motley detachments of stretcher-bearers collected in haste by private help, and it is quite intelligible that these undisciplined crowds may have spread disorder or hindered the movements of the troops; but these crowds would not have been undisciplined had the authorities, confessing the relatively insignificant number of their sanitary detachments, applied in time to the private societies for co-operation and assistance.

By suitable training under experienced officers "carrying companies" might have been formed, all confusion and obstruction thereby avoided, and very many wounded retrieved from death. Such an organisation would not only bring timely aid to the stricken, but would vastly increase the confidence of those who were still unhurt.

Dr. Pirogoff sees a second very important reason why the rendering of first help in the late war was so defective in the rule that a Prussian surgeon is before all things a soldier, whose duty is to be performed under fire. Consequently, up to September, 1870, forty, and later on eighty, medical officers

had fallen in battle. "Wherefore" (he continues) "allot to one a double duty?" The origin of this superfluous medical heroism dates from the Napoleonic wars, when Larrey introduced the "flying ambulance," whose mission was to plunge into the thickest fight and there to tend the wounded amid a rain of bullets. But we cannot regard primary operations in the same light as our predecessors, nor consider them necessary, successful, or even blameless. We cannot now maintain that an amputation runs less risk in transport than a patient with a broken limb. No one would now leave a surgeon and a wounded man under fire for bullet extraction or for dressing. There is therefore but one occasion for help in action—hæmorrhage from the larger vessels—that occurs but seldom, and its control by pressure every soldier can be taught. Hence are trained stretcher-bearers above all things needful. And not only is the custom of sending surgeons under fire useless, but it is disadvantageous, since they—especially the younger—will avoid the bandaging depôts and moveable hospitals and seek in action opportunities for winning the Iron Cross and other decorations. So long as this regulation stands it will be easily intelligible how Corny and Gorze (where Langenbeck laboured) and Remilly (where the wounded amounted to several thousands) were without surgeons. Again, the surgical work done in the heat of battle is but a waste of power, and scarcely less useless than the feverish practice of the bandage places. Dr. Pirogoff, discrediting the value of operations done under such circumstances, adds, as a further reason why they should not be attempted, that the rapid firing of recent weapons produces such a simultaneous crowd of wounded that the ambulances are immediately thronged, and reliable diagnosis between the cases suitable for operation and for conservative surgery rendered impossible. He therefore assigns to the surgeons at the bandage places the duty of using means to avert impending danger—of transmitting the wounded ticketed with diagnosis cards to prevent all further painful and unnecessary examination, and of dividing the wounded into "those hopelessly injured," "those requiring prompt attention," "those fit for transport," and "the slightly hurt."

Above all things is necessary the quick transition of the wounded through the temporary dressing depôts to a place of permanent rest, for even those most demanding surgical interference will bear immediate transport better than after a capital operation.

From this it appears that the experience of Dr. Pirogoff convinces him of the futility of primary operations, which, he says, were only undertaken to any extent in Strasburg on account of the proximity of the permanent hospitals and the nature of the big gun injuries, and these only proved successful while the hospitals were uncrowded at the commencement of the siege.

The conveyances in use for removing the wounded are far from perfect. In this respect Europe is behind America; and at the same time the effects of the means of carriage for good or ill upon the sufferers is incalculable.

Finally, only on their arrival at the private hospitals or trains does the influence of private help come into play, and "up to this point the condition of the wounded is in no way better than in former wars."

(*To be continued.*)

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—This body, which held its first session last year at Bordeaux, is to meet under the Presidency of Professor Quatrefages, at Lyons, during the present month—viz., from August 21 to 28 inclusive. The Medical Section is expected to be very strongly supported by both the Lyons practitioners and those from other parts of France. All who feel interested in the matter may obtain information from Professor Gariel, Secretary of the Council of the Association, 76, Rue de Rennes, Paris.

A STRIKE OF DOCTORS.—The medical practitioners of the Canton Aargau, in Switzerland, have just declared a strike because the remuneration given them for visiting the poor is so wretchedly meagre. It seems that the tariff has not been changed since 1804, and according to it a practitioner, for a visit paid to a pauper at a distance of three-quarters of a league, receives the incredible sum of seventy centimes, or 7d.! For the same distance a *commissionaire* receives a franc.—*Gazette Hebdomadaire*, August 1.

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Medical Times and Gazette.

SATURDAY, AUGUST 16, 1873.

THE PROPAGATION OF ZYMOTIC DISEASE BY MILK.

THE present outbreak of enteric fever in Marylebone has had the effect of directing professional attention, in the absence of other assignable causes, to the milk supplied to the infected houses as a probable source of the mischief. We believe that there can be now no reasonable doubt as to the well-grounded character of the suspicion. The proof is being collected and sifted by Mr. Netten Radcliffe, who has been sent into Oxfordshire to inspect the dairies and farms whence is obtained the milk of the company which supplied, it is said, nine-tenths of the smitten houses. We may be certain that no pains to arrive at the truth will be spared by Mr. Radcliffe and by Dr. Whitmore (the Health Officer of Marylebone), and the public and profession will confidently accept their verdict.

The occurrence, however, and the suspicion to which it has given rise, are not likely to be soon forgotten. Coming on the outbreaks of enteric fever at Islington and at Armley, Leeds, which were distinctly traced by Dr. Ballard to contaminated milk; an earlier outbreak of the same fever at Penrith, observed by Dr. W. M. Taylor; and the local epidemic at Parkhead, near Glasgow, observed by Dr. Russell—to all of which the same cause was clearly assigned—the public are not likely soon to lapse into their usual state of indifferent security as to the source and character of their milk-supply. We say "source," for we shall directly prove that there is some evidence that milk may be contaminated with the contagium of zymotic disease, although it may be apparently of fair quality and present the chemical characters of a normal unadulterated fluid.

The subject has been treated with considerable acumen by Dr. John Dougall, the medical officer for the Burgh of Kinning-park, Glasgow, in a paper read before the Sanitary Section of the Philosophical Society of Glasgow, in April last, and which, after being published in the *Glasgow Medical Journal*, has since appeared in a separate form. One of the principal positions maintained by the author is that milk is "a congenial soil for the propagation of zymotic disease." This he

argues first from its constitution: it contains a fermentable or putrescible body, casein, capable of acting as a ferment on sugar of milk, and when putrefying capable of inducing similar changes in other organic substances. Milk contains all the elements necessary to keep up the nutrition of the body, but it is dead organic matter, and is therefore incapable, like the animal body itself, of withstanding the attacks of toxic germs. "It is a more favourable *nidus* for the nurture of contagia than even a sickly organism." Practical dairy-keepers know that it rapidly imbibes effluvia. Milk allowed to stand near putrescible fish will taste and smell of it. The same is true of other putrefying organic matter, and strong-smelling substances, such as turpentine, onions, tobacco, paraffin, lime, etc., will rapidly impart their odour to milk standing near them. Milk, moreover, in virtue of the amount of water it contains, is a soil admirably adapted for zymotic poison. Dr. Dougall also argues that colostrum or "beasting milk" and diseased milk—both of which would contain more or less albumen, and the latter probably epithelium, casts of the lacteal tubes, pus corpuscles, or granular *débris*—would be especially favourable to zymotic vitality.

Accepting the fact that enteric fever can be conveyed through milk, two questions present themselves. First, Is enteric fever the only disease that can be conveyed through this channel? The second is, In what way or ways is the contagium of disease introduced into milk?

The first question must be answered in the negative. Enteric fever is not the only disease that can be propagated through milk. Professor O. Bell, of St. Andrew's, and more recently Dr. Robinson, of Leeds, have called attention to the transmission of scarlatina by this agent. In the St. Andrew's outbreak twenty-six children took scarlatina from swallowing milk mixed with cuticle from the hands of a person who had milked the cows, and was herself desquamating after scarlatina; she had also nursed others with the disease. Dr. Robinson has recorded that twenty-one children were attacked with scarlatina after swallowing milk obtained from a house where several children were ill of the same disease. Dr. Grimshaw, of Dublin, announced in a lecture delivered in March last his belief that the propagation of small-pox and cholera by milk had been observed by himself, and has since communicated to Dr. Dougall the facts on which he grounded his belief. These seem not more than sufficient to warrant a suspicion.

With regard to the second question, In what way or ways may contagion be introduced into milk? it seems possible that the answer must be, In two ways—through water and through air. The most obvious channel of mischief is undoubtedly water—used either for purposes of adulteration or it may be accidentally introduced in processes of cleaning, etc. Knowing as we do how infinitesimally small is the bulk of solid contagium capable of conveying vaccinia or variola, it is impossible to deny that the most trifling accidental addition of infected water may be sufficient to contaminate a considerable quantity of milk. A speck of contagious matter from a typhoid patient left in a can by the water with which it was washed may do all the mischief. But it would seem that even admixture of water is not necessary. It would be dangerous to assert this absolutely, but it is the conclusion to which the observations made in the outbreak of enteric fever at Parkhead, in a second outbreak at Leeds, and in the outbreak at Penrith in 1857, seem to point. In the case of the second Leeds outbreak, reported on by Dr. Robinson, the inmates of the dairy farm whence the milk came were the victims of typhoid fever; the water-supply of the farm was remarkably pure, being obtained from a source at a higher level than the house; but the sick were in a room communicating with the dairy, those who nursed them attended to the milk, the sanitary arrangements were as bad as possible, and the house, cowhouse, and dairy seem to have been in an atmosphere of emanations from the sick. In the case of the Penrith outbreak, three children were down with typhoid fever; their mother nursed them; she milked the cows, which were kept in a byre adjoining the house; the milk was brought into the room where the children were lying sick, and there it remained until distributed to the customers, many of whom took the disease.

Still, we must acknowledge that these facts have not the precision which would warrant us in asserting that pure milk exposed to an atmosphere of contagium is certain to become a vehicle for its propagation. It probably is so, but absolute proof is yet wanting. The evidence in favour of the contamination of milk by water containing febrile poison is stronger, and it is supported by the known facts of the propagation of enteric fever by water-supply. That milk will convey zymotic disease we hold to be absolutely proved, and it is a question whether it is not one of the most certain and dangerous modes by which it may be disseminated. Itself an organic fermentable fluid, it may be that it is suited for the conveyance and spread of zymotic poison in a higher degree than either water or air.

THE ADDRESSES AT THE BRITISH MEDICAL ASSOCIATION.

One of the most interesting, and to our minds most instructive, parts of Professor Wood's address is that devoted to the consideration of the value of the antiseptic system of dressing wounds, especially as regards its power of preventing the occurrence of those terrible foes of the surgeon—erysipelas and pyæmia. Professor Wood gave the system, *à la* Lister, "a fair trial"—and no one who knows him will doubt the fulness and fairness of the trial—at King's College Hospital; and "at the same time, side by side, and under the same conditions, as far as could be obtained, he employed," he says, "the solutions of carbolic acid in oil and water, and those of other antiseptic substances, such as chlorozone, metallic salts, etc., as a dressing, but without the elaborate attempts to exclude the unpurified atmospheric air which Lister deems essential." For a time all went well. Professor Wood began the trial "at a time when the Hospital was in a good hygienic condition, and the cases for that time did admirably." He had "some cases quite equal to any described by Professor Lister himself; but at the same time other cases treated in a different way did equally well." Some he treated "by the application of dry lint, without any moisture whatever, to the wound, and in many cases, especially in breast cases, the results were also perfect"; and in other cases he "tried the application of the chloride of zinc solution in the manner originated by Mr. Campbell De Morgan, and very good results ensued—viz., healing with the formation of little or no pus." The Professor tells us also how Humphry, of Cambridge, has informed him "that he is quite satisfied with his plan of leaving wounds and stumps entirely undisturbed and uncovered by dressings, having only the discharges wiped or washed away"; that Mr. Heath, of University College Hospital, "prefers tarred oakum to any other dressing," and that in the cases in which he has himself used it, it has answered admirably; and that Mr. Callender, of St. Bartholomew's, "has obtained much success from the use of cotton-wool, combined with his own form of drainage-tube." So far we see great success following the Lister method of treatment, but equally happy results obtained under other, very different and much more simple, systems of treatment. Then came a change. "After about six months there came into the hospital," and into all or most of the London hospitals, "a very unfavourable change." Erysipelas was imported into the hospital from without, and pyæmia began also to show itself. Wounds began to suppurate more, healing by "primary intention grew less common, and the blush of erysipelas appeared with a terrible

impartiality in cases treated in all kinds of ways," and "almost as impartially on the Professor's antiseptic side of the hospital as on his colleague Sir W. Fergusson's non-antiseptic side," and cases treated most fully and carefully by Lister's method suffered from pyæmia and from copious suppuration, as well as cases treated in other ways. The only gain—and it is not a small one—from the Lister method seems to have been a freedom from "putrefaction, as evidenced by the odour"; though in some cases of psoas abscess treated by that method even this advantage was not observed, for the Professor says—"When erysipelas and pyæmia appeared, we had cases in which the pus in the abscess became putrid and offensive after the first evacuation under the spray and with all the precautions." All these cases and observations appear to tell strongly against the truth of the germ theory, on which Professor Lister's system of treatment is based. That they do not stand alone, and that in character they are not new to the profession, we need not say; but they are of high value, in character and completeness, and it may surely be admitted that they give strong support to the belief "that the agencies, whatever they are, in pyæmia, operate in the general system, or, if through the atmosphere, in other channels besides the wounded parts." Professor Wood describes how he has successfully treated some cases of pyæmia by "surrounding the patients with a highly antiseptic atmosphere," administering the sulpho-carbolate of iron, and giving plenty of nourishment; but he adds—"I believe that cases of recovery frequently occur under other methods, or no methods, and that at least as much depends upon the age and reparative power of the patient, the amount of blood-poison formed or absorbed, and the general condition of the atmosphere, as upon any system of treatment whatever."

We have neither time nor space to remark on the rest of Professor Wood's address; nor is it needful that we should do so, for his own reputation, the character of his address, and the subjects on which he has dwelt cannot fail to secure for him careful perusal and consideration.

The last of the addresses-in-chief, and certainly not the least important, was the Address in Physiology, by Professor Burdon-Sanderson. This was highly appreciated by the large audience fortunate enough to hear it, and will, we are sure, be eagerly and most attentively perused by the profession at large. We can here do little more than show some reason for our admiration of the address, for it is an argument on the value and importance of Physiology to the art and science of Medicine, and must be read and studied as a whole to perceive its weight and force; it cannot be fully analysed, or reviewed in detail, in the small space at our command. Noting that the opinion "most commonly held" about physiology is, "that though it may be a very good thing in its place, conclusions derived from physiological reasoning ought always to give way to the dictates of practical experience, and that science can never be a guide to practice," and alluding to some of the instances in which it is affirmed that the influence of physiological theory has been injurious, Dr. Sanderson points out how this opinion arises from the misapplication of the word "*physiological*," and how important and desirable it is to draw a distinct line of demarcation between the science of physiology and the science of medicine. The one is empirical, the other experimental. In the first, that of medicine, "experiment has no place, its fundamental facts being gathered, not from experiment, but from case-books and the records of post-mortem examinations: its method consists in systematising and combining the experience of great numbers of trustworthy persons in such a way as to make them applicable to diagnosis and treatment, and admits of being carried out with quite as much exactitude as those methods which are employed in the so-called exact sciences." While in the second, the science of physiology, experiment is everything—"it is built up of experimental results; its mode of working is that which is now understood by the term research." But "between the two regions of experience and research there lies an intermediate territory of speculation, which is a constant source of temptation to even the most practical mind," and this tendency it is neither possible nor desirable to check. But it must be used, not abused; it is for the practical mind to suggest and theorise, while the physiologist doubts, experiments, and tries to answer; thus "both the speculative and the sceptical faculties of the mind are brought into useful exercise—the functions of the one being to set questions on the behalf of clinical medicine, of the other to answer them by experiment. So long as this reciprocal relation is maintained there is no danger in speculation. The danger to science begins when the practical man not only asks his question, but gives his own answer in the name of science. The danger to practice is when he allows such answers, falsely given, to lead him astray from the safe guidance of experience." And then Dr. Sanderson proceeds to "illustrate this reciprocal influence of empirical speculation on the one hand, and experimental scepticism on the other, by a single example"—that of the Physiology of the Febrile State. He sketches those theories of fever "which propose to explain its phenomena by attributing them either to vascular disturbance on the one hand, or to paralysis of a supposed regulating centre on the other," and then proceeds "to try to show what is the true method of investigation in pathological questions." How is the subject he has taken as an example to be attacked? By taking one by one the questions that present themselves concerning it. And the question that comes forward most prominently is, How is the pyrexia produced? "We have but two certainties to start from—First, that in the animal body heat is produced exclusively by chemical change; secondly, that in the particular case to be investigated the rate at which the body is warmed is greater than can be accounted for by any mere accumulation." And the conclusion from these two propositions is, "that such an increase of temperature as occurs in fever must depend on increased oxidation." But "where does such increased oxidation occur?" It may be that it occurs everywhere—"that is, that just as heat is produced normally in every tissue, it must be so produced in fever,"—but this has not yet been proved; and "of the three or four tissues of which the mass of the animal body is composed—the nervous, the glandular, the connective, and the muscular—there is only one which has been sufficiently investigated in its relation to ordinary heat-production—viz., the muscular." With respect to this, it can be shown that "the variations of intensity of which muscular oxidation is capable would be sufficient, quantitatively, to account for the variations of bodily temperature which occur in fever." From this it may be concluded that "any process by which vital activity can be increased in a relatively large mass of living tissue is capable of producing a pyrexia which is in every respect, excepting its cause, a counterpart of that of fever." And thus, Dr. Sanderson observes, "we come back to a very old definition of fever—that fever is the reaction of the living organism against a stimulus. This definition is of value merely as a finger-post—as an indication of the direction in which we must work. I understand it to mean that, if I am to seek successfully for the proximate cause of fever, I must look for it among agents which act either directly or indirectly as excitors or irritants of living tissue."

Dr. Sanderson concludes his most able address with an eloquent and earnest appeal to the Association to help forward pathological research, "as a thing distinct from, though highly serviceable to, practical medicine and surgery." He hopes that much good may arise from the labours of the Royal Scientific Commission, and notes that a scientific inquiry is now in progress "on a large scale at the public expense, which has

for a principal object the investigation of a physiological question—viz., that of the physical conditions which govern the distribution of living beings at the bottom of the deep sea." "We do not doubt for a moment," he remarks, "that the care and thought which have been spent in the case of the *Challenger* expedition—in the selection of competent persons as observers, in organising them under a man of science and acknowledged ability, in dividing the work of research among different individuals, in providing them with proper places to work in and proper instruments to work with—have been wisely spent. Let us, if we desire to promote efficient research in our own province, follow the same principle." And he says finally—"I venture to think that it is an object in every respect worthy of this great Association to further and promote the organisation of physiological and pathological research, by fixing on the questions to be investigated; by appointing persons of acknowledged scientific ability to take the direction of the inquiries; by encouraging young men of the highest ability to devote the earlier years of professional life to research; and by providing the necessary funds."

Dr. Sibson, in his Address in the Section of Medicine, presses the same object on the attention of the Association. There are, he remarks, innumerable important practical questions that call for careful, patient, and unbiased investigation, and there are many young physicians with time at their command and an earnest desire and skilled power to investigate them. "If our Association places at their command the instruments and means of research, their vigorous powers of investigation will bring to light many of those important questions as to the nature and treatment of disease that are as yet comparatively obscure; and thus the science of medicine will be enlarged and elevated by labours inspired by this Association." We ourselves ventured to touch on this subject the week before the Association met, observing that—"a society possessing a revenue of five or six thousands a year might, in the course of four or five years, find the means for clearing up a large number of medical and surgical problems of the highest importance, not merely to the medical profession, but to the world at large"; and we can hardly believe that the Association, if it means to rank at all as a scientific body, will long be content to employ its extensive funds solely or chiefly in providing its members with a weekly journal, nor even in establishing also, as has been suggested, "a large benevolent fund." The Association may be heartily congratulated on its growing strength and importance, and on its improved financial condition; though it may be permitted to us to remark that we cannot wonder that some surprise has been expressed at the appearance of such a sum as £540 under the head of "petty cash," even in a balance-sheet dealing with the expenditure of nearly £9000; and we think that it must be to many a matter of regret that the British Medical Association has not, with such an income, felt able and willing to add a higher lustre and dignity to its late successful meeting in the metropolis, by the commencement of a series of usefully large grants in aid of scientific research.

THE BRITISH MEDICAL ASSOCIATION MEETING.

Now that the meeting of the British Medical Association is fairly over, and our guests have departed, we are in a position to look back and quietly estimate its success. If size is any criterion, its success is undoubted, for we question if such a number of medical men were ever before brought together in one place; but in such a case as this number is but one of the elements to be taken into consideration: social amenities, as they are called—business and pleasure,—have to be duly estimated. Now, as regards arrangement, there can be no doubt but that in the early days of the meeting much more was to be desired: confusion was paramount, and the reason was plain. Twelve hundred men were expected from various parts of the country—even with such a number the meeting would have been numerically a great success,—but instead the officials had double that number upon their shoulders. Under such circumstances previous arrangements, however good—and we have every reason to believe that the arrangements made were excellent,—must fail. But, on the other hand, it cannot be denied that the power of organisation shown was exceedingly great, for out of chaos soon came order, and the gentlemen who worked so hard to make things go right are to be congratulated on the success which crowned their efforts, for by the last days of the meetings the wheels of the great machine were working as smoothly as if they had been in action for months. This, we hold, is most creditable to all concerned.

As we have already pointed out, some of these meetings have been more distinguished by junketting than by work; such, however, cannot be said of the present meeting, in which the work done was of a most interesting character and of the best description. Of the admirable addresses we shall not here speak, but refer rather to the working of the sections, which was unusually good. It may be that the presence of so many distinguished foreigners urged us on to display our working powers, but certain it is that the sections were better attended and the work done was better than they have ever been before. In the Section of Medicine the business had been so arranged that a discussion on some subject of the day should take precedence of all else. On the first day this arrangement fell through, as a paper which had been promised, and to which we believe much pains had been given, on the subject of Alcohol in Pyrexia, had to be withdrawn, owing to the absence of its author, Dr. Anstie, from unavoidable causes. Nevertheless, the early papers in that section—by Dr. Noel Gueneau de Mussy on Enlargement of the Bronchial Glands, and by Dr. Oscar Liebreich on Croton Chloral—were quite brilliant. So it was in the other sections. The discussion on Cholera in the section of Public Health we have already referred to. The chief paper in the Section of Medicine on the second day was by Dr. Grainger Stewart on Chronic Bright's Disease, and that, together with the discussion which followed, in which Dr. Sutton, Dr. Dickinson, Dr. W. Roberts, Dr. M. Fothergill, Dr. G. Johnson, and Dr. Crisp took part, was really the best we have heard on the subject; the views expressed were moderate, and the clinical aspects of the malady, as well as its pathological characteristics, were duly examined. The papers by Dr. Gairdner on a case of Tricuspid Obstruction and by Dr. Dieulafoy on Aspiration were also exceedingly valuable. The discussion on Anæsthetics on the third day was very good.

Surgery is always attractive, and the Surgical Section was both well worked and well attended.

The Section of Obstetrics is generally a favourite one, and this year it was the more likely to be so from the presence of some foreign celebrities. Physiology and Psychology, though comparatively new, held their own manfully, and contributed to the general success. The Public Health Section was, however, that which seemed to draw the largest audience. For the accommodation of such meetings, sectional and general, it would have been difficult to find a place better adapted than King's College, with its numerous large class-rooms and theatres.

The public luncheon has been an important feature in this meeting; and on the first day, when no proper arrangements had been made, the scramble was appalling, but by next day discipline prevailed, and everybody was able to get, if not what he wanted, yet, at all events, a good luncheon. Of the private hospitalities this is not the place to speak, though they have been numerous and sumptuous. Of the more public receptions at the Mansion House and Royal College of Surgeons we have

already spoken, whilst the *conversazione* at University College is elsewhere described. The excursions which took place were partly of the nature of hospitality, for at Windsor the members were invited to a free luncheon, and at Brighton something still more sumptuous was offered for their acceptance; those who visited Hampton Court were even more magnificently entertained by Dr. Langdon Down. Of these excursions little need be said. The first of all essentials on such an occasion —fine weather—was forthcoming, and, after a week of application such as fell to the lot of some in no ordinary measure a holiday under any circumstance would be delightful. Suffice it to say they were all abundantly successful, and constituted a gratifying termination to a most successful meeting.

Two exceedingly interesting excursions were made on Friday—one to Woolwich Arsenal, where some of the most interesting processes were seen in operation; and another to the northern sewage outfall on the river near Barking, and Mr. Hope's sewage farm. This last excursion was selected by many most distinguished visitors, including Professor Virchow, who is just now greatly interested in matters relating to public health. Mr. Spencer Wells's garden party, too, on Friday afternoon was a great success. Many other visits were made. Stafford House, Dorchester House, Grosvenor House, Apsley House, and many other spots of interest attracted much attention.

Of the public dinner we need not speak. Tickets were anxiously sought after, but the number was limited, and much disappointment ensued. Here, once for all, we must say that any disappointment which did so arise depended entirely upon members themselves: again and again they were asked to signify their intention of being present, and had it been known that so many intended to be present it would have been quite as easy to arrange for 2000 as for 1000.

Finally, we must not forget to say a word about the museum and its catalogue. Many unique specimens were there displayed if one had had more time to examine them; but for those who had not, the catalogue will still remain as a memorial of the meeting and a work deserving of much study. One department of it was unique, for never before had so many kinds of electric apparatus adapted for medical use been brought together. Some of the foreign batteries were especially ingenious, those used by Duchenne notably so. A battery by Gaiffe was also conspicuous for its power and small compass; but, turning to those made in this country, we find that in many respects they are rapidly equalling, if not surpassing in every way, the best foreign models. Chief among these we would mention Foveaux's (Weiss's) constant current, and Mayer and Meltzer's compound batteries.

Although our views may in some respects differ from those of the British Medical Association, still we cannot but feel the great value of such meetings—bringing together old friends and affording the means of making new ones. Medical men are too apt to quarrel over little points of etiquette, and often have no means of knowing how good fellows on the whole their neighbours are. Any means of consolidating the profession, and of welding it into a compact body, ought to be welcome to all, and than such we have seen nothing better than the past meeting of the British Medical Association.

THE UTERUS IN PREGNANCY.

The anatomy of the gravid uterus and the fœtal envelopes has been recently investigated afresh by Dr. Kundrat, of Vienna. The account furnished by the author in his paper (*Medizinische Jahrbücher*, 1873, No. 2) is partly confirmatory of the accepted description of these structures, and partly the opposite: in either case it deserves careful attention. The following points, which are the most generally interesting, refer to the human uterus and embryo:—

The mucous membrane of the newly impregnated uterus is known as the decidua, and is familiarly divided into the decidua vera, reflexa, and serotina. In structure it at first somewhat resembles the uterine mucosa in or before menstruation; it is thickened, the glands are dilated, elongated, and tortuous, and there is a great increase of intertubular cells. In all respects the structure of the three portions of the decidua is very similar. Inferiorly the vera suddenly ceases at a short distance from the cervix in an overhanging border, and the cervix takes no part in the formation of the fœtal cavity. Both the Fallopian tubes and their inferior openings are patent during the whole period of pregnancy. When the impregnated ovum reaches the inferior tubal opening its progress, according to Kundrat, is not obstructed by an adhesive growth of the opposite mucous surfaces to each other, as some observers believe, for no such adhesion exists. For the same reason the ovum does not push before it and invaginate a portion of the mucosa, which becomes the decidua reflexa. The latter is clearly an outgrown and infolded portion of the decidua vera; for it possesses glands on its deep or ovular, as well as on its free surface. The ovum is retained at the fundus of the uterus by the swollen decidua. If the swelling is not so great, the ovum may travel down towards the cervix; and it is for this reason that placenta prævia is more common in multiparæ. Kundrat does not believe that the ovum enters the mouth of a gland, but that it developes on the irregular surface of the serotina. As pregnancy advances the uterus enlarges, and the connexion between it and the ovum becomes more intimate and complex. The enlargement of the uterus is at first out of proportion to the growth of the embryo, and a free cavity exists between the vera and the reflexa, which is filled with a somewhat opaque mucoid fluid. It is not till the fourth month that the embryo fills the uterine cavity, and the walls, which were previously disproportionately thick, become disproportionately thin, while the envelopes become transparent. In the fifth month the process has advanced yet another step, by the adhesion—partial at least—of the opposite walls of the uterine cavity: that is, of the decidua vera and the decidua reflexa.

In regard to the connexion between the chorion and the decidua, it has often been represented that the processes or villi of the former pass into the glands of the latter. Kundrat maintains that this arrangement was "but seldom" to be discovered. On the contrary, the chorion-villi were found to be fixed in the grooves of the serotina and on the sides of its elevations by a connective mass composed of mucus and degenerated epithelium. Other villi had buried themselves in the tissue of the serotina, and formed a connexion so intimate that any attempt at separation ended in rupture. It is here that the placenta is afterwards developed. As gestation proceeds the changes on the decidua are very considerable, and in the last months peculiarly interesting. The decidua reflexa becomes attenuated by pressure until reduced to a simple layer of the transparent envelopes of the embryo, of which it forms the most external portion. The decidua vera and decidua serotina, on the other hand, remain as comparatively thick layers of tissue, compact on the surface and cellular, but spongy in their deep portion, from the presence of the numerous ends of the dilated glands, which represent sinuses lined by epithelium. As the termination of pregnancy approaches there occurs, as we have said, a remarkable change on the lining membranes of the uterus. These and also the reflexa become whitish, dull, and of a pale yellowish or even a yellowish-grey tint, opacity replaces transparency, and the process, which is discovered by the microscope to be one of fatty degeneration, passes into the deeper layers. This description of course reminds us of the simultaneous fatty degeneration of the placenta. When parturition occurs a portion of the membranes is expelled with the fœtus,

and it is interesting to inquire what part, if any, of the envelopes is retained. Careful examination certainly reveals that the superficial portion of the decidua vera is, as a rule, included in the fœtal membranes, while the deeper portion is retained, although this is not always the case. During the first week post-partum the discoloured lining membrane of the uterus may be found microscopically to present the characters of the decidua vera, but the sinuses are full of blood, the superficial cellular layer gone, the fatty degeneration extends to the deepest layers, and the tissue generally is infiltrated with round cells and blood. The lochial discharge consists of such cells and of products of disintegration. In the second week post-partum the process has still further advanced, and the epithelium of the exposed sinuses is found to be proliferating. Restitution now begins and advances, and soon there is found on the surface of the muscular coat a fine layer of connective tissue, covered by epithelium and furnished with young glands, to represent the mucosa of the uterus, which is again at rest.

THE WEEK.

TOPICS OF THE DAY.

The outbreak of typhoid fever in Marylebone has been traced to its source. A letter from Professor Corfield, of University College, which appeared in the *Times* of Thursday, acknowledged that the circumstances connected with one out of eight farms from which the company vending the suspected milk obtains its supply "were open to grave suspicion of accidental contamination of the milk." Professor Corfield, with Mr. J. Chalmers Morton, have been appointed by the company to investigate the matter on their behalf, and it is satisfactory to learn from the Professor's letter that the supply from the suspected source is now entirely stopped. It is reported on good authority that not only does enteric fever exist in the part of Oxfordshire where the farm is situated, but that the disease has appeared on the farm itself. It is said that one person (the farmer) died at the farm in June last from an attack which is believed to have been typhoid fever, and that another person is now undoubtedly ill on the farm from that disease. The houses in Marylebone and the adjoining parishes—between forty and fifty in number—in which the fever has appeared have all, with three exceptions, been supplied by the same milk company. Of the three exceptions one may, however, with certainty be referred to the same source—for the only case in it has been that of a child who had been recently on a visit to a family to whom the contaminated milk had been supplied, and the children of which have since suffered from the disease. There is also a statement abroad that in one house in which the same milk had been used, but had been scalded previous to use, no case of fever has appeared. We have further to state that although the dairy company on first receiving a joint letter from Sir William Jenner and Dr. Murchison, on the subject of the prevalence of typhoid fever in families whom they supplied, did not immediately seem to appreciate the possibility of milk-contamination, they have since shown the greatest willingness to have the matter sifted, and have given every facility to Mr. Netten Radcliffe for carrying out his investigation. Dr. Murchison, we believe, was the first to suspect the real source of the mischief. A busy professional contemporary has thought fit to publish the names of a number of medical men in whose families cases of typhoid fever have occurred. We certainly cannot compliment our contemporary upon the good taste or sense which have been displayed in giving these personal and family misfortunes publicity. At present we have heard of four deaths having occurred from the disease.

Cholera is on the increase slowly in Hamburg and the Prussian towns on the Baltic. In the week ending August 2 there were one hundred cases at Hamburg. The disease is rife in Hungary. There is no official account of any cases in England.

Dr. John Mitchell Bruce has been elected Assistant-Physician to Charing-cross Hospital, and Mr. William MacCormack Surgeon to St. Thomas's Hospital.

The rumour that the female medical students were likely to effect an easy entrance to the University of St. Andrews has been contradicted.

HEALTH OF M. NÉLATON.

M. Nélaton, who had gone to Villers, near Trouville, for the benefit of his health, had very much improved, but since his return to Paris a few days ago he is again laid up, and his present condition causes the greatest anxiety among his medical attendants as well as among his numerous friends and clients.

THE ASHANTEE WAR.

By the last intelligence received from Cape Coast Castle, the *Himalaya* would appear to have arrived there with the head-quarters of the 2nd West India Regiment on board. Fortunately for the small garrison of our countrymen holding the Ashantee hordes in check, heavy rains had come on prior to her reaching the station, thus rendering all offensive operations impossible. As we previously reminded our readers, there will be but little opportunity for punishing the invaders until the cessation of the rains in October; meanwhile, although the ranks will once more be filled, and all the suffering resulting from a water-famine will thus be removed, it is to be feared that the troops will suffer considerably from the long period of inaction in such an unhealthy spot. Dysentery of a malignant type is still prevalent, and small-pox has not at all decreased; whilst, to add to the misery of the unfortunate natives who have taken refuge under the protection of the Castle, the heavy rainfall destroyed some of the temporary hospitals, leaving the sick without shelter of any kind. If the 360 men conveyed by the *Himalaya* are a sufficient reinforcement to establish our supremacy when the moment for action arrives, the Government does well to expose no larger contingent to the malarious influences of the Coast; but, even with the potent assistance of Snider rifles and rocket batteries, it does seem rather a hazardous undertaking—when the enemy is authoritatively allowed to number 30,000 fighting men—to attempt the subjection of such a host with so mere a handful. The work to be done upon the present occasion must be thoroughly done, and it should always be borne in mind that the saving of life under the present policy will be very dearly purchased if, from the paucity of the troops we bring into the field, we suffer any check, however inconsiderable, or should we even engage in two or three encounters without obtaining the most decisive results.

LAMBETH PALACE LIBRARY.

The Archbishop of Canterbury having kindly permitted this rare library, with other parts of the Palace, to be visited by members of the British Medical Association during their congress in London, some eighty in all of the members availed themselves of this privilege. After having examined the library known as Juxon's Hall, with its noble Gothic roof, and containing nearly 30,000 volumes, the librarian, S. W. Kershaw, M.A., explained the choice illuminated MSS. which in reality are the "art treasures" of the collection. The librarian then conducted the members over the guard-room, where the portraits of the Archbishops (including the famous Laud, by Vandyke, and Warham, by Holbein) were much appreciated. So interesting a series of distinguished prelates,

each telling his own historical story in bygone events, elicits a peculiar interest to be equalled in few art collections. The private apartments overlooking the spacious grounds—from which are visible the historic towers of Westminster and the modern structure of St. Thomas's Hospital—were next visited. The chapel, a beautiful example of early English architecture, deteriorated only by the ill-placed Renaissance screen erected by Archbishop Laud, was very much admired. Lastly, the visitors ascended the Lollards' Tower, where the prison in which these unhappy victims were confined was shown. This dungeon is as famous in religious history as many other more noted places, and is among the most remarkable group of buildings in the historical pile of Lambeth Palace. We wish to add that the library is open to all students and literary inquirers every Monday, Wednesday, and Friday, and that, by the liberality of the Primate, permission to copy from illuminated MSS. and make extracts is freely accorded.

A DEFECT WHICH SHOULD BE REMEDIED.

In a case of cholera at Limehouse, which the medical officer reported to the Limehouse District Board last week, it was stated that the clothing, etc., of the patient had been destroyed, and the Committee recommended that the friends be reimbursed the value of the goods. It appeared, however, that the Board had the power to disinfect premises, but had not the power to grant remuneration for clothing or other property destroyed to prevent the spread of disease. It was resolved to leave the matter in the hands of the medical officer. A discretionary power to meet such cases as this should be given to all our local boards. The destruction of property under the peremptory order of the medical or sanitary officer, without the power to reimburse the value of the articles destroyed, is a hardship, especially upon persons in indigent circumstances. We trust, therefore, that the recommendation of the Committee will induce the Board to apply to the Local Government Board for authority to compensate persons for articles so destroyed. Such an authority would relieve the medical and sanitary officers from the unpleasant and invidious position in which the conscientious discharge of their duties places them.

HEALTH AND MORTALITY IN CHINA.

"In the recently published medical reports," says the China correspondent of the *Standard*, writing at Shanghai on May 31, "forwarded by the various surgeons of the Imperial Maritime Customs, many very interesting facts are brought to light. The majority of the writers endeavour to prove that China is not an unhealthy place for Europeans to live in, and that when early death occurs it is generally traceable either to a person's own fault or to some organic deficiency of such a nature that death would have occurred from the same cause, at that identical period, in any other part of the world. However this may be, it is a patent fact that deaths in China are unusually sudden. One writer has been bold enough to assert —and there is considerable truth in his statement—that 'good living' and little exercise have something to do with it; and says further that 'it is doubtful whether the ancient Romans in their most luxurious days maintained anything like such a degree of extravagance in living as seems to be the recognised and indispensable fashion in the foreign houses in China.' Everybody knows that 'heart disease' is getting quite fashionable, and there can be no doubt that over-stimulating the system is a common cause of death among persons who fancy themselves healthy because they are robust and plethoric. It is only due to Mr. Hart, the able and indefatigable Inspector-General of Customs in China, to state that the reports to which we have referred owe their origin and comprehension to his industry and capacity. We may state further that Mr. Hart has instituted a system of meteorological observations along the sea-coast of China, which if carried out in the manner which he has indicated cannot fail eventually to be of the greatest importance to the welfare of the inhabitants of China. It has, however, a more important feature with reference to the nations of the West, inasmuch as these observations will afford data which they have never before possessed for comparing the results of meteorological observations from a country hitherto 'a closed book' in regard to this important subject. It is unnecessary for us to state that the influence which the inquiries of Mr. Hart has originated must be of the greatest service to medical science."

PROFESSOR TURNER ON THE PUBLIC HEALTH ACT.

In his address to the graduates of the Edinburgh University at the conclusion of the ceremony for conferring degrees, Professor Turner alluded to the ever-increasing attention paid of late years to the circumstances affecting the health of the people:—

"This led to the passage through Parliament last year of the Public Health Act, which has virtually opened up a new and most important branch of public service to the members of our profession. Although the need which suddenly arose under the provisions of the Act for the appointment within a limited period of a large number of medical officers of health throughout England and Wales, necessarily led to the selection from the general body of the profession of the present officials, there can be little doubt that in course of time this department of the profession will require to be organised on a distinct footing, and that those who aspire to practise it will have to undergo, in addition to the usual medical education, a special preparation and training. When the State imposed duties of so onerous a nature on the members of our profession, it might have been expected that it would at the same time have undertaken to provide those who might be selected to act as medical officers of health with the means of enabling them to obtain that special education which is necessary for the efficient discharge of these duties. From a Government which has shown no particular desire to further the advancement of science, and which has thrown frequent discouragement on efforts to obtain grants of public money for the promotion of the higher and more specialised kinds of education, the establishment of a distinct training school for the public health service, like the Netley School for the army and navy medical service, could scarcely have been looked for. But something ought to have been done to promote and encourage the expansion and utilisation of the resources of the existing educational bodies which are willing to undertake to provide the necessary instruction. In our own University, for example, the sheer want of class-room and laboratory accommodation stands in the way of organising such a system of instruction as would prove a credit to the University and fill a growing public want. A grant of money from the Treasury would enable the University to supply this want, and to send out each year graduates trained to perform the duties required of the public health medical officers."

VACCINATION AT WAKEFIELD.

Notwithstanding the active opposition of Mr. Ward, one of the guardians of the Wakefield Board of Guardians, to the carrying out of the Vaccination Act in that district, the vaccination officer's return, laid before the Board last week, showed that from July 1 to December 31, 1872, the total number of births had been 1425; of these 1041 had been successfully vaccinated, 161 died unvaccinated, 10 were postponed by medical certificate 15, were removed to places unknown, and 98 were unaccounted for.

A NEW MEDICAL WARRANT.

Mr. Cardwell has intimated (says the *Army and Navy Gazette* of last week) that the errors in the recent Medical Warrant are shortly to be rectified, and that a future Warrant ere long to be promulgated will heal all sores. We trust this may be so, and that the promised and looked-for document may not be long in making its appearance. "Hope deferred maketh

the heart sick," we are told. The hearts of the medical officers must be sick indeed.

FEVER IN THE METROPOLIS.

THERE were seventy-six fever patients in the Homerton Hospital last Saturday, being the largest number in that establishment since 1872.

FROM ABROAD.

THE FRENCH MILITARY SURGEONS AND PHARMACIENS—PUBLIC HEALTH OF PARIS IN 1873—PERAMBULATORS.

THE question of the relative positions of the doctors and pharmaciens in the French army, the opinion of the Academy on which was requested by the Minister of War (*Medical Times and Gazette*, July 19, p. 70), has given rise to a warm discussion which has only just terminated. As we have already noticed, the Committee appointed by the Academy, consisting of medical and pharmaceutical members, reported unanimously, after the withdrawal of the latter, in favour not of the abolition or fusion of the pharmaciens, but of their subordination to the medical officers of the army. This resolution, which seems from the medical point of view a rational conclusion enough (and especially so from the French medical point of view, inasmuch as the military pharmaciens are said to be not infrequently in adverse coalition with the Intendance against the medical officers), not unnaturally has caused a considerable amount of irritation on the part of the pharmaciens, both military and civil. It is to be remembered that the pharmacien in France has attained a much higher professional and scientific rank than he enjoys either in this country or in Germany. For example, his education is as elaborate of its kind, and as adequately tested, as that of a doctor; and distinguished members of the body to which he belongs are elected into the Academy of Medicine, where they are on a perfectly equal footing with the other members; and in this debate they have shown that they know how to defend their position. Any attempt, therefore, to bring them into a distinctly subordinate position had something invidious about it, and, as will be seen, had to be at least nominally waived. M. Bussy, a distinguished pharmacien, called the attention of the Academy to the fact that the duties of the military pharmaciens are not confined to the preparation, distribution, selection, and preservation of medicinal agents, but that they are also called upon to enlighten the Administration on various points of importance in military hygiene. A long list of those who had done valuable scientific work might be drawn up. He warned the Academy against recommending the abolition of an institution which had worked well for eighty years for the purpose of satisfying the prevailing mania for imitating the arrangements of the Germans during the late campaign.

But the principal champion of the pharmaciens was M. Poggiale, himself a Military Inspector of Pharmaciens. In considering the questions propounded by the Minister, he observed that fusion of the two bodies at present was quite out of the question, seeing the imperfect education of medical men in chemistry, pharmacy, materia medica, physics, and natural science. As it is now, errors—and even fatal ones—would often arise did not the pharmacien examine and control the prescriptions of military doctors as regards doses. Formerly, when assistant medical officers were admitted to perform the duties of pharmaciens, it was only the cast-off members who presented themselves, and who were found so incompetent that their admission had to be countermanded. The fusion of medicine and surgery has proved mischievous enough in the army, without adding that of pharmacy. The same line of argument exhibits the impropriety of subordinating the pharmaciens to the doctors; for multitudes of questions arise which the latter are incompetent to treat. M. Poggiale cites instances in which the intervention of pharmaciens has proved of the greatest utility in military hygiene, and he refers to many whose names have become famous.

Baron Larrey explained that no one wished to deny the merits and services and the necessity of military pharmaciens; but after all, as regards their functions and the interests of the army, they were only auxiliaries of the medical officers, and should be subordinate to those whose orders they have to carry out.

M. Poggiale, in continuation, observed that the medical body wished to exert the same power over the pharmaciens which they complained as suffering themselves from on the part of the Intendance. One of the useful functions, he observed, of the pharmaciens, who were thus sought to be ridden over, is the control they exercise over the prescriptions of their would-be masters; and without such control the most lamentable accidents would frequently occur. He could lay before the Academy eight prescriptions which would have caused death had they been made up as directed.

M. Boudet, another pharmacien member, followed with much the same line of argument.

The debate was vigorously maintained on the other side by MM. Legouest, Fauvel, Sédillot, and others; while M. Dumas, the celebrated chemist, communicated to the Academy an eloquent pleading in behalf of the pharmaciens. We have not space for farther notice of so prolonged a discussion, interesting as this is in many parts, although, as usual, prolix to a degree and bristling with repetitions. The last discussion was almost as turbulent as if it had taken place in the National Assembly. The first resolution—"That the fusion of military medicine and pharmacy should be rejected as prejudicial to the interests of the army"—was passed unanimously, the pharmaciens agreeing with the other academicians that the results of such a fusion could only be deplorable. The second resolution gave rise to a stormy debate and numerous amendments. It finally stood as follows:—"The present organisation of the military medical service does not correspond to the interests of the army. It is desirable that this service should be placed under a director taken from amidst its own body, and invested with all the attributes which concern the military medical service." The hottest subject of contest was to come. In its third resolution the Committee stated "That the autonomy of the medical military service necessarily implies the subordination of pharmacy to medicine in the army." This the pharmaciens determined if possible to prevent being passed, and completely succeeded, for after a stormy debate it was rejected by 30 to 19 votes. From the tenor of the debate, during which all argument and illustration seemed in favour of the resolution, this result caused much surprise. But it was thought by many academicians that, since the second resolution substantially carried the point in favour of the doctors, it was needless to insist upon the "subordination" so annoying to the pharmaciens. Still, it was remarked that rejecting the resolution was literally to leave unanswered the very question concerning which this laborious and tumultuous debate has so long occupied the attention of the Academy. However this may be literally, the Minister will not remain uninformed of the real opinion of the Academy, that military medicine should obtain emancipation from the trammels of the Intendance, and exercise control over its auxiliaries, the pharmaciens.

M. Besnier, in his report (*Union Méd.*, Nos. 89 and 92) on the health of Paris for the second quarter of 1873, states that the medical constitution of the capital during that period presented nothing special or exceptional—no epidemic having played a preponderant part. He takes the opportunity of comparing the mortality of the first six months of the

year with that of the first six months of five previous years. The general mortality of the civil hospitals and hospices for these six months amounted to 6427 in 1867, 6973 in 1868, 7089 in 1869, 8110 in 1870, 5519 in 1872, and 5944 in 1873. These comparative statistics confirm a statement made by M. Besnier last year, that the gravity of affections of the respiratory organs is on the increase. This is remarkably shown with regard to *pleurisy*, for which thoracentesis is so fashionable a mode of treatment in Paris just now. In 1867 the mortality was 7·03 per cent., and in 1873 it mounted up to 14·66 per cent., being an increase on that of 1872, which was 11·93 per cent. With regard to *croup* we may extract M. Besnier's observations:—

"In former reports I have, by the aid of numerous documents, stated with exactness various particulars which have been little studied, or misunderstood, regarding the history of diphtheritic epidemics. I have shown that in Paris the diphtheritic endemo-epidemic undergoes every year a regular and normal exacerbation, commencing in general, more or less suddenly, about November, and attaining its maximum about April. I have also established that for some years past the progression of the number of deaths caused by croup has been increasing to such a point that the number of deaths from it, which was only 97 in the medical winter (November to April) 1867-68, increased to 181 for the winter of 1871-72, and to 189 for the winter of 1872-73; the six months of these winters exceeding the total figure of the twelve months of the mean year, which, calculated for 1866-69, presents an annual mortality from croup of 179. If I pursue with perseverance this laborious grouping of figures, it is not in order to satisfy merely a statistical curiosity, but to show how wrongfully this class of studies has been neglected. The mortality from croup (as I have several times established) varies not only according to the regions in which it is observed or the seasons of the same year, but also according to annual epidemics. Consequent on this, any statistics, whether partial or general, brought forward in favour of any given mode of treatment, should be controlled by the examination of the general mortality of croup in the locality where the observation is made, and by the study of its mean mortality at the epoch at which the experiment is instituted. The variations may reach 20 per cent. between one year and another, as is shown by the returns of mortality from croup during the first six months of the last six years. In 1868, 162 cases, with 99 deaths (61·11 per cent.); 1869, 146 cases, and 118 deaths (80·82); 1870, 179 cases, with 130 deaths (72·62); 1872, 255 cases, with 176 deaths (69·01); 1873, 248 cases, with 188 deaths (75·80)."

Great as is this mortality from croup, it does not represent the whole truth, for several patients are taken away by their parents just before the fatal moment or when only imperfectly cured.

With respect to *secondary endocarditis*, M. Besnier makes an observation which is of interest. This, whether observed in relation to diphtheritis, erysipelas, purulent infection, eruptive fevers, or, as recently described by M. Lancereaux, intermittent fevers, should not be regarded as dependent on some peculiar conditions of the primary disease. We have, in fact, to do with a whole series of affections of which a changed condition of the blood is a characteristic in common; and under the direct influence of this the endocardium undergoes the changes which pathological anatomists are now investigating with so much success.

The returns of *puerperal mortality* for the six months confirm the conclusion already arrived at in former reports of the immense advantages which have attended domiciliary deliveries as compared with hospital deliveries. Still, Dr. Besnier observes, this must not be exaggerated, since "a considerable number of women still become the subjects of puerperal accidents beyond the sphere of all nosocomial influences, while there is a category of abandoned women, subjected to the most deleterious moral and physical influences, and utterly improvident to the last hour, whom it will always be impossible to provide for otherwise than in hospitals." The mortality from puerperal disease for the first five months is as follows:—Deliveries effected in Paris Hospitals 2774, with 112 deaths; deliveries at the houses of *sages-femmes* 903, with 12 deaths; deliveries effected *à domicile* by official *sages-femmes* 4771, with 19 deaths.

In one of his recent *feuilletons*, M. Latour calls attention to the mischief which may arise from the now almost universal employment of perambulators for the transport of children. He chiefly dwells upon what happens to young infants, who, in place of resting on the nurse's arm and gradually bringing the muscular system which supports the trunk erect into use by exercise, and accustoming their senses to the perception of surrounding objects, now lie recumbent and somnolent in a state of dangerous quiescence. Woman, he believes, is thus abdicating yet another of her functions, which, in all eyes but her own, render her attractive; and although she may relieve herself of some fatigue, it is at the risk of the welfare of her child. "Certain I am that an *enfant à équipage* is a retarded infant: it will walk later, talk later, and smile later." He calls for facts and observations on what he believes to be an important matter in infantile hygiene.

Of its importance scarcely anyone can doubt, when he sees infant after infant propelled along, somnolent and unconscious. But the perambulator mania is probably far more mischievous to children of older growth, as impeding, by the indolent habits it engenders, the general development of the muscular system, and placing the child in a state of mischievous isolation. The careless way in which the perambulator is driven must also not unfrequently be a source of mischief, and some of the severer jerks or greater violence which this gives rise to may not unfrequently be the unsuspected source of cerebro-spinal mischief hereafter to be developed. At all events, the subject is worthy of professional attention, the practice having grown so universal as to render it very desirable to know whether it is so innocuous as this ought to imply.

PARLIAMENTARY.—PUBLIC HEALTH—CONTAGIOUS DISEASES (ANIMALS)—FACTORY ACTS.

In the House of Lords, on Saturday, August 2,

The Public Health Act Amendment Bill passed through Committee.

In the House of Commons, on Monday, August 4,

Mr. Forster made the important announcement that two suggestions of the Committee on the Contagious Diseases (Animals) Act would be immediately carried out—viz., that animals affected with pleuro-pneumonia should be slaughtered, and that the owners should be compensated.

Mr. Mundella withdrew his Factory Acts Amendment Bill in consequence of want of time to proceed with it.

Royal Botanic Society.—At the thirty-fourth anniversary meeting of this Society, on Monday last, a very interesting report was read, from which it appeared that the Council had not lost sight of one of the principal objects of the institution—the study of botany in its relation to medicine, as free orders of admission to the gardens for study for periods of from one to six months had been issued to 210 medical and other students, and to twenty-five artists, and nearly 30,000 cut specimens of plants distributed to the medical schools of the principal metropolitan hospitals, schools of art, and other educational institutions.

Treatment of Diphtheria.—Dr. Lolli, of Trieste, states that while diphtheritis is very fatal in that city, he has lost less than 2 per cent. of his cases in consequence of the efficacy of the treatment he employs. He does not resort to cauterisation, bleeding, purgatives, or emetics, save in very exceptional cases. He maintains the skin in a state of great activity from the very first by keeping the patient in bed, and, if necessary, applying warm applications or mustard. These measures are continued until all local and general symptoms have disappeared. As the sole medicinal agent, he employs the following mixture in different concentration:—Liq. calcis ʒiv. ad lb. j., liq. ferri sesquichl. ♈ j. ad ʒ ij., phenic acid gr. j. ad ♈ j., mel. rosæ ʒ j. With this he paints the fauces every two hours, and gives two spoonfuls of the same in water every two hours.—*Wiener Med. Zeit.*, July 8.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

London, 1873.

[Second Notice.]

King's College, London, is admirably suited and situated to be the head-quarters of a great medical or scientific gathering such as that of last week. It is in the very centre of town, close to three great arteries of the metropolitan microcosm—the Strand, the Thames Embankment, and the Thames itself; and it contains plenty of lecture-rooms, theatres, halls, corridors, and staircases, for the purposes of meeting, discussing, lounging, and chatting. The whole of last week it presented a most animated scene. Carriages of all sorts, from the street-cab to the imposing turn-out of the West-end physician, were constantly passing and repassing under the portico, which informs the outer world that everything inside is done *sancte et sapienter*. The hall was a rendezvous, where might be seen at various times nearly every distinguished member of the English profession and many a renowned foreigner; and the theatres, section-rooms, museum, and last but not least the luncheon-room, seemed never to lose their attractions. The greatest credit is due to the Reception Committee. If during the first day or so of the congress some difficulties were experienced, and discontent was heard of, the members of the Association themselves and no others are to be blamed. Intending visitors were invited by the official organ of the Association for several weeks before the meeting to send in their names to the Reception Committee, in order that they might be properly entertained and cared for. About 700 or 800, we believe, did so, but more than 2000 came. Of course so large and unexpected an accession of visitors tested the powers of the entertainers to the utmost; and if at the first there was some want of smoothness in the working of the machinery, it was very soon removed, and everything went pleasantly. As we have said, great credit is due to the Reception Committee; the various members of it contributed munificently to the hospitality, and every effort was made by them to receive and entertain their guests with generous and considerate attention. The arrangements at King's College were chiefly made by Mr. Cunningham and Mr. Fielder; those at University College, by Professor Marshall; at the Mansion House, by Mr. Durham and Mr. Cross for the Lord Mayor; at the College of Surgeons, by Mr. Stone; and the general management was carried out under the direction of Drs. Quain, Wilks, Stewart, Alexander, Henry, John Murray, and Kelly, and Messrs. Callender, E. Hart, W. Tay, and the secretary, Mr. F. Fowke.

Our notice of the proceedings in the last number of this journal terminated with the report of the Address in Surgery delivered by Mr. John Wood. In the afternoon on Thursday the chief event was the delivery of an address at a Conference of Medical Officers of Health by Mr. Ernest Hart, in which he unsparingly criticised the conduct of Mr. Stansfeld, the President of the Local Government Board, in the matter of the appointment of inspectors for carrying out the provisions of the Public Health Act. Instead of consulting the medical officers attached to the Government department over which he presides, and appointing properly trained and instructed medical inspectors, he employed the old lay inspectors of the Poor-law Board, who have acted on no defined policy, and the result has been that we have had official representatives of the Local Government Board giving instructions and advocating a totally different policy in different districts. At the time the appointments were made we drew attention to the great mistake committed by Mr. Stansfeld in not at once employing a staff of medical inspectors to insure the carrying out the provisions of the Act, and we are glad that Mr. Hart has called public attention to the evils which have resulted from the course pursued by the Government authorities.

We must not linger over the description of the dinner in Lincoln's-inn Hall, graced as it was by the presence of Mr. Gladstone, but must hasten on to Friday, when Professor Burdon-Sanderson, F.R.S., delivered the Address in Physiology.

ADDRESS IN PHYSIOLOGY.

By John Burdon-Sanderson, M.D., F.R.S.,
Professor of Practical Physiology in University College.

The subject on which I have to address you to-day is Physiology, but we are met for the purpose of promoting the progress of medicine. We are, I venture to say, rather a practical than a scientific body, having ends and aims which concern our own good, and that of the community, rather than the promotion of science. Yet, notwithstanding, we all feel that we take a great interest in science—not only in those branches of it which have to do with our everyday work, but in those which have little or no connexion with our art.

There exists, I doubt not, in the minds of all of us, a conviction that science possesses a certain intrinsic value not dependent on its immediate applicability to useful ends. Every day we, like other men, are becoming more and more convinced that it is a desirable thing to search after truth by the observation of nature—that those who occupy themselves in this pursuit are substantial benefactors of their country and of the human race—that the scientific labours of a few men, who do not set forth philanthropy as their motive, who do not profess to sacrifice themselves for the good of mankind, who live quiet unobtrusive lives, and are known for the most part only by their work, may accomplish more for the material welfare of the community than the efforts of armies of philanthropists. If I were to attempt to illustrate this, I should have to turn to other subjects than those which we have before us, for physiology has as yet done little for our art, and consequently little for humanity. I should have to seek for examples among the professors of those sciences which are sufficiently advanced to be brought into practical application. When I think of a life like Faraday's, every year of which brought a new accession of knowledge, and in the end enriched this country to such a degree as ought to secure him the posthumous adoration of all Mammon-worshippers, however little they thought of him when alive; and when we compare the results of his life with the life itself, with the contracted laboratory in which he laboured, with the mean salary on which he lived, with his quiet devotion to science, with the constancy of his religious faith, and finally with the end of that life—mind and body exhausted in work—how great in such a man does that insatiable spirit of inquiry seem, which finds its constant and all-sufficient pleasure in the discovery of new truth—in wresting from Nature her secrets by strenuous intellectual effort!

In an address, which I had the honour of giving at the opening of the Physiological Section of the British Association, I endeavoured to combat the now prevailing view, entertained by many men of science, that it is desirable, in the interests of physiology, that it should be as completely as possible separated from medicine, on the ground that, being founded on experimental research, and using the same methods of investigation as are used in the sciences of physics and chemistry, it ought, for all purposes of teaching and study, to be regarded as part of them. I was then addressing an audience of zoologists and botanists, scarcely any, or at all events few, of whom were medical men. I was, therefore, not surprised that the views then expressed, as to the necessary connexion which exists between medicine and physiology, were strongly objected to, and that my belief in the association of practical medicine with any subject deserving the name of a science was attributed to my own professional bias.

I founded my argument on the natural relation which must always exist between every art and the sciences on which it is founded; maintaining that to try to separate medicine from physiology would be as unreasonable as to separate telegraphy from electricity, engineering from mechanics, or navigation from astronomy.

When I was called upon to deliver the Address on Physiology before this Association, I at once determined to follow out the same line of thought—not going over the same ground, but pursuing it in a direction which was before precluded, and which would have neither fitted the occasion nor the composition of the audience at Brighton. Then it was necessary to look at the question from the side of physical science; now I propose to look at it from the side of medicine.

The subject is, I think, one of considerable importance both to medicine and to physiology, but also of considerable difficulty. Conscious of this, I should not have made bold to take it up,

had I not felt that I could entirely depend on your sympathy and indulgence.

I have no doubt that we are all agreed in entertaining a high opinion of the value of physiology, and that we are all anxious to promote its progress. Beyond this, I should not be surprised to find very great differences of opinion. There are probably some who think that every physician ought to be a physiologist—that in the selection of remedies and the diagnosis of disease he ought to call in the aid of physiological considerations, and be guided, not merely by experience (or by empiricism, as we call it when we want to slight its value), but also by science. Freely admitting that physiology is scarcely as yet sufficiently advanced in the work of investigation to advise safely on practical subjects, they would look forward to a time when it will be otherwise; believing that, as the science approaches maturity, it will assume an authority in the decision of practical questions to which now it has no just pretensions. I am convinced, however, that this is not the view usually entertained by the profession at large. The opinion certainly most common is that, although physiology may be a very good thing in its place, conclusions derived from physiological reasoning ought always to give way to the dictates of practical experience, and that science never can be a guide to practice. Those who employ this mode of expression refer, as to a convincing argument in support of it, to the numerous instances in the history of medicine in which the influence of what they are pleased to term *physiological* theory has been injurious.

They refer, *e.g.*, to the overfeeding and overstimulating treatment of disease during the last twenty years; to the unreasonable disuse of venesection; to the neglect of antimony and other so-called antiphlogistics; to the undervaluing of mercurial remedies; to the purgative treatment of cholera; and to other instances in which they say that practical medicine has been injured by allowing *physiological* theory to dominate over experience.

With the exception of the misapplication of a single word I have not very much to object to in the view so expressed. But that word, in relation to the subject of my present discourse, is somewhat important. It is the word "physiological"! The cases on which the whole argument is founded are undoubtedly good examples of the injury done to medicine by allowing theory to dominate over practice; but in no single instance can the theory referred to be termed, with any regard to exactitude of expression, physiological. Take the example of mercurial remedies as the most familiar, and as having relation to a therapeutical investigation set on foot some years ago by this Association. What is the state of the case?

Physiological experiment has proved that mercury exercises no influence in increasing the secretion of the liver. Experience has proved ten thousand times that, in certain sufficiently well-defined disturbances of the digestive organs, the traditional blue-pill and black-draught at once relieve the symptoms, and restore the disordered functions to the normal, and the patient from misery to comfort. These are the two facts, the one physiological, the other practical or empirical. Out of these spring two theories; one that mercurial remedies are useless, the other that mercury acts beneficially by exciting the secretion of bile. Both are demonstrably false. The former, certain writers on the subject are pleased to call physiological. All I can do on the part of physiology is to repudiate it altogether. It is an inference which practical men, and not physiologists, have with sufficient consideration drawn from physiological facts. It is an example, in short, not of the injury which physiology does to medicine, but of the undeserved discredit which practical men throw upon science, by attempting to apply its facts without any sufficient knowledge of their bearing.

I have entered upon these considerations for the purpose of showing that, in the present position of physiology and medicine, it is highly desirable for the welfare of both to draw a distinct line of demarcation between them. On the one side of this line we have what may be properly called the science of medicine—a science in which experiment has no place, its fundamental facts being gathered, not from experiment, but from case-books and the records of post-mortem examinations. Its method consists in systematising and combining the experience of great numbers of trustworthy persons in such a way as to make them applicable to diagnosis and treatment, and admits of being carried out with quite as much exactitude as those methods which are employed in the so-called exact sciences.

In physiology, experiment is everything. Just as the science of medicine proper may be described as based on the observation of cases, and in the orderly classification of the recorded clinical facts, so physiological science is built up of experimental results. Its mode of working is that which is now understood by the term research, the nature of which is best expressed by the well-known words of Harvey, in founding the Harveian Oration, in which he declares his purpose to be that the orator should stir up his hearers to search out the secrets of nature by way of experiment.

The distinction between medicine as an empirical, and physiology as an experimental science, though easy to state, is difficult to maintain practically. For between the two regions of experience and research there lies an intermediate territory of speculation, which is a constant source of temptation even to the most practical mind. Whether he will it or not, he is constantly led by the subjects which occupy his thoughts in practice to speculations on the nature and origin of disease. For every intelligent man—every man who is possessed of that insatiable desire to understand all that he observes, which is the basis of all intellectual effort—has constantly presented to him, in the practice of our profession, facts which furnish the very stimulus required to call the speculative tendency into action. Already practised in the faculty of accurate observation, he is constantly being tempted to undertake the work of investigation; in other words, not to content himself with the appreciation of the facts which bear upon diagnosis and treatment, but to engage in inquiries relating to the intimate nature, the origin and essence, of the diseased processes he has before him.

Is it either possible or desirable to check this tendency to speculation? Certainly not. So long as practical medicine lasts, and the minds of men are constituted as they are, speculation will continue. Practical men will still make excursions into this border-land of imagination; will still make advances, so to speak, towards physiology. Our efforts, therefore, ought to be, not to prevent speculation, not to reject these advances, but, on the contrary, to advance on our side to meet them. For the process by which we get new knowledge is a reciprocal one—theory and experiment, question and answer. The practical mind suggests and theorises; the physiologist doubts, experiments, and tries to answer. Or, putting it in terms more directly applicable to our subject, the clinical observer analyses the facts of disease, separating them from each other, and ascertaining, by the application to the case of the numerical method (the great instrument of his science), which are the most important—*i.e.*, the most constant characteristics of the disease,—and in this way sets questions. The experimental man begins his investigations where the other terminates his analysis; and sets to work, not on the whole disease as it presents itself in its complication of phenomena, but on the simpler processes, such, *e.g.*, as fever, inflammation, catarrh, into which the clinicist has resolved it. With these he proceeds by the same methods as are used in all the other experimental sciences. Having a phenomenon, he seeks for its cause, directing his efforts to the discovery, among the perhaps numerous conditions to which it may be attributed, of the one on which it is actually dependent, and by means of which it can always be reproduced.

In this way both the speculative and the sceptical faculties of the mind are brought into useful exercise—the function of the one being to set questions on the behalf of clinical medicine, of the other to answer them by experiment. So long as this reciprocal relation is maintained, there is no danger in speculation. This danger to science begins when the practical man not only asks his question, but gives his own answer in the name of science. The danger to practice is when he allows such answers, falsely given, to lead him astray from the safe guidance of experience.

I desire to illustrate this reciprocal influence of empirical speculation on the one hand, and experimental scepticism on the other, by a single example—endeavouring to show how, as I have said, both work together for the progress of pathology.

Before proceeding, however, I would guard myself against a misunderstanding. When I place the two functions of suggestive and experimental work, so to speak, in opposition, I do not mean that the two should not be exercised by the same person. For, although there may be conditions in the recent progress of science which render it necessary now, more than in former times, that there should be division of labour, we have abundant proof in the history of our science that the advances have been made by men who have looked at questions from both sides, in whose intellects imagination and

doubt, question and answer, speculation and experiment, have had equal scope.

I now return to my examples. The one that I shall take is that of the Physiology of the Febrile State—a subject which, at the present moment, occupies the attention of a larger number of workers than any other question in pathology. And in pursuance of my plan, I will endeavour, first, to trace the development of the chief scientific theories which prevail on the subject—in other words, the questions which have been asked by clinical medicine, and the responses of experimental science, and then to show in what direction permanent progress can alone be made.

I would state to you at the outset that I shall not have to bring before you any brilliant scientific achievements. On the contrary, you will see that the more sceptically we test the answers already given, the less considerable will they appear in proportion to the numerous questions which still remain unsettled.

At the present moment the theory of fever which exercises the widest influence and is most generally accepted is that of Virchow, the main characteristic of which is that it places the *fons et origo* of the febrile state in the nervous centres. To deal with it I must carry you back to the year 1851, which may be considered as an era in the history of this subject, if not in the development of the science of pathology in general, inasmuch as it is from this year that the use of the thermometer as an instrument of clinical observation may be said to date. For it was in 1851 that Traube, physiologist and physician in one, published the earliest systematised thermometrical observations of febrile diseases.

As regards the doctrine of fever, the effect of the introduction of this method was to bring us back to the notion which is expressed in the old Hippocratic word "pyrexia"—a word which implied the recognition of increase of temperature as the essence of the febrile state. For among the earliest results of the observations of Traube and his immediate followers was the demonstration of the fact—which no one had suspected before—that in fever the elevation of bodily temperature is characteristic of the whole process; and that in those fevers in particular in which the cold and the hot stage are most distinct from each other, the condition of the patient is as truly pyrexic in the former as in the latter, however little it may seem to be so to himself or to others; in short, that amid all the varieties in the subjective state of the patient, in the state of the skin and of the circulation, the objective fact of increased temperature remains.

The immediate expression of the impulse thus given to the pathological thought in reference to fever was the development of the theory of Virchow just referred to. Founded directly on clinical observations, it seeks, like other theories of similar origin, to harmonise these observations with each other by regarding them as parts of the same physiological process. The first step in its construction was to bring the two chief components or constituents of fever—viz., pyrexia and increased discharge of oxidation products—into causal (*i.e.*, physiological) relation with each other.

Virchow's is essentially a neurotic theory. It points to the functional disorder of a hypothetical nervous centre, the so-called regulation or moderation centre, the exact position of which he does not pretend to determine, assigning to it, however, a place somewhere in the intracranial part of the spinal cord. The normal function of this centre is to preside over the bodily temperature; for it is owing to its agency that the oxidation processes, which may be said to constitute the life of out tissues in health, are so controlled that the bodily temperature, even in the most internal parts, never rises above 100° Fahr.

In disease, *i.e.*, in fever, the wholesome influence of this centre is paralysed, and the normal oxidation processes gain the upper hand, as shown by the increased discharge of oxidised products by the lungs and kidneys, and the general wasting of the body, while the temperature rises.

Here I must ask leave to make a digression. While all this was going on in Germany, our own countryman Parkes was observing without theorising in England. So early as 1853 he had made both thermometrical observations and urine analyses in fever, which so far confirmed those of German observers. The results of his observations were published in his Gulstonian lectures on pyrexia. In these lectures, while concurring with Virchow in regarding fever as primarily a neurotic process—a process having its primary seat in the nervous centres—and supporting this view by a variety of convincing arguments derived from clinical observations, he, with characteristic and wise caution, neither followed him into his physiological explanation nor substituted any other theory for it. It is now twenty years since the lectures were published; and although they are full of facts and observations which at the time were new, I do not think they contain any expressions or statements which the author, if he were to republish them, would find it advisable to retract. The reason is that Dr. Parkes approached his subject in a truly sceptical mind, and refused to give way to the besetting temptation to physiologise. He contented himself with setting questions; not that he failed to see with perfect clearness the theoretical bearing of the facts, but because he knew that physiology was not at that time in a position to answer his questions with any approach to certainty. Would that other equally earnest inquirers were endowed with the same wise cautiousness!

To return to Virchow. As I said before, he made no pretension to assign any definite position to the supposed regulation centre, either anatomically or by physiological experiment. The first serious attempt to do so was made by Naunyn and Quincke many years afterwards. The evidence was sought by the method usually followed in physiology. When the physiologist desires to find out what is the value of a particular organ in relation to a particular function, he observes the modifications which that function undergoes when the activity of the organ in question is either disturbed or annulled. In the case of functions of intracranial organs in general, this is a matter of great difficulty; still more is it a difficulty when the organ, like the hypothetical heat-centre, has its seat in the most vital part of the nervous system; for it is not possible to eliminate its activity without interfering with other important activities of neighbouring parts.

These experiments consisted simply in observing the effects of dividing the spinal cord on temperature, under different circumstances, at different heights—viz., at different distances from the medulla. Now ordinarily, when the spinal cord is divided in the cervical portion, the effect on temperature is very marked. The result of the operation is not only (I need scarcely say) to paralyse the voluntary muscles, but to paralyse the vascular nerves.

The consequence of this vaso-motor paralysis is (as has been ascertained by repeated measurement) to retard the circulation, diminish the work done by the heart, and diminish the temperature. The temperature sinks because heat is given off at the surface more rapidly than it is evolved in the tissues—a fact which is proved by the observation that if the animal be wrapped in cotton-wool its cooling is delayed, though it cannot be wholly prevented; while, on the other hand, if its body is immersed in a conducting medium, such as water at the ordinary temperature, so as to favour the loss of heat at the surface, the depression of internal heat is correspondingly accelerated.

The experiment of Naunyn and Quincke may be regarded as an imitation or reproduction of the well-known case of dislocation of the lower cervical veterbræ recorded by the late Sir Benjamin Bredie, in which he observed a very rapid increase of temperature with acceleration of pulse before death. Having destroyed the continuity of the spinal cord by crushing at the level of the sixth or seventh cervical vertebræ, Naunyn and Quincke observed that, if the animal were placed in a chamber at a temperature varying from 82° to 86° Fahr., there was always an elevation of temperature amounting to three or four degrees, which, as in Sir Benjamin Brodie's case, was continued until death. This they attributed to the severance of those channels by which, according to the theory of Virchow, the intracranial part of the spinal cord controls those chemical processes by which heat is produced.

Having repeated the experiments of Naunyn and Quincke on one or two occasions, and failed to obtain any warming effect which could not be accounted for otherwise, I was not surprised, and was indeed somewhat gratified, to find that Professor Rosenthal, in an extensive series of experiments, had come to the same negative result—that is to say, had found that in all cases of division of the cord in the cervical region the effect of the operation is to depress the bodily temperature below the normal standard. The error of Naunyn and Quincke was evidently due to their having neglected to compare carefully the phenomena produced under the influence of the agent to be investigated with those which present themselves under otherwise similar conditions. For it is an invariable rule in experimental investigation, that no result can be accepted as proving the parentage of any given phenomenon until it has been

shown by counter-experiments that the effect is not produced under circumstances which, in every other respect excepting the presence of the supposed cause, are identical with those of the original experiment.

With these recent observations of Rosenthal, the history of the regulation centre theory may for the moment be said to terminate. It has not been definitely proved that the encephalon contains no such centre, but its existence has been rendered extremely improbable. For, although a great number of experiments have been planned for the express purpose of eliciting evidence of its action, all have failed. In few words, the history of the theory is this:—Framed to account for clinical facts, it was for years accepted by clinical pathologists as a good physiological explanation, until at last its importance claimed for it the attention of experimental physiologists, when it was found not to stand the test of investigation.

I now proceed to other theories having this in common, that while they place the origin of the febrile state in disturbance of the nervous system, they explain the influence of that disturbance in the production of pyrexia by supposing it to be exercised through the organs of circulation. There are two such theories which are of sufficient importance to merit attention — one of them is endorsed by Traube, to whose clinical researches at the beginning of the present era in pathology I have already made reference; the other has attached to it the name of the distinguished French physiologist with whose presence we are now honoured. Thrown out by him in a lecture, probably rather as a suggestion than as a mature theory, it has received from medical theorists an extent of application which one may venture to suppose that its reputed author did not contemplate.

Both theories take their start from the ordinary physiological doctrine of the distribution of heat in the bodies of warm-blooded animals. As set forth with admirable clearness by Huxley in his little "School Physiology," it may be stated as follows:—The heat which is communicated to the blood in every living part of the body by the chemical changes which constitute its life, is distributed therefrom to every other part by the blood-stream; but between the external parts—*i.e.*, those which are in contact with relatively cool external media—and the internal parts there is this important difference, that whereas in the interior all is production, at the exterior the production is far more than balanced by the loss—*i.e.*, by the giving off of heat by evaporation and radiation: consequently, if it were not that, by means of the circulation, fresh supplies of heat are constantly being brought to the surface from the warmer parts at the centre, the surface would rapidly cool, as, indeed, it actually does when the circulation is much weakened. Hence, in respect of its function in the distribution of heat, the circulation is rightly compared by physiological teachers to a hot-water apparatus; and they use this similitude, be it observed, not as a representation of the facts, but merely as a diagram or schema. Even for this purpose the ordinary hot-water apparatus requires considerable modification in its plan, in order to serve as an illustration. In the first place, we must suppose that the movement of the water is determined, not, as in the ordinary case, by the variations of density due to heat, but by the action of a pump representing the heart; and that the heat is communicated to the water, not at one focus, the stove, but in all parts of the system (as *e.g.*, still following our friend Huxley, by a number of little gas-jets arranged at short intervals underneath the pipes); and secondly, we must have our pump placed at the centre of the system, and our water-pipes, some in protected positions close to each other and carefully covered with hay-ropes and other appliances for preventing loss of heat, others exposed to the air, divided by repeated branching and kept constantly moist, to represent the conditions of the circulation in the exposed and external parts of the body. So arranged, the apparatus would give us a very true diagram of the circulation in relation to the distribution of heat, and it is not difficult to see what the results would be, both as regards the maintenance of temperature in the whole system and its distribution in different parts. The temperature of the internal protected tubes would be always greater, that of the external exposed tubes always less, than the mean temperature of the whole apparatus; but, provided that the dryness and temperature of the external media and the relative quantities of water passing to the external and internal parts, and the heat communicated by the gas-jets remained unchanged, the mean temperature of the whole system would be constant, just as it is in the animal body. Any alteration of any of these factors would declare itself either in general warming or cooling, which, however, would only go on until a new balance of loss and gain was established. If, *e.g.*, the relative quantity of water flowing through the external parts were increased, either by facilitating the flow in the protected tubes or by hindering it in the exposed ones, this would at once tell in an increase of the general temperature in the whole system, which effect would continue until, by increased evaporation and more rapid radiation at the exposed surfaces, equilibrium was again established. The former condition representing health, this might be regarded as fever.

Out of considerations of this sort sprang the two theories of fever to which we now desire to direct our attention. According to Marcy, fever consists in a general relaxation of the vascular system of the external parts of the body; referring to our schema we find that the effect of this must be to let blood of a higher temperature from the central pump flow more freely into them and warm them up. Hence the hot skin of fever. According to Traube, on the contrary, the surface vessels are contracted; consequently, the flow of blood through the exposed parts is hindered, while that through the internal organs remains unimpeded. Hence, again referring to the schema, the general temperature of the body rises, and you have fever. Is it not strange that on the same physiological scaffolding such opposite structures should be erected?

The vaso-motor theory of fever in either of its forms is not only defective as leaving the collateral constituents of the febrile state (viz., those which relate to nutrition and secretion) unaccounted for, but fails to explain even the very phenomena (those of circulation and bodily temperature) on which it is constructed. It is perfectly true that in the animal body as in the schema, if we alter the relative quantity of blood flowing in external and internal parts, or vary the velocity of the blood-stream, we produce corresponding variations both in the distribution of temperature and in the mean temperature of the body. But experiment shows—1, that the maximum effect thus produced is not comparable in quantity to the elevation of temperature actually observed in fever; and 2, that the direction in which the effect manifests itself varies, being determined by complicated combinations of circumstances of which neither theory takes any account. These are, among others, the external temperature at the time, and the vigour with which the heart responds to the increased resistance. Considering that we can produce much more decided vaso-motor effects experimentally than any which can be supposed to exist in fever, and can graduate those effects at will, we may consider it as proved, at all events as regards vascular contraction, that this condition is quite inadequate to account even for the temperature result attributed to it.

The notion that the heat of skin in fever is dependent upon what may be called a determination of blood to the surface, is in like manner negatived by the fact previously referred to, in relation to the regulation theory that under all varieties of condition the invariable effects of vascular relaxation is the contrary to that which the theory supposes—viz., to depress the bodily temperature,—and that this cooling takes place even when the animal is protected as much as possible from the influence of external media by packing it in cotton-wool and so forth. A more striking, though not to the physiologist a more conclusive, proof of the inadequacy of any conceivable change in the distribution of the blood to produce pyrexia is to be found in an experiment of Liebermeister's, of which I will now endeavour to give an account. It is an experiment not made on dog, cat, or rabbit, but on a willing human subject. It can, however, be substantially repeated on the lower animals with a similar result.

If you take two ordinary warm baths at the temperature of the body, and, after careful agitation of the water, put a healthy person in the one, leaving the other unoccupied; the mass of water in each being the same, and then after a time remove the subject of experiment, and again measure the temperature of the water after agitation, it is found—1, that, whereas in the unoccupied bath the temperature of the water has sunk, the occupied bath has either remained at the same temperature, or at all events has lost less than the other; and 2, that the subject's body has become warmer, because, being surrounded entirely with a conducting medium neither cooler nor warmer than itself, no heat whatever has been lost at the surface; so that all the internal heat produced during the period of immersion has accumulated—that is to say, has gone to the good of the bodily temperature.

This is the experiment. Its value lies in the information it gives us as to the maximum result which can possibly be attained by complete suppression of the surface discharge by mere accumulation of the heat normally produced. The thermometrical results of the experiment as compared with temperature measurements—*e.g.*, intermittent fever during the period of fervescence—show that the rate at which the temperature rises in the accession of ague is at least four times as great as the maximum effect of accumulation.

I need scarcely say that I have not exhausted all the theories of fever in the sketch I have attempted to give of those which propose to explain its phenomena by attributing them either to vascular disturbance on the one hand, or to paralysis of a supposed regulating centre on the other. I now proceed to the second use that I wish to make of my example, to try to show what is the true method of investigation in pathological questions.

How must this question of fever be attacked? It seems to be too strong a position to be carried by assault, and must be got at by a combination of well-directed approaches. The questions must be taken as they present themselves, one by one. This done, the combining of the results into a theory will require as little genius as the taking of a fortress requires military skill from the moment that all the commanding positions are already in the hands of the besiegers.

The first step is to select among the constituent phenomena of fever those which are the most important—in other words, to classify the characteristics of the febrile state according to the greater or less degree in which they are essential. This can of course be done on one principle only, that according to which those phenomena are regarded as most important which are most constantly present. On this principle we have no difficulty in placing pyrexia first; next comes, probably, loss of weight; next, frequency of pulse; and after these other concomitant phenomena more or less dependent on them.

Taking pyrexia as a phenomenon by itself, we want to know how it can be produced. We have but two certainties to start from—first, that in the animal body heat is produced exclusively by chemical change; secondly, that in the particular case to be investigated the rate at which the body is warmed is greater than can be accounted for by any mere accumulation. The first of these propositions is axiomatic, being an almost immediate consequence of the law of conservation of force; the second arises from experiments like that of Liebermeister on the human subject, as well as from others more exact on animals. By the combination of these two propositions we come to the conclusion that such an increase of temperature as occurs in fever must depend on increased oxidation.

The next question relates to the seat of the process—where does such increased oxidation occur? Here we have no sufficient information. Admitting that the most probable answer is—everywhere, that is, that just as heat is produced normally in every tissue it must be so produced in fever, it would be most unjustifiable to assume that it is so.

Of the three or four tissues of which the mass of the animal body is composed—the nervous, the glandular, the connective, and the muscular—there is one only which has as yet been sufficiently investigated in its relation to ordinary heat-production—viz., the muscular. With respect to this tissue, it cannot be shown that it is the special seat of the increased chemical activity which produces fever, but it can be shown that, even if every other source of heat-production were excluded, the variations of intensity of which muscular oxidation is capable would be sufficient quantitatively to account for the variations of bodily temperature which occur in fever. In this respect, therefore, I propose to refer to some of the experimental facts known to physiology as to this heat-producing function of muscle.

I will first mention an experiment which belongs neither to the laboratory nor to the hospital, our two ordinary sources of information. A man works in an extremely hot place, for example the stoke-hole of a tropical steam-vessel, where he is subject to a temperature of perhaps 120° to 130° Fahr. Under such circumstances a dog would soon die, but so efficient is the apparatus for the discharge of heat at the surface in the human body, that not only life but continued muscular work is possible. If now we place the same man under slightly altered circumstances, and set him to work in what is termed a "dead end" in one of the so-called "hot mines" in Cornwall, where not only the air is heated, but the workman is rained upon by the incessant dripping of water at a temperature of say 105° Fahr., so that the air is constantly saturated with moisture, we find that, although the temperature is nothing like so high as in the stoke-hole, he suffers so much more from the effect of it that continued labour is impossible. After remaining by a great effort of the will for ten minutes at the most, he can endure the distress no longer, but rushes out to cool himself, and after a few minutes' rest in a well-ventilated gallery is himself again.

To understand the difference between the two cases, all we have to do is to compare the man's bodily temperature as he escapes exhausted from the hot working with that which he possesses while labouring in the stoke-hole. In both instances there is excessive production of heat, and, as we know from other experiments, excessive discharge from the body of carbonic acid; but in the one the over-production is balanced by the surface cooling, in the other such cooling is impossible, the man's body itself receiving the overplus, which goes on accumulating until, if I may use the expression, he is warmed up into fever—a fever which, although transitory, yet so long as it lasts shows all the characteristics of the febrile state—the quick pulse, the muscular and nervous prostration, the increased temperature, and increased discharge of oxidised products.

The experiment I have been relating is a ready-made one and may be called a rough one; it exemplifies the physiological fact that the excessive heat-production which is determined by muscular exertion, if not compensated for by increased discharge, raises the bodily temperature and thus produces functional disorders which closely correspond to those of fever.

The same thing may be demonstrated with greater exactitude by experiments on animals. Nothing, *e.g.*, could be more striking by way of illustration of the heat-producing function of muscle than the comparison of the effect of the two well-know poisons curare and strychnia on bodily temperature—curare by paralysing the muscles, cooling the body so effectually that, as every experimenter knows, it is impossible with the utmost precautions to prevent the temperature from sinking; while under the influence of strychnia the heat produced is so much increased that the temperature rapidly rises to that of fever.

I trust that, after what has been said, it is scarcely necessary to observe that I am not drifting towards a new theory of pyrexia. My object is not to show that fever has its seat in muscle, but that any process by which vital activity can be increased in a relatively large mass of living tissue is capable of producing a pyrexia which is, in every respect excepting its cause, a counterpart of that of fever. Of the bearing of this conclusion we can judge better if we put it in another form; for in other words it amounts to this, that pyrexia may be produced by any agent, whether originating in the nervous system, as in the case of the man working in the hot mine, or in the blood, as in the case of the animal poisoned by strychnia, which stimulates a great mass of living tissue to increased action. In this way we come back to a very old definition of fever—that fever is the reaction of the living organism against a stimulus. This definition is of value merely as a finger-post, as an indicator of the direction in which we must work. I understand it to mean that, if I am to seek successfully for the proximate cause of fever, I must look for it among agents which act, either directly or indirectly, as excitors or irritants of living tissue. Examples of indirect action I have already given. I now proceed to submit to your consideration a third example, which I conceive to be one of direct action.

It has now come to be an extremely well-known fact in pathology that if the exudation liquids of certain acute inflammations are mixed, even in extremely small quantity, with the blood-stream, the inevitable result is the production of a pyrexia, which in its development, progress, and concomitant phenomena, so far as they have yet been studied, exhibits all the characters of the febrile state. I have no intention of entering at all into the consideration of this remarkable process, and refer to it here merely by way of illustration. I am altogether unable to state on what tissue mass the poison in question exercises its influence; all I want to do is to point out that, whatever answer is eventually given by experiment to this question, the only possible conception that can be formed of its mode of action is that which regards it as a direct tissue-stimulant.

I have not time to enter upon the other constituents of fever, each of which requires as careful and separate investigation as that of pyrexia—the phenomenon of shivering and the changes which accompany it in the circulation, affecting the arterial pressure and the distribution of the blood to different parts; the changes which occur in the hygrometric condition

of the skin and mucous membrane, and in the glandular apparatus connected with the latter; the changes which occur in the tissues in fever, so well investigated by Dr. Beale in the fever of cattle-plague; and last, but not least, the chemical changes which occur in the blood. Each of these requires to form the subject of a separate and detailed investigation, and until this is carried out it is premature to go any further in theorising than is necessary for the purpose of obtaining what I have already indicated as finger-posts.

I have now come to the end of my time if not of your patience, and I must attempt what I feel myself singularly incompetent for—I must appeal to you to use all your influence to promote the prosecution of pathological research in this country.

Having this in view, I chose the subject of fever, partly because I am myself deeply interested in it, and partly because fever and inflammation have always in the history of medicine been the pivots on which pathological teaching has turned. If, therefore, pathology is of any value at all, if it is of use to know not only the external characteristics on which we base our diagnosis of disease, but the internal and hidden processes which constitute its essence, the question of fever cannot fail to interest us. But it is not in support of this or that line of inquiry in particular that I would appeal to you. What I would urge is that this Association ought to help forward pathological research as a thing distinct from, though highly serviceable to, practical medicine and surgery; that we should support it, not merely on the ground of its immediate utility or of the direct applicability of the results to be obtained, but on the broad principle of its scientific value.

As regards the eventual utility of scientific research in general it is not needful for me to address you. You have heard the subject argued, and probably read the numerous publications which have recently appeared in connexion with the work of the Royal Scientific Commission, the result of whose labours I earnestly hope may be to obtain from our legislature a permanent recognition of the national importance of research. As regards physical science in general, indeed, there can I think be no doubt that eventually, and it is to be hoped at no very distant period, this country, which owes its boundless wealth no less to its scientific men than to its statesmen, will tardily but freely and fully acknowledge its obligation.

It is quite possible that our science will not at first participate in the advantages of this change. The question whether it does so or not will, I think, much depend upon the medical profession, of which this Association is the representative body.

By the earnest and energetic pleading of men belonging to our profession, the public ear has been successfully gained for the claims of other branches of physical science not immediately connected with medicine. At the present moment we have a scientific inquiry in progress on a large scale at the public expense which has for a principal object the investigation of a physiological question—viz., that of the physical conditions which govern the distribution of living beings at the bottom of the deep sea. Many of us, I do not doubt, take a deep interest in the success of this undertaking, for the carrying out of which the best instrumental appliances have been provided, and the most skilful and carefully trained observers selected.

I do not refer to this expedition because I think that the magnificent preparations which have been made are at all out of proportion to the importance of the objects. I refer to it for the purpose of making a comparison between these inquiries and those in which we as pathologists are interested. The able staff of naturalists on board the *Challenger* concern themselves with the animals which inhabit the depths of the ocean, and with the conditions which affect their life; we occupy ourselves with human beings and the physical agents which affect their life. These agents are altogether similar in their nature to the others, and require the same methods for their investigation.

We do not for a moment doubt that the care and thought which have been spent in the case of the *Challenger* expedition —in the selection of competent persons as observers, in organising them under a man of science of acknowledged ability, in dividing the work of research among different individuals, in providing them with proper places to work in and proper instruments to work with—have been wisely spent.

Let us, if we desire to promote efficient research in our own province, follow the same principle. Let us not suppose that because in the past history of medicine the employment of an hour here and an hour there, of weary leisure stolen, as it were, from the practical duties of a laborious profession, has accomplished great things, that this is the most efficient way of proceeding now. It must be admitted that circumstances have changed, and that as we possess resources which before did not exist we ought to use them. In the first place we have young men trained in the methods of chemical and physical work, who no doubt would show themselves as zealous and devoted to experimental researches in physiology and pathology as the young men now on board the *Challenger* in their several lines of inquiry. We have long had hospitals as fields of investigation, and now we have laboratories for the proper carrying on of our work. What we chiefly require is organisation, a clear definition of the purposes to be attained, and a combination of the various agencies at our disposal towards their attainment.

I venture to think that it is an object in every respect worthy of this great Association to further and promote the organisation of physiological and pathological research, by fixing on the questions to be investigated, by appointing persons of acknowledged scientific ability to take the direction of the inquiries, by encouraging young men of the highest ability to devote the earlier years of professional life to research, and by providing the necessary funds.

After the reading of Dr. Sanderson's address, Professor Virchow, who was most enthusiastically received, rose and said:—

Gentlemen,—I have accepted the agreeable duty to propose the thanks of this meeting to Dr. Burdon-Sanderson, for his able address. Indeed, he has touched the most important questions concerning the relations between physiology and pathology, or, in other words, between theory and practice. Is it correct, is it a thing of public necessity to advance in the path of experiment and of research, and to induce the profession to bring in strong connexion their practical theories with the theoretical views of modern science? In my country this question is answered in the affirmative sense. I myself commenced the struggle when, twenty-five years ago, I began my *Arehives* of pathological anatomy and physiology, and of clinical medicine, and when I proved the postulate that clinical medicine should be in accord with practical physiology. The victory of this tendency was confirmed when, in 1856, the Prussian Government took the decision to found the first pathological institute. Since that time each year has brought new proofs of the correctness of this mode. In all civilised countries our science has followed the same course, and if now the English Government and the English profession agree to found large pathological institutes, what they do is nothing else but to accomplish that national tendency originated by the two most illustrious members of the College of Physicians and of the College of Surgeons—William Harvey and John Hunter. Each pathological institute in the world is a monument erected to the memory of those two heroes of science; and, gentlemen, I believe, if no other reason existed, it should be a debt of gratitude to establish that sort of institute where *their* method could be pursued and transmitted to the coming generation. But I am somewhat surprised that such a question should be discussed, and the answer be doubtful, in the country which for many centuries has given to the whole world the highest representatives of the successful combination of medical or surgical practice and theoretical speculation. May I be allowed to recall at this time, and in this place, the memory of a man who, after my opinion, is for ever the best example of what a correct method and an intrepid philosophical sense can attain—I mean the memory of Glisson. He, with his colleagues of London, has shown what calm and diligent observation produces in the investigations of the most dark points of practical medicine, when based upon good anatomical knowledge. But the same Glisson, who seemed to be a mere empiric, has employed the most earnest efforts for finding a general formula for the phenomena of life; and it was by following in his footsteps that Haller came to the doctrine of irritability, the fundamental thesis of modern biology. We also, in prosecuting the so-called physiological theory, are in the way of Glisson—the way of good practice. The scientific man, whether he be a practical man or not, analyses, diagnoses, divides the phenomena of life. In this way he arrives very soon at an apparently distinctive result. The unity of life, the unity of disease, however, is destroyed. So in the theory of fever we find no resemblance between

the modern, and generally accepted, view of fever dependent on various local and general influences, and the former doctrine of essential fever, placed in each system of older medicine at the head of the special diseases. What is inflammatory fever now, and what was it forty years ago? Now we know that pneumonia is a local affection, developing itself in a regular series of stages. But these stages do not correspond to the stages of fever concomitant and excited by that local affection. Nay, the fever can cease, the disease, considered as unity, can be finished by a regular crisis, but the local affection is not always finished, it can make further progress, and it can persist by a series of dangerous metamorphoses. The old unitarian doctrine could not give any explanation of these particulars. We observe that pneumonia is a local affection, proceeding ordinarily from lobule to lobule; and, if we look upon the inflamed lung of a man who has died in the stage of acme, we see in the same way, placed side by side, all the different stages of local development—the most advanced hepatisation immediately at the side of red hepatisation, and that at the side of the first signs of the malady. Thus the fever makes its way, and the local affection makes its way; and sometimes we find the local affection without fever, or with only a very insignificant fever. But the local affection is not a single one. Each affected lobule, each affected lung-cell, presents its particular and independent affection. Should the practical man not recognise these compound things? Should he continue to contemplate the disease as a unity, only because the patient is an individual? No, gentleman, disease is a unity only in an elementary organism—in a cell. It is always a compound phenomenon in a higher, in a compound organism; and nobody will have a clear knowledge of disease if he is not enabled to divide the disease into its elementary components. This is shown by that branch of medical science which has now reached the highest degree of scientific surety—ophthalmology—whose methods make it possible to fix real elementary textural alterations, and their continuation to compound diseases. So, gentlemen, will the physiologist divide so-called fever into a series of elementary processes. But I hope the future will show that it was not completely erroneous to believe that all these elementary processes could be reduced to a primary central affection, and that either the vaso-motor nerves or the trophic nerves should derive their roots from the optical centre. But never can we return to the so-called practical view of essential fever; never to the opinion that not only the fever, but also all those local affections combined with it, could form a real unity.

In the evening of Friday, perhaps the most delightful of the *conversaziones* was given by the Professors of University College. Nothing could be more charming than the arrangements and decorations. University College is especially well suited for the purpose of a *conversazione*. The library, the Flaxman gallery, the long corridors, and the portico and grounds, lit up with the electric light, and traversed by numerous groups of well-dressed guests of both sexes, the excellent glee singing under the direction of Dr. F. Roberts, and the music of the Guard's band in front of the portico, left a recollection of pleasurable sensations that will be as lasting as any of the reminiscences of this memorable meeting.

REVIEWS.

Old Age in Bath. By Dr. H. J. Hunter. Bath: W. Lewis. Pp. 75.

We have to thank Dr. Henry Julian Hunter for the very pleasant employment of a before-dinner hour. His little book—recollections of two well-nigh forgotten physicians—Dr. John Sherwen and Dr. Thomas Cogan, both of whom were Bath celebrities—with the addition of some unpublished remains of the poet Wordsworth, and of the late antiquary and genealogist Joseph Hunter, make together as charming a little volume of "ana" as any we have met with for a long time. The literary workmanship is exceedingly good—there is much of taste, much of humour, and here and there a touch of nature which enlists the reader's sympathy, and the anecdotal character of the whole fixes his attention. Dr. Sherwen had been an Indian surgeon. He was educated at Aberdeen, though a Cumberland man. Dr. Hunter gives us a curious tradition of the means taken formerly to recruit the Indian Medical Service, which we hope our Aberdeen friends will forgive us for reproducing:—"It used to be the practice with the Hon. East India Company, when a supply of surgeons was required for the eastern colonies, to send a ship to lie off the city of Aberdeen. A boat was then sent ashore, and aboard the boat was a coal fire and a great stew-pot full of fat English pork and peasc. The lean city was speedily aware of the presence. Pleased with the grateful scent, the granite fronts of the colleges relaxed into a smile, order was loosened, and one by one the hungry young leeches slipped down to the boat. The mess of pottage soon made easy terms, and about a score of medical officers were on their way to the land of pagoda trees." Sherwen in the East studied Shakespeare and philology. Returning to England he practised as a general practitioner at Enfield, and then, after obtaining a medical degree and the recognition of the College of Physicians, he commenced practice at Bath, where he distinguished himself as a writer in the Rowley controversy—maintaining that Chatterton did not forge the Rowley poems—and as a commentator on Shakespeare. It was when travelling in France with Sherwen that Tom Paine, Quaker and *bon vivant*, made the celebrated epigram on Count Zenobio's nose:—

> "Going along the other day
> Upon a certain plan,
> I met a nose upon the way;
> Behind *it* was a man.
> I called upon the nose to stop,
> And, when it had done so,
> The man behind it he came up;
> *They* made Zenobio."

Dr. Cogan was bred as a dissenting minister, but, as he was neither a Calvinist nor did he believe in the everlasting punishment of a great mass of mankind, he quitted the pulpit, married a rich young Dutch lady, studied at Leyden, took a medical degree, and became one of the leading accoucheurs of London. After having made a fortune he first retired to Holland, whence he was driven by the French revolutionary armies, and finally settled at Bath. He is perhaps best known as the founder of the Royal Humane Society, and as a writer on metaphysical subjects. To those of our readers who love scraps of biographical information pleasantly given we can confidently recommend Dr. Hunter's modest little *brochure*. His account of the visit of the late Joseph Hunter to Wordsworth is full of interest—it reminds us of De Quincey's recollections.

The Philosophy of Evolution (An Actonian Prize Essay). By B. Thompson Lowne, M.R.C.S., F.L.S., etc. London: Van Voorst. 1873. Pp. 159.

Mr. Lowne has produced a very readable and well-composed essay on the subject of evolution. We do not find that he has added much, if anything, to the arguments for or against the evolutionary theory; and those who are not convinced of the truth of that theory by the writings of Mr. Darwin and his immediate followers will certainly not be convinced by Mr. Lowne's essay. Nevertheless, Mr. Lowne certainly puts the case for the evolutionists in a sufficiently favourable light; he writes clearly and distinctly, and although his argument, we believe, is by no means sufficient to account in any convincing degree for the facts of the life history of this planet as far as they are known to us, it is a well-drawn account of a speculation which probably shadows forth a partial truth. If we have a fault to find with Mr. Lowne's essay it is with its dogmatic tone. For instance, he tells us the hypothesis of evolution is supported by facts, analogy, and reason, but he forgets to tell us that there are numberless facts it is utterly powerless to explain; he gives but little weight to the fact that there is no evidence whatever of the observed evolution of a new species from a pre-existing form, and that the modifications which are observed under exciting influences never rise to the value or import of specific differences, and are for the most part transitory—altering with the influences which appear to give rise to them. The oft-quoted ascent from the Palæotherium through Hipparion to the Horse is made to do duty in support of the evolutionary hypothesis—although it has always seemed to us that any argument founded on the osseous structures alone of a series of animals must be inconclusive. But, allowing it its full weight, we are not justified in drawing from it an inference stronger than that drawn (in the preface to the "Anatomy of Vertebrates") from it and analogous facts by Professor Owen, whose labours and sagacity have furnished materials for the speculations of many who are not prepared to adopt his cautious reserve.

"The most intelligible idea of homologous parts in such series is that they are due to inheritance. How inherited, or what may be the manner of operance of the secondary cause in the production of species, remains in the hypothetical state exemplified by the guess-endeavours of Lamarck, Darwin, Wallace, and others."

Pharmacopœia of the University College Hospital. Published by Authority of the Medical Committee. Edited by W. Martindale. Printed by Taylor and Francis. 1873.

This is a carefully edited collection of the formulæ in use in the wards of University College Hospital. Many of the combinations seem to us very good ones, and the little book, we think, is worthy of a wider circulation than that for which it has been specially compiled. Besides the hospital pharmacopœia it contains an appendix giving the general heads under which cases should be reported and accounts of autopsies drawn up—an addition useful to the clinical clerk or dresser.

MEDICAL NEWS.

University of London.—The following are lists of the candidates who have passed the recent examinations:—

First M.B. Examination.

First Division.—Harry Beecham Briggs, King's College; Lewis John Hobson, University College; Arthur Henry Jones, Guy's Hospital; Cyril Lloyd Jones, Guy's Hospital; Charles Arthur Mercier, London Hospital; Augustus Joseph Pepper, University College; Thomas King Rogers, University College; Ernest William White, King's College.

Second Division.—Paul Morgan Chapman, University College; Thomas Robert Hood Clunn, Guy's Hospital; Eugène Crétin, St. Bartholomew's Hospital; Edward Joshua Edwardes, St. Mary's Hospital; John Gatchell Hancock, King's College; Leander Starr Jameson, University College; William Henry Lamb, Guy's Hospital; Rhinallt Navalw ap Joan Pughe, Liverpool Royal Infirmary School of Medicine; Bernard Matthias Simon Roth, University College; William Joseph Seward, University College; George Henry Voelcker, University College; George Edward Williamson, London Hospital.

Excluding Physiology.

First Division.—John Christian Ferrier, Guy's Hospital.

Second Division.—Richard Legg Batterbury, King's College; Edward Marriott Cooke, King's College; Herbert Duke, Guy's Hospital; Charles Walter Evans, University College; John Benjamin Hellier, Leeds School of Medicine; Arthur Jermyn Landon, St. Bartholomew's Hospital; John Geoffrey Langley, University College; Wm. Whitchurch Taunton, B.Sc., University College; Benjamin Arthur Whitelegge, University College.

Physiology only.

Second Division.—Richard Hickman, St. Mary's Hospital; George William Homan, King's College; George Hawson Keyworth, Guy's Hospital; James Arthur Rigby, Guy's Hospital.

University of Aberdeen.—During the past year the following candidates, after the usual examinations, received Degrees in Medicine and Surgery:—

The Degree of M.D.

Geo. Roper, M.R.C.S. Eng., L.S.A., Aylsham, Norfolk. At the same time, William Thomas Benham, M.B., C.M., Bristol; Francis Henry Bodman, M.B., Devizes; Alexander Brebner, M.B., C.M., Army Medical Department; Archibald Carmichael, M.B., C.M., Barrow-in-Furness; William Henry Edwards, M.B., C.M., Antigua, W. Indies; James Frederic Goodhart, M.B., C.M., London; Samuel Thomas Knaggs, M.B., C.M., Newcastle, New South Wales; Nathaniel Lawrence, M.B., C.M., Longside; Patrick Mitchell, M.B., C.M., Old Rain; Thomas Raitt, M.B., C.M., Accrington; James Shepherd, M.B., C.M., Aberdeen; Henry Waldo, M.B., C.M., London; Alfred Walker, M.B., London; Charles John Wharry, M.B., C.M., Hong-Kong; and William Whitelaw, M.B., C.M., Cupar-Fife, received promotion to the Degree of M.D.

The Degree of M.B.

James Adams, Kingsbridge, Devon; John Findlay Arthur, Banchory-Devenick; Alfred Baldock, M.R.C.S. Eng., L.S.A., London; Percy Hugh Benson, Whitby; Alexander George Burness, Woburn, Bedfordshire; Anthony Butler, Forres; James Cantlie, M.A., Dufftown, Banffshire; Eber Chambers, M.R.C.S. Eng., Isle of Wight; Louis Richard Connor, Doncaster; Meldon Joseph Dempsey, M.R.C.S. Eng., L.S.A. Lond.; William Donald, King Edward, Banff; Arthur Henry Downes, Munslow, Salop; John Edward Ferguson, Cove, Kincardineshire; Albert Frederick Field, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A. Lond., Canterbury; Charles Henry Fowler, M.R.C.S. Eng. and L.S.A., St. Helena; Alexander Davidson Fraser, Aberdeen; John Edward Garner, Woodside, Aberdeen; John Roubel Gray, Aberdeen; William Gregory, L.R.C.P.&S. Edin., India; Charles Cormack Greig, Fyvie; John George Hall, Aberdeen; Henry Arthur Hallett, Poonah, India; Pemberton Abel Hoole, Graham's Town, Cape of Good Hope; Francis Ed. Jackson, M.R.C.S. Eng., L.S.A., Chertsey, Surrey; Walter Gawen King, Poole, Dorset; William Lawson, Tullynessle, Alford; Henry Martin Lechler, London; Ralph Winnington Leftwich, London; William Frederick Lill, M.R.C.S. Eng., L.S.A. Lond., Nottingham; Edward James Lloyd, North Wales; Stephen Mackenzie, M.R.C.S. Eng., London; William Mearns, M.A., Fintray; Forbes Fraser Maitland Moir, Kildrummy; Clement Frederick Fenn Murrell, M.R.C.S. Eng., L.S.A. Lond., Great Yarmouth; Charles Frederic Newcombe, Nottingham; Henry Alfred Alford Nicholls, London; Charles Oakes, L.S.A. Lond., L.M., Dublin; Francis Ogston, Aberdeen; David Aikman Patterson, Dover; William Peacey, M.R.C.S. Eng., London; Henry John Robbins, Wellingborough; William Roberts, M.R.C.S. Eng., L.S.A., London; James Russell, Croydon, Surrey; John Scott, M.A., Aberdeen; William Japp Sinclair, M.A., Laurencekirk; Charles Gordon Lennox Skinner, Ballindalloch; Francis Henry Spencer, M.R.C.S. Eng., L.S.A., Chippenham, Wilts; John Bellhouse Bowden Triggs, L.S.A. Lond., Falmouth, Cornwall; Alex. Reid Urquhart, Elgin; Albert John Venn, Shepton-Mallett; James Walker, Aberdeen; Lionel Alexander Weatherley, Portishead, Somersetshire; William Edward Webb, Winborne, Dorset; Henry Wilcox, St. Neots, Hunts; John Frederick Wilkin, M.R.C.P. Edin. and M.R.C.S. Eng., Folkestone; Alexander John Willcocks, M.R.C.S. Eng., Deyrah Dooa, India; and Robert Mortimer Yule, Aberdeen.

The Degree of C.M.

John Findlay Arthur, Alfred Baldock, Percy Hugh Benson, Alex. George Burness, Anthony Butler, James Cantlie, Eber Chambers, Louis Richard Connor, John Cran, William Douald, Arthur Henry Downes, John Edward Ferguson, Albert Frederick Field, Alex. Davidson Fraser, John Edward Garner, John Roubel Gray, Charles Cormack Greig, John George Hall, Henry Arthur Hallett, Pemberton Abel Hoole, Walter Gawen King, Wm. Lawson, Henry Martin Lechler, Ralph Winnington Leftwich, Edward James Lloyd, Stephen Mackenzie, William Mearns, Forbes Fraser Maitland Moir, Clement Fred. F. Murrell, Charles Frederic Newcombe, Henry Alfred Alford Nicholls, Charles Oakes, Francis Ogston, David Aikman Patterson, William Peacey, Henry John Robbins, William Roberts, James Russell, John Scott, Wm. Japp Sinclair, Charles Gordon Lennox Skinner, Francis Henry Spencer, John B. Bowden Triggs, Alex. Reid Urquhart, Albert John Venn, James Walker, Lionel Alex. Weatherley, William Edward Webb, John Frederick Wilkin, and Robert Mortimer Yule. Of the above-mentioned candidates, Eber Chambers, Arthur Henry Downes, Albert Frederick Field, Stephen Mackenzie, Forbes Fraser Maitland Moir, William Japp Sinclair, and James Walker received their Degrees in Medicine and Surgery, with Highest Academical Honours; Percy Hugh Benson, Ralph Winuington Leftwich, and Henry Wilcox their Degrees in Medicine, with Academical Honours; James Cantlie, Charles Frederic Newcombe, and Alexander Reid Urquhart their Degrees in Surgery, with Academical Honours. The Thesis of Stephen Mackenzie, on "Tumours of the Middle Lobe of the Cerebellum," was considered deserving of high commendation.

At the same time, James M'Call Fehrsen, Henry George Travers Strickland, and William Herbert Williamson were certified as having passed all the Examiuations, but did not graduate.

At the late Graduation Term the following were declared to have passed part of their Examinations:—

Samuel H. Bailey, William Bannerman, Robert S. F. Barnes, Adam Blackhall, Frederick J. Brennand, James H. Cartwright, Walter C. G. Collins, Charles James Connon, William R. Cossham, George Cran, James Cran, Kharshedji A. Dalal, Sorabshah H. Dantra, Rashel T. Davison, William F. Edgelow, Thomas Fiddes, William Geddie, John Harris, Francis Hay, Herbert J. Ilott, John F. Innes, Arthur C. James, John H. Jenkins, T. Siddall Jones, Charles Lamond, Robert Laws, George Le Mottée, John F. Floyd, James P. Lumsden, Alex. M. M'Aldowie, Robt. J. Morice, William Morrish, Alfred K. Newman, John C. Pearson, Alfred E. Prockter, Frederick Robertson, Frederick H. Saunders, Robert G. Smith, Alfred F. Stevens, Alexander F. Trail, Frank W. Trevor, Edward A. White, Henry Cox Wilkin, and Julius J. E. Willmott.

Royal College of Physicians of London.—The following gentleman was elected Fellow of the College on August 6:—James Muter Turnbull, M.D. Edin., 86, Rodney-street, Liverpool.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Aug. 7:

Clift, Martin Luther, Central-street, E.C.
Godrich, Alfred, Fulham-road, S.W.
Risdon, George Owen, Charlwood-street, Pimlico.

The following gentleman also on the same day passed his primary professional examination:—

Little, Henry Selby, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cox, William Ashley, M.B. Edin., L.R.C.P. Lond., M.R.C.S. Eng.—House-Surgeon to the North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent, *vice* Mr. Alfred Cotterill, resigned.

Dodson, Andrew, M.R.C.S. Eng.—Resident Medical Officer at the Birmingham and Midland Hospital for Sick Children.

Fosbroke, G. H., M.R.C.S.E., L.S.A. Lond.—Medical Officer of Health for Stratford-on-Avon.

Jordan, F. W., M.R.C.S.E., L.R.C.P. Lond.—Assistant House-Surgeon to the Sheffield General Infirmary.

Strange, W., M.D.—Medical Officer of Health for the City of Worcester.

BIRTHS.

Airey.—On August 2, at 27, Dacre-park, Lee, the wife of Hubert Airey, M.D., of a daughter.

Butt.—On August 3, at 12, Kilburn Priory, N.W., the wife of William F. Butt, L.R.C.P. Lond., of 12, South-street, Park-lane, of a daughter.

Collins.—On June 27, at Dorchester House, Montreal, Canada, the wife of W. Collins, M.D., Surgeon Scots Fusilier Guards, of a daughter.

De Lisle.—On August 9, at Panorama House, Guernsey, the wife of Frederick Irving de Lisle, L.R.C.P., of a son.

Ellis.—On August 10, at Shipley, Yorkshire, the wife of W. H. Ellis M.R.C.S.E., of a son.

Leake.—On August 8, at Gertrude Villa, Crescent-road, Ramsgate, the wife of Dr. Jonas R. Leake, H.P. Army Medical Staff, late H.M.'s 80th Regiment, of a son.

MOORE.—On August 9, at Cambridge-heath, London, the wife of Dr. Edward Moore, of a daughter.

WALKER.—On August 7, at 48, Stanley-road, Bootle, the wife of George Charles Walker, M.D., of a son.

MARRIAGES.

BAYLY—DE KRAUCHY.—On July 19, by special licence, at the Church of the Sacred Heart, Camberwell, Alfred Bernard, eldest son of the late Alfred Henry Bayly, M.R.C.S., of Sloane-street, to Bertha, eldest daughter of Count John de Krauchy, Irun, Spain.

BOWER - GUTHRIE.—On August 6, at the parish church, Metheringham, Sleaford, W. Bower, L.R.C.P., L.R.C.S. Edin., son of W. Bower, surgeon, of Metheringham, to Frances Guthrie, second daughter of the late Geo. Guthrie, Esq., of Merevale, Warwickshire.

BRADLEY—GREENWOOD.—On August 6, at Churchkirk, George Alfred, youngest son of the late Christopher Bradley, surgeon, of Church, to Alice, second daughter of the late John Greenwood, Esq., of Fulledge House, Burnley.

COOKSON—SOFFE.—On August 6, at Edisham, near Bungay, Suffolk, Albert Nestfield Cookson, surgeon, Nuneaton, Warwickshire, third son of the late Rev. Frederic Cookson, vicar of Stow Upland, Suffolk, to Frances Jane, only daughter of the late William Soffe, Esq., Romsey, Hampshire.

HARRIS—BUCKLAND.—On August 11, at St. Stephen's, Shepherd's Bush, William Harris, L.R.C.P., etc., Melton, Suffolk, to Annie Buckland, R.A.M., daughter of James Warwick Buckland, Esq., late of H.M. Customs, London.

HONISON—BRAYBROOKE.—On August 6, at St. John's Church, Manchester, Andrew Honison, B.A., M.B., C.M., of Paramatta, New South Wales, to Sarah, second daughter of S. H. Braybrooke, Esq., Northwood House, Manchester.

MCCALMAN—HOGGAN.—On August 7, at St. Jude's, Southsea, Robert, Gilmour McCalman, M.B., C.M., eldest son of the Rev. Hugh McCalman, of Latheron, to Jeannette Marie, eldest daughter of William Hoggan, M.R.C.P. Lond., Staff Surgeon R.N.

MARRIOTT—MAYCOCK.—On August 9, at St. Mary's, Newington, Surrey, William Kenaz, the youngest son of John Marriott, M.D., of Colston Bassett, Bingham, Notts, to Maria, second surviving daughter of Mr. William Maycock, of 59, Lorrimore-road, Kennington.

MEADOWS - BRETT.—On July 2, at St. Paul's Cathedral, Calcutta, Charles J. W. Meadows, Surgeon H.M. Bengal Army, to Clara, younger daughter of Alfred Brett, Esq., The Limes, Peckham, Surrey.

SPURGIN—SALE.—On August 6, at Clifton, Rugby, Herbert Branwhite Spurgin, Surgeon 48th Northampton and Rutland Militia, of Northampton, to Jane Anna, younger daughter of the late Edward Sale, Esq.

DEATHS.

BROWNE, DOROTHY, relict of Robert Caue Browne, M.D., of Arkley Lodge, Herefordshire, on August 10, in her 73rd year.

CLARKE, MARGARET, widow of James Clarke, M.D., at The Knoll, Clevedon, on August 7, aged 85.

DILLON, FANNY PLURA, daughter of the late Garrett Dillon, M.D., late of Spanish-place, Manchester-square.

RAWLINS, ARMSTRONG PLAXTON, only surviving child of Martha and Frederic W. Armstrong Rawlins, M.D., at Stroud-green-road, Finsbury-park, on August 11, aged 3½ years.

REED, RAYNES, Surgeon 2nd Battalion H.M.'s 12th Foot, and eldest son of the late Baynes Roach Reed, M.D., at Ferozepore, Central India, on July 5, aged 37.

WHITE, STEPHEN, L.S.A., at Bayswater, after a few hours' illness, on August 8, in his 81st year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BOURNEMOUTH DISPENSARY.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Committee, on or before August 21.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD, S.E.—Registrar. Particulars may be obtained from the Hospital.

HEREFORDSHIRE RURAL SANITARY AUTHORITIES.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to T. Llanwarne, St. John-street, Hereford, on or before August 19.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to R. Harrison, Registrar (of whom particulars may be obtained), before August 13.

NEWTON ABBOT.—Medical Officer of Health. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to John Alsop, East-street, Newton Abbot, Devon, on or before August 16.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Candidates must be M.R.C.S. and L.S.A. Applications, with testimonials, to the Assistant-Secretary, on or before August 16.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Belper Union.—Mr. Cantrell has resigned the Wirksworth District; area 10,865; population 5645; salary £33 per annum.

Droitwich Union.—Mr. Alfred J. G. Waters has resigned the Ombersley District; area 7475; population 2506; salary £62 10s. per annum.

Lodlow and Clavering Union.—The Second District is vacant; area 15,522; population 3834; salary £55 6s. 4d. per annum. The Workhouse is vacant; salary £40 per annum.

Tenterden Union.—Dr. Joyce has resigned the Rolvenden District; area 6650; population 1620; salary £45 per annum.

APPOINTMENTS.

Ampthill Union.—Henry Fredk. Holland, M.D., M.R.C.S.E., L.S.A., to the Workhouse.

Bridgwater Union.—Ephraim F. H. Burroughs, L.R.C.S.I., L.A.H., to the Middlezoy District.

Cirencester Union.—John Douglas Watson, M.B. Edin. and C.M., to the Parish of Sapperton.

Newbury Union.—Richard Hickman, M.R.C.S.E., L.S.A., to the First District.

Woburn Union.—George A. D. Mahon, M.R.C.S., L.S.A., to the Aspley Guise District.

ROYAL COLLEGE OF SURGEONS.—It may save our readers some trouble to remind them that the Library and Museum of the College will be closed as usual during the month of September for the necessary cleaning, dusting, repairs, etc.

MR. GEORGE HAYNES FOSBROKE, son of Mr. Fosbroke, surgeon, of Bidford, has been appointed Medical Officer of Health for the district comprising the unions of Stratford, Evesham, and Alcester, and the towns of Stratford and Evesham, at a salary of £600 per annum. There were sixty-three candidates.

THE first Bishop of British Kaffraria, the Rev. Dr. Callaway, a missionary of the Church of England, at Spring Vale, Natal, just nominated, was some years ago a surgeon in Southwark, and, we believe, the son of the late Mr. Callaway, Surgeon of Guy's Hospital.

THE new infirmary at Lanark, containing thirty beds, has just been opened. The medical officers are Alexander M. Adams, L.R.C.P. Edin., James Ewin, M.D. St. And., and Alexander H. Gray, M.D. Glasg.

THE British Medical Benevolent Fund has received the sum of £30 from Miss Caroline Brown, completing a donation for the present year of £100 from this lady. The pressure on the charity is very great, and half the applications for aid at the last meeting of the Committee were unavoidably postponed or passed over from want of means.

THE Officer of Health of St. George's, Hanover-square, summoned several coffee-dealers last week for selling adulterated coffee. The defence was that pure coffee could not be sold at the price they charged (1s. 4d. and 1s. 5d. per lb.), and that its being a mixture was stated on the packet. The magistrates inflicted fines, and stated that as pure coffee was asked for it should have been supplied; the intimation of its being a mixture was no legal excuse.

THE report of the Committee of Management of the Hospital for Consumption and Diseases of the Chest, Brompton, presented at the quarterly court of the corporation held last week, stated that increased accommodation for seventeen patients had been provided in the "South Branch" in the past quarter. Three more houses opposite had been purchased to carry out their scheme of extension. The Court of Chancery had paid a portion of the late Miss Read's bequest, amounting to £61,938 0s. 1d., new 3 per cent. stock. The number of patients admitted since May 29 was 198; discharged, many greatly benefited, 207; died, 11; new out-patient cases, 2195.

ROBUR.—It is a well-known fact that a new brand of champagne, if it takes with the public, becomes a fortune to the happy proprietor thereof, and that something of the same kind may happen with regard to spirits—our English gin is a standing example. When Dutch William came over, out of compliment to him hollands became the fashionable drink, and the endeavour to imitate it on the part of our distillers resulted in the well-known article which now bears the name of gin. Such being the case, there is no reason why a new flavoured spirit, especially if wholesome, should not make its way. At all events, the proprietors of Robur are endeavouring to try the experiment. This spirit, besides the pure alcohol, contains a flavouring matter derived from tea, and is devoid, they assure us, of any unwholesome constituent. We have taken the trouble to procure a bottle on our own account, and find the liquor of a dark-red colour—somewhat oily-looking—having a taste pleasantly aromatic at first, afterwards slightly bitter, and producing a feeling of warmth at the epigastrium. We take it that it might be exceedingly useful as a kind of liqueur intermediate between dry curaçoa and absinthe, being both aromatic and stimulant.

INDIAN MEDICAL SERVICE.—The following candidates were successful at the competitive examinations for H.M.'s Indian Medical Service, held at London in February, and at Netley in August, 1873, after having passed through a course at the Army Medical School at Netley:—

	Names.	Studied at	Number of Marks.
1.	Wilkie, D.	Glasgow and Berlin	(a)6142
2.	Battersby, W. E.	Dublin	5745
3.	Wall, A. J.	London	5613
4.	Moodie, R.	Edinburgh and Vienna	5511
5.	Goldsmith, S. J.	London	4144
6.	Thomas, A. A.	London	4651
7.	Tuohy, F. S.	Cork	4616
8.	Moynan, W. E. B.	Dublin and Galway	4586
9.	MacDonald, D. P.	Dublin, Cork, and London	4413
10.	Browne, W. R.	Dublin and Belfast	4360
11.	Baker, O.	London	4343
12.	Mallins, H.	Dublin	3915
13.	Wright, F. W.	Edinburgh	3904
14.	Robinson, M.	London	3865
15.	Leapingwell, A.	London	3460
16.	Dill, J. S.	Belfast and Dublin	3200

(a) Has obtained the Herbert Prize.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. Campbell, Christchurch.—Your letter, with enclosure, received.

Sceptic.—A national conference of spiritualists, lasting three days, was held in Liverpool last week. Mr. T. Everitt, of London, presided.

A New Subscriber.—Dr. John Leake was the founder of the Westminster Lying-in Hospital.

Rusticus.—The Ettles Prize of £40 for the best graduate of the year in the University of Edinburgh was awarded on the 1st inst. to Mr. John Wilson Alston, Australia.

THE DILATATION OF STRICTURES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It appears to me, in reading Dr. Tibbit's two fatal cases after Holt's operation in your last week's issue, that the lesson to be learned is—not to hastily attempt too much. Both strictures were split with the largest sized dilator at once. Had the smallest sized dilator been used first and the other sizes in rotation till, at the second or third repetition of the operation, the largest had been attained, the results would in all probability have been different.

I am, &c.,

August 7. A COUNTRY SURGEON.

A Tutor, a Successful Candidate, etc.—We will endeavour to publish the result of the recent Arts examination shortly.

J. B., St. George's.—There will not be any examination at the College until November. The registration will take place, as usual, during the first ten days in October.

B. C. P.—Staff Surgeon S. S. D. Wells, of the *Lord Warden*, has been appointed to the medical charge of Haulbowline Hospital, Malta.

G. O. F.—Francesco Bonafide was an Italian physician and professor of botany at Padua in 1533. He was famous for suggesting the botanical garden established there in 1540, which really began a new era in the knowledge of plants.

THE NOMENCLATURE OF PHTHISICAL DISEASE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have carefully read the great "tubercle" controversy, but I am in doubt whether it is still correct to use the word "tubercular" to express that large class of cases of pulmonary phthisis in which the disease is hereditary and occurs in connexion with large chests, long bones, fine features, and superior intelligence. The word "tubercular," as used in this sense, may have been founded on a fanciful or erroneous pathology; but it should continue to be used to express the same clinical fact till a more appropriate word can be found. I think Dr. Wilks uses the word in this way, and not in connexion with its former pathological meaning.

Shrewsbury, August 9. I am, &c., W. J. MARSH.

Globule.—A committee of homœopathic physicians in Prussia have addressed a formal petition to Prince Bismarck, requesting that professional chairs for homœopathy may be added to the universities, and that medical inspectors may be appointed, to insure proper supervision of the homœopathic practice.

M. W., Wörth.—Claus Wormius, an able Danish physician, was made canon of a Cathedral by Christian IV. as a reward for his medical services, and died in 1654.

THE TESTIMONIAL TO SIR WILLIAM FERGUSSON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It appears that the Edinburgh College of Surgeons are anxious to have a replica of the portrait of Sir William Fergusson which is proposed to be subscribed for to be presented to the London College. As probably the subscriptions will mostly come from Sir William's old pupils at King's College, I would suggest that there be another replica to be presented to King's College Hospital, the scene of Sir William's brilliant success as an operator and a surgeon.

I am, &c.,

Clapham-road, August. AN ASSOCIATE OF KING'S COLLEGE.

A QUERY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Is it proper or etiquette for one medical man to refuse a consultation with another when specially asked to do so by the patient or relatives? The cases referred to were as follows:—I was asked by the parent of one patient and the husband of another if I would go to give my advice. I was told at the same time that a professional brother was in attendance. I refused to go until they informed their doctor (who was the same in both cases) that they wished me to visit. I was then asked if I would meet in consultation, to which request I agreed. The parent of the one and husband of the other went to their doctor and requested him to fix a time, but were told that there was no necessity, etc. One of them at the same time asked him to meet another medical man (if he had any objection to me), but this also he refused. I know he would not meet this medical man on any occasion, so I take it that he did not act with courtesy to me. If he was friendly inclined to me, ought he not to have given way to the friends' wishes?

Also I will feel obliged by being informed on the following circumstances:—When a message is left in my consulting-room for me to see a patient who was a stranger to me, and not knowing who was the former medical attendant (if he had any), am I compelled to ask if the family had a regular attendant, or is it the patient's duty to tell me that he wishes me to attend for myself? Supposing that after a few days' attendance I accidentally become aware that such and such a doctor was the former attendant, must I make my bow and leave, although invited to continue? I always make it my business to ask, if sent for to attend a confinement, if I had not been engaged, etc., but I want to know if it is not a sign of wishing to employ me when I am deliberately sent for and no other doctor's name mentioned as having been the family doctor. Is there no such thing as changing the doctor, even though there is no fault found? I am told here that, under all circumstances, I must ask questions of this kind before even prescribing for my patient, and that I must refuse to do so if he had a medical attendant on any former occasion.

An explanation through your valuable columns will, therefore, oblige

M.B., N.Z.

*** 1. It is always a mistake to decline a consultation with a qualified medical practitioner unless some strong personal or moral reason intervenes. 2. We think that it would be better to inquire who has been in attendance. If the patient says that he has dismissed or does not wish to see his former medical attendant, the course is clear. He has a perfect right to employ anyone he pleases.

EXAMINATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—"Dead men tell no tales" runs a proverb denied by the skilled pathologist who accurately traces the course and progress of morbid lesions, finding out where the strain has been most severe, what benefit or injury has been induced by treatment, why and how the beautiful complex machinery of life stands still never to work again. The human body at various ages may be compared to the tiny fragile yacht, the disabled bark, or the battered old hulk cast in sore distress, for which the hidden rocks, the dangerous channels, and the treacherous winds are pointed out to be avoided by the experienced pilot, and the crippled craft steered into the harbours of safety. The honest physician is that pilot. Equally in the detection of crime, in the protection of society, morbid pathology, dogging the footsteps of clinical medicine, brings to light foul play, often brings to the scaffold the most subtle poisoner. At Netley there is of its kind a magnificent pathological museum, illustrating not merely the results of warfare, but also the lesions induced by tropical service, by syphilis, vice, or intemperance, the section including pericarditis, endocarditis, valvular diseases, aneurisms, atheromatous deposits, cardiac abscesses, ulcers, polypi and concretions, all specially valuable. For a number of reasons it is impossible to write an account of the collection just now, but the man who has the time and leisure carefully to examine and epitomise the best specimens, might publish a book of extreme professional interest. A few notes were taken, somehow mislaid, and, unwilling to trust to a treacherous memory, I will not inflict on your readers erroneous statements. There are some wonderful livers enormously enlarged or extremely contracted, else containing gigantic multilocular cysts; one containing a needle; the fatty, waxy, amyloid, cirrhosed, tuberculated, nodulated, gummatised, melanosed, duct dilated, duct obliterated, honeycombed, riddled by hydatids, or containing calcareous deposits,—in short, livers of all denominations, some ruptured by mechanical injury, others peculiar in the number of lobes, others showing the various ways by which abscesses empty themselves. The spleen down to a quarter of an ounce or up to fifty pounds. The kidneys most peculiar in shape, joined together like cocked hats; the capsules enormously dilated. It makes one shudder, to look at a kidney consisting of a shell enclosing a cavity you might put your fist into, to think of the amount of suffering undergone. Abscesses in the brain, disorganisation, foreign bodies embedded, how wonderful that the victims should have survived so long! There are specimens of the "soldier spot," but as this condition is found in civil life and even in young children, this misnomer is now more happily applied to the bald heads of aged assistant-surgeons. Someone has decamped with the money extracted from the thigh of a Hanoverian soldier (shot at Waterloo) who had no pockets, much less cash. In the same manner part of the cranium has been found embedded in the thigh, a tooth in the temporal muscle, and the olecranon of one man in the elbow of another. There is a cabinet of calculi in addition to many instances of calculi in the kidney, and in one man's bladder there are six which occasioned but little pain. The lesions of typhoid fever and dysentery are singularly instructive, especially in pointing out the danger of purgatives. It may not be out of place to give the questions of a recent examination which ought to have been undergone years ago. In middle age to go to school to toil at Gray's "Anatomy," Holmes's "Surgery," Russell Reynolds, Aitken, Parkes's "Hygiene," Green's "Pathology" (a capital book), Blue-books, and tropical medicine, is very hard work, to rake up subjects studied twenty years ago. For a long time specially employed, surgery and morbid anatomy uncommonly rusty, not coming within my province. This examination in one sense is a test, in another it is none, but rejection is simply professional ruin. When a man has been in busy practice for fourteen long years, and the lives of husbands, wives, and children have been

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS OF TUMOURS OF THE BRAIN.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
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Lecture II.

Before I speak of the several classes of symptoms in cases of intra-cranial tumours and other kinds of adventitious products, I have to make a statement which may surprise some of you. It is that occasionally *there are no symptoms* in these cases. And frequently when symptoms are present they are insignificant in comparison with the size of the tumour found post-mortem, or, more correctly speaking, in comparison with what we might theoretically infer from the size of the tumour. But I say "post-mortem"? Well, it is a fact that a patient will *die* without cerebral symptoms—die of non-cerebral disease—and yet an adventitious product be found within his cranium; or he may die suddenly in the midst of apparent good health, and we find an adventitious product of some standing.

It is an abrupt change of subject to speak of *absence* of symptoms after putting them in groups. It was, however, absolutely necessary to group them first, because, although all symptoms *may be* absent, those absent most frequently are the *specially* nervous—those of Class 2 (see page 139). This is just the contrary of what one would expect at first glance.

Now you will understand how it is that I have used such expressions as "may be" with regard to symptoms producible by cerebral tumours. In the cases without symptoms the tumour is nearly always of the cerebrum or cerebellum—not affecting the motor tract. Yet there may be a tumour in the motor tract itself without paralysis. This is rare.

Let me quote authorities as to what I may call the "latency" of intracranial tumours and other adventitious products. Gull says of cerebral abscess—"It is generally seated in the substance of the hemispheres, where it is known that extensive disorgauisation may go on without any indication, provided the corpora striata, thalami optici, and other central parts be not involved, the cerebrum and cerebellum appearing to have, like other organs, a surplusage not required on ordinary occasions."(a) Again Gull says—"In many instances even at last it is not the abscess itself which occasions the symptoms, but the reactive inflammations around it." I will also quote more recent statements on this point. Callender says—"Extensive disease of the brain may thus destroy the upper, back, and middle parts of the hemispheres, without giving rise to symptoms, if we except the occurrence of headache."(b) Dr. T. H. Andrew has collected seventy-two cases of injuries to the brain, "the majority of them being where the ball or shot remained in the interior of the cranium, producing little or no constitutional disturbance, in some few the patient dying many years after from disease entirely foreign to the injury."(c)

However, as the part of the encephalon directly destroyed by the adventitious product, or indirectly incapacitated by squeezing, must have had *some* function, it is safer to say, and quite enough for our present purpose, which is clinical, that frequently there may be no *obvious* or striking symptoms from adventitious products in the cerebrum or cerebellum. Yet when there is no striking defect there may be a dulling of mind (slowness, hebetude, incapacity for *continued* mental exertion); still, there are no *symptoms* which make the patient seek a doctor until perhaps shortly before death. The patient's mind may be so generally reduced to a lower level that neither he nor his friends notice any failure; or they may notice "alterations" of disposition, which they put down to wrong causes—to the influence of external circumstances, for example. There is, doubtless, from every degree of lesion to the cerebral hemisphere, loss of some special or "delicate" intellectual processes, and correspondingly of some of the finer emotions; for every intellectual act is accompanied by emotion. To adapt an expression from ophthalmology, there is no doubt a "limitation of the mental field," a limitation of the area of consciousness. The finer intellectual processes and emotions are not absolutely necessary for ordinary routine life. Hence, slight deteriorations of intellect and feeling are overlooked or are misinterpreted. Slight failure of mental power is only apparent when something occurs demanding more than mere routine application, especially if that something be of a new *kind*. As you know, I believe that when intellect fails the patient is necessarily reduced also to a lower level of feeling (disposition). There is a twofold effect: loss of the finer emotions, and increased excitability of the coarser ones. In slight degrees of mental imperfection there is only a slight exaggeration of the natural disposition: the bad-tempered man takes offence *more* readily, the naturally sensual man indulges with *less* regard to decency, and so on.

Such mental symptoms, when discovered, do not by themselves point to *tumour*. They are, indeed, not symptoms of any *one* sort of pathological process, but symptoms of loss of the most special sensori-motor processes by *any* kind of *slow* pathological change. They point of necessity to the cerebral hemisphere as the part affected by the tumour. But, as we shall see, that part may, as in cases of tumour of the cerebellum, be affected in a very indirect way. There is in tumour of the middle lobe of the cerebellum obstruction to return of blood by the veins of Galen: as a consequence of this there is effusion into the ventricles, and hence squeezing of the cerebral hemispheres.

So far I have spoken of cases in which adventitious products have produced no marked symptoms; neither those of Class 1 nor those of Class 2. But more often there are symptoms of Class 1, but none of Class 2. Very often indeed in the early stage of a case of cerebral tumour there are present only the symptoms mentioned in Class 1; or, to speak in detail, it is common to find in the early stages of cases of intracranial tumour (and other adventitious products) that although there are severe headache, vomiting, and double optic neuritis, there is no palsy, no convulsion, no affection of speech, and no obvious mental failure. Now, as I have told you innumerable times, there may be no defect of sight with optic neuritis, and, therefore, the only symptoms actually presented in the early stages of cerebral tumour may be headache and vomiting. As there are then no nervous symptoms proper, the result is that cases of cerebral tumour are rarely diagnosed in their earliest stages. The symptoms are put down to disorder of the digestive organs, especially of the liver, and to other wrong causes. The "bilious" vomiting especially misleads.

I do not say that tumours of *particular parts* of the cerebrum do not produce special nervous symptoms. When the adventitious product is in the neighbourhood of the left corpus striatum, there may be some defect of speech. I believe, too, that disease in the right cerebral hemisphere—especially in the posterior lobe of that hemisphere—is more likely to cause mental defect than disease in the left hemisphere is: I mean mental defect other than affection of speech. But I now speak very generally, and I repeat, that a large adventitious product may be found in the cerebrum or cerebellum of a patient who has had no obvious symptoms related thereto, either mental or physical, except perhaps shortly before his death, or, at any rate, none severe enough to send him to a doctor. And I repeat that very often the symptoms the patient has are often those not specially nervous—not those of Class 2.

This is of so great importance in many ways that I will relate several cases in illustration. I choose cases which have value for other reasons than because they bear on the matter at present under remark. In particular the cases show that from cerebral abscess and from some cerebral tumours you may have *sudden* symptoms, quite contrary to what theoretically you might expect. The abscess bursts, or vessels of the tumour bleed.

A clinical illustration of latency of an adventitious product is occasionally given by cerebral abscess. (See above quotation from Gull.) In the last volume of our Reports(d) I mentioned the case of a man forty-seven years of age, whom I attended some years ago with Dr. Daniel H. Tuke (then of York); that patient became suddenly comatose and hemiplegic from rupture of an abscess in one cerebral hemisphere into the lateral ventricle. This abscess had no doubt existed for some time. Dr. Talfourd Jones has related in this journal a remarkable case of cerebral abscess of the same bearing. I have made an autopsy on a patient who died

(a) *Guy's Hospital Reports*, vol. iii., 3rd series.
(b) *St. Bartholomew's Hospital Reports*, vol. ii., p. 440: "The Anatomy of Brain Shocks."
(c) *Pennsylvania Hospital Reports*, vol. i.
(d) *London Hospital Reports*, vol. iv., 1868, p. 384.

with hepatic abscess, but who had had cerebral symptoms (convulsions) on the day before his death only, and yet we found three cerebral abscesses. But you may find cerebral abscess in a patient who has died with no noticeable cerebral symptoms. Thus the late Dr. Rooke, of the *Dreadnought*, showed me a brain taken from a patient who died of phthisis, and who had had no cerebral symptoms. I shall shortly speak of abscess of the cerebellum.

The cases for further illustration deserve your careful attention. Death by hæmorrhage from cerebral tumour is an important clinical department of our subject.

In cases of cerebral tumour there is occasionally absence of symptoms until hæmorrhage occurs from the tumour, and then you may have suddenly symptoms of apoplexy; there is cerebral hæmorrhage, although the bleeding is from the vessels of a tumour and not from the legitimate vessels of the brain. This hæmorrhage if large and sudden causes apoplexy. I will give you an illustration (recorded in *Lancet*, November 23, 1869). A man, 56 years of age, was discharged on July 1 from the *Dreadnought* for a simple infraction of the hospital regulations. Dr. Harry Leach, under whose observation the patient had been in that hospital, told me that the only symptom was pain in the head. I must not say, then, that the man had *no* symptoms from the tumour, but that they were not what I have called specially nervous—not those of Class 2. On July 10 he was brought to the London Hospital comatose, and he died there that night. The day before he had been *found in the street* in a condition which led the police to suppose he was drunk; they took him home. As he did not get up next morning he was looked after at mid-day. At the autopsy we found a vascular tumour in the posterior lobe of the left cerebral hemisphere close upon the middle cornu and descending cornu. In the lateral ventricle were several ounces of blood, which had presumably come from the tumour, as no part of the brain was broken up except the wall of the middle cornu near the tumour. Obviously, the diagnosis of cerebral tumour in this case was impossible. As we knew nothing whatever of the patient's previous headache until after the autopsy, we had *no evidence* bearing on the existence of tumour, and if we had heard of the headache it would not have been decisive. Later on I shall mention a case in which, when a patient had got apparently rid of symptoms of tumour, death occurred by apoplexy consequent on hæmorrhage from that tumour— a glioma.

We occasionally obtain illustrations of latency of adventitious products from the cases in which there is secondary cancer of the brain. In some of these cases, while I am as yet unable to say that there are "no obvious cerebral symptoms," we may say that the symptoms are slight in comparison with the extent of the cerebral lesion we find; or, to speak quite strictly, in comparison with what we should from superficial theoretical reasoning infer from the extent of the lesion. A patient died of cancer of the root of the lung. We found post-mortem that the greater part of the right anterior cerebral lobe was cancerous, the grey matter seeming to be replaced by cancer. Besides, there was a mass the size of a walnut just under the surface in the parietal lobe of each cerebral hemisphere. In this case there had been no affection of speech and no paralysis—no *local* paralysis at all events. And as to mind, the only things noticed were that sometimes, not always, the man gave very strange replies, and that he was very odd in his manner—more than odd, for he would get up and make water on the floor. These mental peculiarities of course showed that there was something wrong with the brain; but from them alone not even a guess could have been made either as to the extent of the cerebral disease or as to its nature. It might have been inferred from the fact, or rather from the diagnosis of there being cancer *somewhere* in the patient's body, that even symptoms so trivial or so general were owing to secondary cancer of the brain. But I repeat, *from the cerebral symptoms themselves* we could have arrived at no such grave diagnosis. Of course I do not say that secondary cancer of the brain does not often, nor even usually, produce very marked special nervous symptoms. A little while later Dr. Stephen Mackenzie drew my attention to the case of a patient, afterwards under my care, who had cancer of the root of the lung, and in whom the first observed symptoms were cerebral. It was plain that the brain was seriously damaged, and Dr. Mackenzie's inference that the damage was cancerous was at once accepted by myself, and the autopsy showed that we were right. Whether there shall be special symptoms or not depends on the exact part in which the cancer "happens" to grow.

Absence of symptoms—*i.e.*, of obvious symptoms—is observed in some cases of tumour of the cerebellum. I give you an illustration of the absence of special nervous symptoms from disease of *both* lobes of the cerebellum (case recorded in *Medical Mirror*, September 1, 1869). In 1869 I had under my care a man, 39 years of age, who had paralysis of the right arm, following a convulsive seizure limited to that limb. This symptom, the autopsy showed, was owing to a tumour of the hinder part of the first (uppermost) frontal convolution of the opposite cerebral hemisphere. So here you see a tumour of the cerebrum *did* produce symptoms; but do not omit to notice that the paralysis followed a convulsive seizure; the paralysis of the arm was not produced by the *destroying* action of the tumour. Moreover, the patient had had severe headache, and there were slight changes in his optic discs. But there was also a tumour in each lobe of his cerebellum, although there were no symptoms—no motor symptoms at all events—referable to his cerebellum, for there were no "leg symptoms" of any kind. Twelve days before his death the man walked absolutely well. I say this very confidently. When I first saw the patient I felt certain that we should find at least a little paralysis of the leg, because it is rare to find paralysis of the arm without some weakness of the leg. But I know now, from other cases, that there may be *absolute* palsy limited to a part of the body (face or arm) following a convulsion which has been limited or nearly limited to that part. I have recorded such a case (*St. Andrews Transactions*, vol. iii.).

I told my then clinical clerk, Mr. Clouting, that we should be sure to find at least *some* palsy of the right leg if we got the patient up to walk. But, as I say, the patient walked absolutely well. He walked with naked legs on bare boards. I looked critically, because I only expected to find a *slight* defect in the right leg. During his life I felt certain the patient had disease of the left cerebral hemisphere, but it never occurred to me to suppose that there was disease of the cerebellum. It could not have occurred to me, as there were no symptoms referable to it.

So you see that symptoms from adventitious products in the encephalon are occasionally none at all, and very frequently only those of the first class. In the case of Grimwood (case recorded in this journal, Nov. 16, 1872) there were for a long time the symptoms of the first class only, and even to the last there were no symptoms which we could attribute to the cerebellum, in which we found the tumour. The palsies of the sixth nerves which occurred late in the case were evidently owing to indirect pressure, and not to *destruction* of part of the cerebellum. We have recently had two cases of abscess of one lobe of the cerebellum—one under Mr. Maunder's care and one under my care.(f) In each of these cases, whilst there were some of the symptoms of Class 1, there were no symptoms of Class 2.

The generalisation is that *destruction* of a considerable part of either the cerebrum or cerebellum (especially if that destruction be effected slowly) can occur without the production of striking symptoms of any sort—"mental" or "physical." Now, remark that I say *destruction;* I do not use the vague expression "disease." If even a *small* tumour of the surface of the cerebrum leads to *instability* of neighbouring grey matter, then you may have very marked motor symptoms. You may then have motor symptoms of two opposite sorts. There is first convulsion—the direct result of the discharge of the unstable grey matter,—and second there may be, as an indirect result of the discharge, paralysis of the parts "overworked" in that convulsion.

Let us take an illustration. In the case of tumour of the first left frontal convolution instanced above, the paralysis of the right arm did not occur because that tumour had destroyed so much of the brain—the arm was paralysed after it had been convulsed; it was paralysed as an indirect result of a discharge of grey matter which was not destroyed but very unstable. Here, then, the tumour "caused" paralysis, not as a clot does when it breaks up the motor tract, but in the very indirect way I have described.

Next, observe that a patient may *have had* severe symptoms attributable to an adventitious product in the cranium; he may recover, or at all events get for a while into a state of health so far good as may lead persons who have not made many post-mortem examinations to think the diagnosis of an adventitious product in such a case "unpractical." Thus I saw under the care of Dr. Ramskill, in this hospital, a man, 23

(f) These cases are reported in the Mirror of the *Lancet*, March 29, 1873.

years of age, who had had convulsive seizures, and who had double optic neuritis and intense headache. After a while he was so far well as to go about the ward and to *read the newspaper:* he took his food well. In such cases you may hear it said that there "could be no tumour," because the patient had got rid of his symptoms. There certainly are no strong theoretical reasons why he should not have got rid of symptoms owing to an adventitious product when we know that an adventitious product need not produce any obvious symptoms. The patient died one night in two or three hours by hæmorrhage from a gliomatous tumour of the right anterior lobe. (Autopsy by Dr. Sutton.) I published a brief note of this case (*Lancet*, October 23, 1869).

In that case sight was apparently good; oftener perhaps there is defect or loss of sight to limit the expression "recovery." It is not at all uncommon for a patient to get rid of all symptoms of tumour except that he remains blind or defective in sight. It would be a great mistake to suppose that this sort of recovery negatived tumour.

I have spoken at length on this matter because it is very erroneous to suppose that the absence of paralysis or convulsions, loss or defect of speech, or, in short, the absence of any *specially* nervous symptom—of any symptom in Class 2,—nay, of any symptom whatever,—negatives the existence of an adventitious product within the cranium. If the patient has only the three great symptoms of Class 1, the diagnosis of an adventitious product is almost certain; and this notwithstanding that his general health is good, and notwithstanding that he improves and for a time becomes apparently well. I do not now hesitate to say that in the earliest stage of some of these cases the ophthalmoscope alone will enable you to make a correct diagnosis. If any healthy-looking patient has "bilious" vomiting, severe headache, and optic neuritis (even if his sight be absolutely perfect), it is next to an absolute certainty that that patient has some "coarse" intracranial disease—an adventitious product of some kind, and most probably a tumour.

Another thing to be mentioned is that a patient may live some years with intracranial tumour. A young woman(g) who was under Mr. Hulke's care in 1865 for optic neuritis and other nervous symptoms, and later under mine for a further development of the latter, died in 1872 under the care of Dr. Claye Shaw, in the Leavesden Asylum. A tumour growing from the floor of the right sphenoidal fossa of the skull was found post-mortem.

COMMENTARIES ON DISEASES IN CHILDREN.

By EUSTACE SMITH, M.D. Lond.,

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IV.—Pleurisy.

(*Continued from page* 117.)

Pleurisy in the child frequently passes unrecognised, and in hospital practice it is common enough to meet with cases of the disease the nature of which seems to have been previously misapprehended. "Low fever" or "debility" are names constantly applied to cases of pleuritic effusion; but here, in all probability, the chest had never been examined at all. In other instances, where an examination of the chest had been made, but no doubt very hurriedly and superficially, the disease is spoken of as "liver complaint" or "phthisis." An error in diagnosis is only excusable after we have exhausted all the methods at our command to arrive at a conclusion. In no case of disease in the child should an examination of the chest be omitted, and if there be any obscurity in the symptoms, such an examination is imperatively called for. Even when the examination is made with all care, an error may still be fallen into, and the disease be confounded with pneumonia. This mistake is hardly to be wondered at when we remember the resemblance between the physical signs of the two diseases—a resemblance which is by no means so generally recognised as its importance requires. If, however, we consider the whole aspect of the case, noting the manner of invasion of the disease, and comparing the physical signs with the general symptoms, this, with accurate observation of the character of the signs, will in most cases enable us to avoid an error.

The initial symptoms—pain in the side or belly, followed by cough, with usually fever, but only slight reduction of the strength—should at once suggest pleurisy, and these symptoms are tolerably constant. There is little disturbance of the natural relation between the pulse and the respiration; and the face, unless the pain be severe, seldom shows evidence of distress. In pneumonia the pain in the side, if present at all, is slight, and occurs subsequently to the cough, the pulse-respiration ratio is greatly perverted, the prostration is as a rule extreme, and the child has the aspect of one seriously ill.

When effusion has taken place, the dead, flat percussion-note with greatly increased resistance, the bronchial or weak breathing, and the increased resonance of the voice or cry—these signs discovered at the base, and *found at the front of the chest as well as at the back*, are very characteristic. In basic pneumonia they would be limited, at any rate at first, to the back or the front, and would not be found in both situations; and besides, the puff of fine crepitation caught at the end of a deep breath is seldom absent in pneumonia, and is very different from the larger superficial crackling sound produced in an inflamed pleura. On account of the feebleness of vocal vibration of the chest-wall in children, no information is to be derived from the absence of fremitus unless this is to be felt over other parts of the parietes; nor, on the other hand, does a strong fremitus exclude the presence of fluid, for vibration of the chest-wall may persist even where the effusion is copious. In a boy, aged 10 years, lately a patient in the East London Children's Hospital, and from whose chest ten ounces of fluid were removed by paracentesis, vocal vibration before the operation was well marked, and was little, if at all, weaker over the diseased side than over the healthy part of the chest. Alterations in the voice or cry present in themselves nothing characteristic unless the quality is markedly ægophonic, in which case only may the sign be considered presumptive of the presence of fluid in the chest.

When the effusion reaches high up in the chest the heart is displaced and the intercostal spaces are obliterated, and these are very valuable diagnostic signs. In such a case, too, the complete absence of rhonchus over a dull area of large extent is much more common in pleurisy than in other forms of chest disease, and if present in a case of acute consolidation of the lung would not persist for many days in succession. Again, the alteration in the shape of the affected side, which becomes somewhat square in outline, as evidenced by the cyrtometer, is a very characteristic feature of an extensive pleuritic effusion, and one which is not found in cases of consolidation.

In the diagnosis of pleurisy in the young child, morbid growths in the lung, which in the adult often occasion great perplexity, may be left out of consideration. One case, indeed, occurring in a boy of fourteen, has been placed upon record by Dr. Clifford Allbutt; but such cases are, fortunately, very rare, and I do not know of any instance in which a young child has been found so affected.

A combination of pleurisy with pneumonia is often met with. In these cases the general symptoms are more severe, and the pulse-respiration ratio is perverted; but, if attention be paid to the character and distribution of the physical signs, the presence of fluid can scarcely be overlooked. Often, however, in these cases the pleurisy is of the fibrinous variety in which scarcely any fluid is present. Here, if friction be absent, as so frequently happens in young children, the diagnosis is extremely difficult, and the complication constantly remains undetected. It is common in the post-mortem examination of such cases to meet with recent signs of fibrinous pleurisy, the existence of which had been unsuspected during life.

When pleurisy occupies the right side and the effused fluid is small in amount, its existence sometimes passes unrecognised, especially as friction is often absent, and the very limited dulness is attributed to the liver, which in young children rises higher in the chest than is the case with adults. If, however, proper care be taken, the mistake should not be made. The dulness produced by a small collection of fluid, such as would be present in the case supposed, presents all the characters which have already been sufficiently dilated upon. It is a perfectly dead dulness, and is accompanied by a marked sense of resistance. Besides, the upper limit is very clearly defined; and this is a very important distinguishing mark. In the case

(g) I published the early part of the life-history of her case (*Royal Ophthalmic Hospital Reports*, vol. v., p. 4).

of ordinary liver dulness at the right base, the dulness passes somewhat gradually into clearness, for the thin border of the lung overlies the upper margin of the liver, and so modifies the percussion-note at that point; while in the case of a small liquid effusion the transition from extreme dulness to clearness is usually abrupt. Again, in cases where an enlarged liver rises up into the chest, the dulness reaches to a higher level in the front than at the back, while in the case of fluid the level of dulness, if higher at one point than another, would be highest posteriorly. In all cases of uncertainty percussion should be made while the patient is in different positions, so as to test the effect of gravity upon the dulness. If the note become clear on a change of position, the presence of fluid is placed beyond the possibility of doubt. A good instance of the condition here described is seen in the case of Maurice R., as noted on February 4. If the child had been seen for the first time on that date, the presence of pleurisy might on a careless examination have passed undetected. In cases of basic lung disease, such as that of Martha B., the diagnosis is more difficult. The distinguishing points in that case have already been insisted upon. If any doubt exist, an exploratory puncture with a fine trocar—a proceeding which is absolutely harmless to the patient—should if possible be had recourse to.

The diagnosis between pleurisy and hydrothorax presents some difficulty, for the physical signs are identical—being due in each case to a collection of fluid in the chest cavity. Hydrothorax, however, is usually double, and there is no accession of fever when the effusion occurs, as is almost always the case at the onset of a secondary pleurisy. Besides, in a passive exudation resulting from some impediment to the circulation, evidence is usually to be obtained of similar effusions taking place in other parts of the body.

Between pleurisy and collapse of the lung the distinguishing points have already been discussed in a previous paper. (See *Medical Times and Gazette*, May 31, p. 568.)

Simple primary pleurisy generally ends in recovery, and even when the disease has reached the stage of empyema the prognosis is not as a rule unfavourable. The great danger in such cases is the occurrence of acute tuberculosis as a result of the purulent collection. In estimating the chances of recovery in a case of empyema, the thermometer is a very trustworthy guide. If the temperature remains high we should always regard the symptom with anxiety, although such cases do not necessarily end badly; but if, after remaining high for a considerable time, the evening temperature suddenly falls to a point below the natural level of health, an unfavourable termination to the disease may be regarded as imminent.

The age of the child has not appeared to me to influence the prognosis of primary pleurisy. Infants, if strong, have seemed to do as well as older children; but pleurisy, attacking an infant worn and wasted by a long course of bad feeding, is necessarily a very fatal disease.

In secondary pleurisy the danger is in proportion to the degree of weakness of the patient at the time the complication occurs. On account of the serious reduction of the strength which takes place in pneumonia, pleurisy coming on secondarily in such a case renders the chance of the patient's recovery very doubtful indeed.

The treatment of pleurisy at first is simple, and consists in perfect quiet, warmth to the chest, a carefully ordered diet, and the administration of a simple saline. The severe measures which used to be at once resorted to in the treatment of every case of pleuritic effusion, are now set aside for simpler remedies. Bleeding need only be mentioned to be condemned. The only form in which it would be for a moment admissible is that of the application of a leech to the side to relieve pain; but this is now unnecessary, as we have in the hypodermic injecting syringe an instrument which enables us to effect the same object rapidly, and without the withdrawal of blood. In pleurisy a child wants all his strength, and to lower it is to do him harm. Mercury, again, which used to be the indispensable remedy at a time when its influence in promoting the absorption of all serous exudations was held in universal belief, is now practically abandoned in the treatment of pleurisy. In children the drug should never be given unless the indications for its employment are very decided, on account of the anæmia and depression which it is so apt to induce; and the best authorities now concur in believing its value as an absorbent in cases of pleuritic effusions to be more than doubtful.

The child should be kept perfectly quiet in bed. Hot linseed-meal poultices, frequently renewed, should be applied to his chest; or the upper part of the body may be swathed, not too tightly, in a broad flannel bandage wound round and round the chest and crossed over the shoulders. His diet should be carefully suited to his powers of digestion, and should consist principally of milk and light broth. For medicine he may take a citrate of potash mixture or a draught containing a solution of acetate of ammonia with sweet spirits of nitre. If the pain in the side be severe, the hypodermic injection of morphia, in the proportion of one-thirtieth of a grain for a child of twelve months old, will give very rapid relief.

In children who are old enough to describe their sensations, very severe pain referred to the epigastrium and accompanied by marked oppression of breathing is usually indicative of inflammation affecting the pleura overlying the diaphragm; and in such cases the action of this muscle during respiration may cause great suffering. When this occurs the application of a bandage to the belly, so as considerably to restrict the action of the diaphragm, will often give immediate ease.

If the cough be distressing, small doses of opium should be given by the mouth. It is important to keep the bowels properly relieved, for any distension of the stomach would increase the uneasiness of the patient. For the same reason a careful watch should be kept over the digestive functions, and any signs of dyspeptic fermentation of food should at once cause us to reconsider the dietary, and restrict the quantity of farinaceous or other fermentable matter which is being taken. Violent purgation is to be avoided, for, as in all acute chest disorders, irritation of the bowels seems to be attended with anything but benefit to the patient.

When effusion into the pleura has ceased, measures must be at once adopted to hasten absorption of the fluid. Counter-irritation of the chest-wall has long been extensively employed to effect this object, and although the value of the practice has lately been called in question, yet in this disease it has always seemed to me to yield very satisfactory results. I have certainly met with many cases where fluid, which under treatment previously adopted had not perceptibly diminished in quantity, has begun at once to be absorbed immediately that counter-irritation was made use of, and this although the other treatment remained in all respects the same. I prefer the tincture of iodine to any other form of counter-irritant. A spot about the size of the palm of the hand should be well painted over with the tincture twice a day until the skin begins to crack and peel. Another spot of the same size should then be selected, and the process be repeated in exactly the same manner.

At this time the child should be put upon as dry a diet as possible, for by diminishing the quantity of fluid taken into the body the blood is stinted of necessary liquid, and a stimulus is thus given to absorption. For medicines the iodide of potassium is very useful, and generally increases very much the secretion from the kidneys. Iron, in the form of the tincture of the perchloride, is also of great service, and should be given in tolerably large doses—five to twenty drops, according to the age.

If the above measures are not found to produce the desired result it will be necessary at once to consider the advisability of paracentesis. This can now be done so completely without risk by the pneumatic aspirator that there should be no hesitation about performing the operation the moment it is thought advisable to do so. On account of the early period at which the fluid becomes purulent in children, and the danger of such purulent collection giving rise to tuberculosis—a result of the disease which ought especially to be guarded against,—an effusion should never be allowed to remain longer than three weeks if no signs of absorption have been discovered. Even before that period it is sometimes necessary to evacuate the pleural contents. Thus, if, without causing actual attacks of dyspnœa, the accumulation of fluid be so great as to press upon the opposite lung and hamper the breathing, or if there have been several fits of dyspnœa when the collection of fluid is large—in either case the operation should be performed without unnecessary delay.

A fine canula should be chosen, and the puncture should be made, as recommended by Bowditch, in a line drawn downwards from the angle of the scapula. Bowditch recommends the operator to ascertain by percussion the inferior limits of the sound lung, and to introduce the canula two inches above this level on the affected side. If, on account of the thickness of false membranes, no fluid is found at the spot first selected, a second puncture can be made a little higher up, nearer the axillary line. The whole of the fluid need not be withdrawn,

for the operation usually gives a sufficient impetus to absorption to enable the rest of the fluid to be removed by the natural processes of nature. If, however, this should not be the case, and purulent fluid should reform and become offensive, the fluid should be withdrawn as completely as possible, and the pleura should then be washed out with warm water, or with a weak solution of carbolic acid. If this plan do not succeed, one of Chassaignac's fenestrated drainage-tubes may be passed through the original opening and be brought out at another part of the intercostal space. The ends of the tube can then be tied loosely together. By this means accumulation of matter is prevented, the fluid slowly draining away.

A better plan, however, of treating these cases, and one which prevents the admission of air, is that perfected by Dr. Playfair, and advocated by him in his paper read before the Medico-Chirurgical Society, and published in vol. xiv. of the *Transactions*. The chest is perforated by a canula just large enough to allow the passage of a piece of ordinary fine drainage-tubing. This is passed through the canula directly the flow of pus is found to be free, and the canula is withdrawn. The free end of the drainage-pipe is then attached to a short glass tube, to the other end of which is fitted several feet of ordinary caoutchouc tubing. This last dips into a bottle half full of water. The apparatus, when applied, is left in position for as many days as pus continues to flow, being kept in place by a fine wire twisted round the drainage-pipe as it issues from the chest, and fixed by strapping to the chest-wall. If properly adapted, the integuments close round the tube at its point of exit, and prevent the entrance of air.

If the case be seen for the first time when the empyema is pointing, the swelling should be immediately lanced, so as to allow of the escape of the fluid. The diet at this time should be as nutritious as possible. Meat, eggs, and milk should be given as freely as the child's powers of digestion will allow, but the stomach should not be overloaded with too large a quantity of food at one time. Especial care, indeed, should be taken not to *overfeed* the patient in our anxiety to supply material necessary to enable him to withstand the exhausting drain upon his system caused by the purulent discharge. Cod-liver oil is very useful in such cases, and I have found Dr. de Jongh's light-brown oil to be more completely digested by weakly children than the oils in common use in hospitals. M. Dubouć recommends the administration of tannin after evacuation of the fluid in empyema. He states that this drug acts as a tonic astringent, improving digestion and diminishing secretion. It may be given in doses of from three to five grains several times in the day. Small quantities of wine or brandy are also required in these cases.

The above method of treatment is also applicable to cases of secondary pleurisy accompanied by effusion of fluid. In dry pleurisies, such as are common in cases of phthisis, the pain is best relieved by mustard poultices, or by small blisters if the child be old enough.

ORIGINAL COMMUNICATIONS.

ON CONSTIPATION SIMULATING DIARRHŒA.(a)

By DAVID NELSON, M.D. Edin.,

Formerly Physician to the Queen's Hospital, and Professor of Clinical Medicine; afterwards Professor of the Principles and Practice of Medicine in the Queen's College.

The present paper is brought before you, not from there being anything very recondite in the matter, but from the number and great frequency of the cases in which I have observed an overlooking of the true causes at work in the production of what is viewed as a common-place complaint, and the serious consequences which have accrued from such inattention. Indeed, these so-called simple and ordinary ailments are of far greater material and vital interest to mankind at large than those others that are certainly very fatal, but comparatively uncommon, yet which, on that very account, are full of a curious and attractive interest, denied to those others which really ought to claim a close attention from their great mortality in the aggregate; just as it has happened again and again that more persons have died, in certain seasons, of an epidemic influenza than of typhus.

(a) Read before the Midland Medical Society, Birmingham.

It is from this tendency in the general mass of human beings that we see medical students often deserting the routine of cases in the wards of a hospital, and rushing afar off to witness one of catalepsy or hydrophobia; and the surgical pupils perhaps habitually neglecting that on which they will be mostly employed in their after practice, and yet crowding the operating theatre to see the performance of lithotomy or excision of the tongue—exploits which they have no more intention of ever attempting to imitate than of flying to the moon. Not that these latter spectacles should be neglected,—very far from it; but that a student should, at the same time, pay due attention to those matters which shall form the chief business of his after-life, as well as indulge this natural curiosity upon others which he shall never in all probability be called upon to treat.

> "Rightly to know
> That which before us lies in daily life
> Is the prime wisdom."

This subject which I now handle is one of those matters of daily concern, not simple, but involving the whole complicated question of nutrition and evacuation, though it be only in connexion with the latter function that I now propose to consider it. In the natural and healthy state of the intestines, much latitude is to be allowed in consistency with general soundness of condition, under that law of compensation which rules throughout all nature, but more especially within living organisms, where, in the oscillation of action and reaction, we daily find fit balances ultimately maintained, notwithstanding innumerable variations of circumstances leading to extremely opposite conditions of functional activity and functional repose. In the function now under consideration—namely, that of periodical evacuation—the latitude under varying conditions is, as I have said, considerable, for it will be modified either by repletion or starvation,—the first augmenting and the second diminishing the body of excrement; or by active exercise or sedentary habits,—the one exalting and the other depressing the nervous and muscular energies for purposes of expulsion. Besides these usual and natural variations, there have been, of course, abundant curious instances in both extremes, such as those two cases in Heberden's practice, the one patient having an intestinal motion only once in a month, and the other being moved twelve times a day through a period of thirty years. Some have been known to aver that this irregularity of the function, even to a great degree, does not materially affect health, and have practically acted upon that belief, while others have looked upon even a moderate amount of stiffness or firmness as a serious consideration, and to be rectified forthwith by purgatives. Thus it is, as the public saying goes, "Doctors do *indeed differ*." How such differences tend to shake confidence in the faculty at large, was instanced to me by one who had been a resident medical officer in a hospital where one of the physicians (of the evacuative school), examining one of his patients, laid great stress upon the function being in abeyance even for a brief time. It so happened that the occupant of the next bed, not having had a motion for three days or so, took alarm, and drew the attention of *his* physician (of an opposite school) to that fact, when he received the more confounding than consolatory reply, that it did not matter if it were a week or even more.

But, putting aside occasional alternations of inaction followed by a compensatory and safe reaction, and admitting that actual disease may not always accrue from protracted constipation; yet, seeing that, from the undue retention of such offensive and effete matters, there must be reabsorption and the determination of disagreeable molecules and odours to the skin, lungs, and elsewhere, and taking also into account the natural habits of the cat and dog tribes, whose food and other modes of living are so similar, so far as they go, to those of man, we are led from such facts and analogies to concur with the view of so acute and profound an observer as Cullen—viz., that every deviation from one diurnal motion is an approach to an unnatural state; that is to say, an approach, however slight, towards actual disease, repeated approaches bringing the patient nearer and nearer to it.

Accepting this, as I do, it follows that, whenever such deviation occurs, there should be an endeavour to restore or induce natural action; not, certainly, by any powerful appeals, such as are made by calomel, or jalap, or the popular salts and senna, but it may be merely by some judicious alteration in diet, or a resort to more active exercise; or, if these fail, to the very mildest forms of aperient, rather calculated to arouse peristaltic action than to stimulate the mucous and other follicles. We know that patients, especially of the lower class,

are very apt to neglect this function, and that workpeople of very sedentary habits, such as shoemakers, tailors, dressmakers, etc., suffer more especially from such neglect; though there be another set who, through hints from newspaper advertisements, etc., do, on the contrary, always have an array of pills and a stock of Epsom salts and senna on hand, with which they proceed to do execution, but in such wise that the shaking received by the general system from so violent an excitement, followed by depression, deters them from resorting to the remedy again until matters have once more gone ahead; and thus they subject their bodies to alternations of such extreme constipation and extreme purgation as gradually leads up to the onset of some formidable chronic symptoms, which the physician, however, is expected to rectify at once by a few strokes of his pen.

Amongst these is this false diarrhœa, or the simulation thereof by actual constipation, in which frequent and teasing, but ineffectual, evacuations occur many times in the day, with abdominal pains and nausea, the whole of such evacuations put together not nearly equalling one natural motion. Yet most patients, whether of a higher or lower class, only excepting the comparatively few who have been taught to regard with proper and prudent respect the mystery of physic and of nature as its domain, and to know

"What dire results from small beginnings flow,"—

most of them, I say, are apt to think that such symptoms as either constipation or looseness obviously speak for themselves, and utter, as it were, their own diagnosis from within their own bodies, and do not require any regular medical investigation. Hence it is that self or home treatment, with an appeal to the druggist as to what he thinks is most effectual in either case, is too often the rule; and hence there shall and does accrue, in too many instances, a steady augmentation of the fundamental real malady, with an apparent but delusive relief of the leading sensational and visible phenomena from time to time, such as pain or this seeming diarrhœa. Nor only in self or home treatment alone or under druggists may these results occur, but also amongst parochial and club patients when the practitioner is too often either overburdened by others or self-burdened with excess of work, which he must accomplish within a given time or else expose himself to unjust but ruinous complaints. And the same observation applies to the out-patient system of hospitals and dispensaries and to all of us in common under similar circumstances, when, under the pressure of business disproportionate to time, we ask the patient what he complains of, and prescribe in accordance with his statement of affairs, although a few brief questions and a few taps on the abdomen might perhaps settle the point.

Of course there are sundry remoter as well as direct causes of this obstipative condition of the intestines, such as tumours, be they cancerous, scirrhous, or otherwise; thickening and ordinary hardening of the coats of the gut; enlargement and adhesion or fixity of the womb, or pregnancy, or swelled prostate gland, and old hæmorrhoids; besides torpidity of the liver, with pale fæces; or too little or too mild a diet; or primary loss of muscular tone and of nervous sensibility from brain or spine disease; or secondary paralytic inertness from long-continued pressure and overstretching of the muscular fibres, leading to a loss of sensibility and of contractile power; or a like state induced by a habit of resisting the calls of nature from mere laziness, and disinclination to leave a warm bed or a warm room in cold or rough weather.

If the constipation exists simply by itself, it is clearly recognised, and remedies, appropriate or inappropriate, just as the case may be—but, at all events, so as to be efficient for the expulsion of fæces,—are employed; but if it assume the character above indicated, of frequent, troublesome, and petty efforts, and small discharges, with colicky pains, then the very opposite treatment is often adopted, and chalk and catechu mixture, with opiates, resorted to, with decided arrest of the annoying evacuations and a riddance from tormenting pains: but with a steady increase of the source of the evil, and a propagation of the disease upwards, till an habitual dyspepsia, that has all along troubled the patient with a sense of heaviness, and constant eructations of gas, and perhaps mouthfuls of sour fluid, culminates in a thorough prostration of the natural powers of the stomach and liver, with regurgitation of vitiated sour bile or choleic acid, and a rejection of all food, even though it should be but a little milk or small quantities of tea, or even spoonfuls of water, putting out of the question meat, or bread, or vegetables, or wine, or beer.

In so-called diarrhœa of this kind, it will be found, as already observed, that all the numerous motions in a day will not, united, equal one proper clearance. It will also be found that amidst the liquid dejections there shall be generally, or from time to time, discovered—it may be very minute, but yet very hard, fragments of indurated fæces, like small grit, but still indicating the source from which it has come; as well as, in some instances, agglomerated particles of chalk, along with a peculiar odour belonging to long-retained fæcal excrement—"an ancient and fish-like smell," as Shakespeare has it,—combined with that of foul brass or oxidised copper. There will likewise be discovered, under percussion, a deeply marked dulness of sound, either over the greater part of the abdomen, or at least in some part or parts, more or less, over the course of the colon; and perhaps even large hard masses may be felt, resembling cancer or scirrhus, or other such solid tumour, though a tolerably sure distinction may generally be at once drawn by the experienced examiner, from the physiognomical aspect and complexion of the patient, coupled with the previous history of the case and the general condition of the body.

And now for our procedure as to treatment. For that, I think, we must be guided by numerous collateral considerations of age, sex, and general strength and condition, though one invariable rule must govern in every case—namely, that no very potent or active remedies should be used in the first instance, lest from the induction of a very powerful action from above or below—though chiefly from above,—and before the obstructing matters are ready to yield easily and safely, we may bring about such a struggle and commotion midway as shall not only inflict violent pain, but it may be usher in death itself, from inflammatory processes or from intussusception. The milder aperients, therefore, will be first called into play, not, however, excluding from that category small doses of blue pill, such as three or four grains, in union with a like amount of socotrine aloes, or some of the watery extracts, coupled with ipecacuanha and capsicum or ginger. But, along with these, it is generally desirable to make use of mild injections—say, merely gruel and olive oil, but frequently repeated, and in considerable quantity; while, for subduction of the acid or oily vomitings, draughts of bicarbonate of soda or potassa, with calumba and hydrocyanic acid, such draughts being administered in teaspoonfuls at a time and at intervals of two or three minutes, being also diluted with iced water, which iced water, by itself, may be taken as the patient desires.

If we be called upon to act at this comparatively early stage—though it be, indeed, a late one, so far as the lower intestines are concerned—then I think we may reasonably hope for success by the employment of such safe and mild aperients, aided by such kind of injections and such stomachic draughts, along with abstinence from all food, except perhaps of the most mild liquid kind, and even then in the smallest quantities at a time, and cooled with ice, as above said. Under a treatment of this sort the sickness and vomiting are likely to be subdued, and the natural peristaltic action restored, the flatus ceasing to be projected from the gullet, and rather making its way in a downward course, as felt and heard by the patient himself. The pains may fluctuate, becoming more or less severe as the hard masses or imprisoned gases may be forced through the twistings of the gut; but if all go right there will finally be a thorough clearance, with complete relief from all the symptoms, and a permanently improved state of health by judicious counsel as to future diet and general regimen.

But we may encounter cases of a more complicated and obstinate order, in which more potent and special agents have to be resorted to by the mouth; while the injections have to be raised to a more stimulating efficacy by the addition of strong salines, or oil of turpentine, or asafœtida. Of such agents it may here be as well to take a review in their relation to the age, strength, and general condition of the sufferer, as well as to each of their own peculiar modes of action. And first, as regards the most extensively operating and efficient amongst them—namely, calomel,—it may be observed that this medicament, as stimulating the liver, the pancreas, and the whole system of minuter glands along the digestive tract, is especially available after the failure of simpler remedies, having some other purgative conjoined with it, as aloes or colocynth, and such a carminative as ginger or capsicum,—not excluding opium if the pain be severe, which does not, when in moderate quantity, materially retard the purgative action, but only modifies it. Besides the socotrine aloes and extract of colocynth above spoken of, others, according to their

ordinary usage, might use the scammony or gamboge; but I should always feel disposed to have most of such matters in the form of watery extract, because I believe their more vehement and protracted griping qualities are due to the particles of their insoluble resins clinging to the mucous surface, and thereby keeping up a violent and useless commotion, very undesirable in the cases under consideration, nay, dangerous in the extreme under certain circumstances. Even the calomel, which acts with so slow, heavy, and effectual, but exhausting or depressing force, I should confine for use upon the young and vigorous only, unless other agents failed. The podophyllin acts much after the manner of calomel, but with more protracted squeezing of the liver, if one may so speak; for while the first usually dislodges the masses along with a clay-like semi-fluid in which such harder masses seem embedded, the podophyllin in corresponding doses will continue to gripe and gripe with numerous straining motions, like those of dysentery, and amounting at last to mere spirtings of a yellow bilious mucus, though that perhaps might be obviated by the employment of a like watery extract thereof,—even as the griping of senna is prevented by the infusion being made from cold instead of hot water. As to croton oil, I should seldom be inclined to use it, except in cases of stupor; and though some gentlemen present may possibly consider it a mere prejudice on my part, I am no friend of elaterium under any circumstances at all—except, perhaps, in certain cases of ascites or hydrothorax. In anasarcous dropsies the work of this elaterium may be as effectually performed, and much more safely, by a combination of the supertartrate of potassa with a moderate admixture of jalap, joined with ginger. Jalap, of course, requires the same caution in its use as the others; but the supertartrate of potassa in small doses has a most satisfactory effect in inviting an additional flow of mucus, and thus melting or softening down the hardened fæces in a quiet manner, without that exhausting and drastic action which characterises its exhibition in full doses. This, therefore, as well as the other saline aperients, such as the acidified sulphates of soda or magnesia, or Seidlitz powders, combined with compound tincture of senna or otherwise, according to circumstances, are useful as adjuncts. The oil of turpentine I should never think of employing in such cases through the mouth; though, as already observed, it may prove a very valuable remedy indeed, especially when joined with asafœtida, in sluggishness of the colon, by acting directly thereon as a powerful and warming stimulant.

(*To be continued.*)

PRACTICE OF MEDICINE IN SMYRNA: POISONING.

By JAMES M'CRAITH, M.D., F.R.C.S.,
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Poisoning is an art pretty well known in the East, but until lately very few cases were brought to light. Lately the Turkish tribunals pursue and punish the perpetrators, and in doubtful circumstances investigate the case. In three instances I have been mixed up in the investigation. In two of these cases I have been able to prove the presence of arsenic; in the third case I believe no poisoning took place. This was the case of a captain in the army, whose wife could with difficulty be persuaded that her husband had not been poisoned. An autopsy was made, and the contents of the stomach were examined, but no poison detected. The man died very suddenly—too suddenly for the effects of most poisons known here. The second case was that of a wife poisoned by her husband. He was her second husband; and a son by the first husband, suspecting that his mother was poisoned by the stepfather, took his mother's body on his back, and brought it from their village, some miles, down to the sea, embarked it in a boat, and brought it to Smyrna, where he made his accusation, and an autopsy was ordered. This took place at the Ottoman Civil Hospital—an establishment lately put in order, and at present managed in a manner very creditable to the directors. Dr. Borg, the Physician to the Hospital, not wishing to take the entire responsibility on himself, and not practised in such investigations, requested my aid. Contrary to old Turkish prejudices, an autopsy was allowed, and the stomach presented all the symptoms or signs of arsenical poisoning—highly inflammatory appearances, and ulcerations in many places (chiefly at cardiac end), to some of which were adherent particles of a yellow, "mortar-like" matter: this was the yellow sulphuret of arsenic. The contents of the stomach were also shown to contain arsenic. Besides the symptoms of her illness and the pathological appearance of the mucous membrane, which clearly indicated arsenical poisoning, the following proofs were adduced:—The possession of arsenic by the accused; about a drachm of white arsenic, in a copper cup, was produced as having been found in his possession. A small particle of the yellow matter found in the stomach, when thrown on a piece of clear-burning charcoal, diffused, in a close room, a most unmistakable odour of garlic. The few grains of yellow matter (sealed up), the contents of the stomach, viscus included (sealed up), the coffee-cup and contents—white powder (sealed up), were all sent to my cabinet, when the following chemical experiments were performed:—Upon examining somes boxes of chemical apparatus which I possess I found that the copper-test (Reinsch's) was the only one I could apply; and for this I was obliged to extemporise my apparatus as follows: I found a small coil of fine copper wire in one of my boxes; this I beat out into a ribbon shape, making of it a thin foil an eighth of an inch broad, which I cut up into pieces of a quarter of an inch long: this gave me the bright copper-foil I required. I boiled some eight or ten of these pieces of copper-foil in distilled water, with an eighth of dilute muriatic acid, in a test-tube. After boiling for some ten minutes the copper remained as bright as ever; this I took as proof of the freedom from arsenic of my materials—viz., the copper and muriatic acid. Upon adding about a quarter of a grain of the yellow matter, and again boiling, I found the pieces of copper-foil changed to a steel-grey colour; these I washed and dried on bibulous paper and put them by, marking them No. 1. I repeated this experiment, but instead of the yellow matter from the stomach I added an eighth of a grain of arsenic got from the chemist. The result was precisely the same, pieces of bright copper-foil being turned, by deposit of arsenic, to a steel-grey colour. These, washed and dried, I marked No. 2. Both of these pieces of stained copper foil, well dried on a small disc of porcelain (my box contained a number of these, like the dishes of a child's doll-house), and deposited—separately, of course—at the bottom of a small tube (such as are used for the detection of arsenic), well dried previously, gave, on the application of the flame of a spirit-lamp, a well-marked ring of arsenical stain, similar in both. The question was to prove this ring or stain in both to be arsenic. I repeated the experiment, but in place of exposing the pieces of stained copper-foil to heat in a tube, I exposed them to heat on the porcelain disc, and when well dried I covered them with a heated slip of glass. The result was a well-marked stain, exactly the same in both (that from the yellow matter, and from the known arsenic), and which, when examined under the microscope ($\frac{1}{8}$ lens), showed a number of crystals of "arsenious acid," clearly proving the yellow matter found adhering to the ulcerated spots on the mucous membrane of the stomach to be a form of arsenic—the yellow sulphuret. It was swallowed as white or metallic arsenic, and became "sulphuret of arsenic" in the decomposing stomach. Inadvertently I first placed the glass with the stained surface uppermost, and was much disappointed at not finding the crystals I was expecting; but, quickly rectifying this mistake, I was much pleased at being able to recognise the crystals as "arsenious acid" but they were very small, and scattered over a large surface, so I repeated the experiment, modifying it as follows:—I filed off a glass tube of about a quarter of an inch in diameter a small piece—say a quarter of an inch in length—and into this I packed a number of the pieces of copper-foil, stained by the process I have described, well washed and dried. I applied heat to this, placed on end on the porcelain disc, and got the stain on the glass placed over it. The result was a stain much better marked on the glass, of the diameter of the piece of glass tube. This circular stain, when examined under the microscope, gave a dense mass of larger and more defined octahedral crystals, in their usual variety; some seen as perfect octahedra, others as dark squares, others as triangular and octahedral, variously truncated. This experiment for the detection of arsenic in all manner of organic mixtures is so simple that it can be performed by almost anyone, and the result is most satisfactory. You see the crystals of arsenious acid, which do not resemble any other that may be possibly produced from any other known volatile substance, enabling you to give positive evidence of the existence of arsenic in the matter under examination. The materials you employ are few and simple—distilled water, copper-foil, and

dilute muriatic acid; and yon prove their purity, or freedom from arsenic, in a most easy and satisfactory manner. The Turks poison with arsenic in the following ingenions manner: They throw a quantity of arsenic on burning charcoal, and they hold a coffee-cup over the fumes: the arsenic is deposited in the cnp. These cups are generally deposited, with the bottom reversed, one over the other. The cup with the adherent arsenic is taken up, and the coffee is poured into it from the pot in which it is prepared. The same coffee is poured out for several persons, bnt of course no one is poisoned except the person to whom the particular cup is served, though all are served from the same coffee-pot—thus avoiding all acts which may lead to suspicion.

The third case—the last I have been engaged in—is that of a Jew attempting to poison another Jew. There is a colony of Jews here in Smyrna, descendants of those expelled from Spain some centuries since. They nnmber perhaps 10,000 or 12,000 persons. I have never known for the last twenty years an instance of any serious crime amongst them—the present being a solitary instance. Murder is quite unknown amongst them. This year is, it appears, an exceptional one amongst them, as two instances have occurred of suicide by arsenic amongst them; on both occasions a quarrel with the wife being the cause. Of these cases the Turkish tribunals take no notice. The case of attempted poisoning is the following:—A Jew had a thriving trade in the red caps, or "fezzes," nniversally worn in this country. A competitor set up a shop opposite, and, it appears, interfered with the first. This latter prepared some sweetmeat (called here "Haratlicoom," a Turkish word meaning "easily swallowed"), and he employed a boy to sell this sweetmeat to the "new-comer," telling him to sell it at half-price, or for whatever he could get. The new-comer refnsed to bny at any price; bnt a neighbour in the next shop, seeing this sweetmeat offered at snch a cheap rate, bought it, and ate a small piece, putting the rest by, "per la senora et la creature"—for the wife and little ones. His conjugal and parental affection saved his life. The little he had eaten, however, nearly killled him, and, snspicion being awakened, the Turkish doctor who attended him, recognising the symptoms of arsenical poisoning, the sweetmeat and some of the vomit were sent, sealed up, to me for examination. The vomit had a very disagreeable smell; it remained in my "cabinet" or study for a few days till I was at leisnre to make the analysis; and when mixed with the acid it effervesced, and gave off a very resinous smell. The patient had suppression of urine, and probably the vomit contained "urea," which had changed to carbonate of ammonia by decomposition. This, on being boiled with the pieces of copper-foil, gave no indication of arsenic; but on adding some two or three grains of the white sugary matter contained in the sweetmeat the foil became coloured like steel, and a quantity of arsenions acid crystals were, by heat, deposited on the glass, unequivocally proving the presence of arsenic in the sweetmeat. Great numbers of perfect octahedra, with the other nsual forms, visible under the microscope. In this instance only two foreign substances were used—the acid and the copper-foil,—and the first boiling in the vomit proved these free from the presence of arsenic, eqnally with the vomit. The accused was convicted. There is nothing new, nothing not well known previously in all I have described; but the process is so simple, the apparatns necessary for the experiment I have almost extemporised, the result so satisfactory, that it onght to snpersede all other processes. The resulting deposit is seen as arsenious acid on the glass, and will remain fixed and unchanged for years, easily recognisable by anyone, not depending on evanescent colours or on the purity of a nnmber of tests; in fine, can be pnt in practice by any tolerably well-informed medical man, and not at all requiring a professed chemist or expert for its performance. Were it not for the light I was enabled to throw on these cases, it is most probable that the delinqnents would have escaped. By this process also the quantitative analysis may be made. You have only to boil the entire qnantity of vomit proved to contain arsenic, in repeated quantities of copper-foil of known weight as long as they become coloured—nntil, in fact, the whole of the arsenic contained in the matter under examination be deposited on the copper-foil. The difference in weight gained by the foil will of course represent the qnantity of the arsenic contained in the vomit or other matter under examination.

Snch is a sketch of the manners of the people here in Turkey, and the experience of a medical man in its criminal jurisprndence. I may, on a future occasion, give you a chapter of my experience in another criminal subject—that of abortion, a not nnfrequent crime amongst the various races (Turks, Christians, and Jews) of this country. I must qualify the assertion, and say, to their credit, a rare one amongst the latter commnnity.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

CASES UNDER THE CARE OF MR. WAGSTAFFE.

Case 1.—*Large Tumour of Parotid—Removal.*

Thomas B., aged 56, a shopkeeper, was admitted on July 17. Fully fifteen years ago he noticed a tnmour in left parotid region, about the size of a bean; it was movable and never painful. It at first showed itself in the region of the socia parotidis. He never found the affected side of throat or month dry. It has rapidly increased during the last six or eight months, with slight pain beneath the ear. It burst in January last spontaneously, and some clear oily flnid escaped. His brother had a tumour taken out of his arm twelve months ago by Mr. Pearse. There is no history of a blow, but he received a cnt across the cheek, by falling, thirty years ago. Health excellent; no implication of nerves of month, facial nerve, or parotid duct; submaxillary glands on the affected side slightly enlarged; pain as of steady pressure below ear; temporal artery felt distinctly pulsating above; no venous enlargement.

July 23.—3.30 p.m.: Operation commenced. After the administration of chloroform, a transverse incision was made, avoiding the chief projections. The npper flap was not easily separated, as the tumour was adherent to fascia at the zygoma; anteriorly and below the tumour was readily separated, and behind it did not dip deeply. The transverse facial branch of nerve was involved in the upper part of the tnmour, and had to be divided; Stenon's dnct was not exposed; several small vessels reqnired to be twisted. There was a good deal of bleeding at the time. The wonnd was closed with silver sntures. The masseter mnscle was quite denuded of fascia. A carbolic oil pad, and light mannal pressure was kept up for an honr. 5 p.m.: Temperature 98·4°. 9 p.m: Patient comfortable, bnt the lower half of the orbicularis palpebrarum was powerless. Temperature 100·1°.

24th.—9 a.m.: Temperature 101·2°. There is bagging below extensively. The plng removed, and a connter opening was made in the most dependent point of bagging; under chloroform.

25th.—Has done admirably; no bagging. Every alternate suture was removed to-day. Nausea from chloroform continned for two days.

26th.—Upper part of orbicularis palpebrarum paralysed. Patient up to-day.

30th.—We have had the opportunity of seeing this case to-day, and were pleased to find the patient so far convalescent as to be able to take out-of-doors exercise. The wound was to a very great extent united; there was, however, a moderate amonnt of paralysis of the side of the face.

Case 2.—*Smashed Foot—Subastragalar Amputation.*

David F., aged 18, boiler maker, was admitted on May 21, at 7.45 a.m. Foot crushed by fall of metal. Tarso-metatarsal articulations laid open. The foot was pulped in front of this. Subastragalar ampntation was performed immediately by making an incision corresponding for the upper part with the margins of the wound from over neck of astragalus along inner side to front of heel, then backwards in median line to behind heel, then ronnd below the external malleolns to point first started from. Forcible inversion; dissection at first from above and outside, then from behind. The anterior tibial artery was twisted; the posterior was tied with catgnt ligatnre after torsion had failed. Oozing from tendo Achillis. 2 p.m.: There was free hæmorrhage. The wonnd had to be opened entirely, when the bleeding was found to proceed from a vessel behind the tendo Achillis; this was ligatured.

May 22.—Restless night. Temperature 102°, 10 a.m.; Pulse 120, temperature 101·8°, 10 p.m.

25th.—Improved. Suppuration has occurred along the tendons of the leg, so a counter-opening was made on inner side about one inch above the ankle. The arrangement of the flap was altered in order that a projecting angle in front might be done away with.

June 8.—A counter-opening made higher up on the inner side of the leg where the skin was red, and where a probe passed to; another incision was then made at outer side opposite to the highest part of suppuration. This extended through the interosseous membranes.

July 12.—Amputation wound closed a few days after above operation, except the surface-wound. All discharge has ceased.

About a week later the higher wounds ceased discharging and closed. For the last fortnight there has been only a granulating surface-wound; this was grafted ten days ago. He has borne his weight on the stump for the last fortnight.

26th.—Wound healed.

Case 3.—Compound Fracture of Leg—Supra-condyloid Amputation.

Henry W., aged 16, smith. A heavy millwheel fell on his leg, completely smashing it to within a short distance below the knee. There was much bruising of skin. On admission, on June 20, at 2 p.m., venous oozing occurred after portions of trousers were pulled out of the wound. About half a pint was lost after admission. At 3 p.m. was operated on by Mr. Wagstaffe, assisted by Mr. MacCormac. Skin much separated in front and behind to a point opposite the knee-joint, so that it was necessary to form flaps by operating above the knee. Gritti's supra-condyloid amputation of femur was performed, and about an inch and a half of femur was removed. The patella was sliced, and placed upon the under surface of the femur. The extensor muscles were stretched a good deal as soon as the patella passed the edge of the femur. There was a good deal of oozing from the small vessels of the flaps. The limb was bandaged from hip downwards. After the operation the patient was restless towards evening. A microscopic examination of some blood from his finger showed the existence in it of numerous bacteria.

June 21. — Bandage removed, being soaked and rather offensive. Finger put in wound to insure position of patella, of which Mr. Wagstaffe was doubtful. The bandage was then reapplied. During the afternoon and evening he was delirious—out of bed and on floor.

July 22.—The wound has done well. Extension has been kept up by a shield on front and back of stump, and a solution of sulphate of zinc (gr. iv. ad ℥j.) has been used.

July 30.—Is now quite convalescent.

BRISTOL GENERAL HOSPITAL.

EMPYEMA — PNEUMOTHORAX.

(Under the care of Dr. BURDER.)

[Reported by Mr. F. Howell Thomas.]

J. R. was admitted July 22. About fourteen days ago he says he strained himself whilst at work, but had not felt any pain until this morning, when, whilst running to catch a train, he was seized with shivering and severe pain in his left side, especially when he breathed. Breath very short; temperature 104°. Lungs: Percussion—anteriorly, fairly resonant (respiration harsh); posteriorly, somewhat dull at left base, resonant at right base (respiration tubular). Vocal fremitus slightly increased at left base. No pleuritic crackle. Heart sounds very rapid; dulness normal. Temperature, evening, 103°.

July 13.—Lungs: Anteriorly, fairly resonant; posteriorly, dull at left base, resonant at right base. Respirations: Anteriorly, harsh tubular; posteriorly, left base inaudible. Total absence of vocal fremitus at left base; right base harsh, tubular. Temperature: Morning, 101°; evening, 102·6°. Less pain in left side.

14th.—Percussion: Anteriorly, dull left side, resonant right side; posteriorly, dull at left base and wall of chest, resonant at right. Respiration as yesterday, excepting that it is inaudible on left side anteriorly. The heart is displaced to right of sternum; complains of great pain in left side. Temperature: Morning, 101·4°; evening, 102·4°.

15th.—Pain continues in left side. Expectorates bloody sputa.

16th.—Pain not so severe. The effusion was thought to be pus, because of the severe constitutional disturbance. Temperature: Morning, 100°; evening, 101°.

17th.—Percussion: Anteriorly, hyper-resonant on left side, resonant on right side; posteriorly, left base dull, but directly below the inferior angle of the scapula there is a circumscribed area where the percussion-note is tympanitic; right base somewhat dull. Respirations: Anteriorly, harsh tubular on right side, inaudible on left; posteriorly, harsh tubular at right base, inaudible at left. Temperature: Morning, 101°; evening, 101·4°.

18th.—Temperature: Morning, 100·2°; evening, 100·8°.

19th.—Temperature: Morning, 98·4°; evening, 100·4°.

20th.—Physical signs remain the same. The difficulty of breathing more marked. Tapping was not performed on account of the evidence of air. The respirations have varied from 33 to 38 per minute, never exceeding 38. Temperature: Morning, 99·4°; evening, 102·6°. Pulse feeble.

21st.—Temperature: Morning, 99·4°; evening, 102°.

22nd.—Temperature: Morning, 101·4°; evening, 101·6°.

23rd.—Complains of great pain in his right side, where there is a loud pleuritic crackle. Temperature: Morning, 99°; respirations 38; pulse very feeble.

Died at 4 p.m.

24th.—*Autopsy* (twenty-four hours after death).—Decomposition commenced; abdomen and chest much distended. On opening the chest a quantity of air escaped from the left side of an offensive character. The left side was full of pus, containing several quarts. The pleura was thickened, very soft, and suppurative; it appeared to be one immense slough. There were adhesions to the chest-wall and diaphragm. The left lung weighed eleven ounces; it was entirely collapsed, and sank at once in water, there being no air in it. On the posterior surface of the lower lobe there was a distinct erosion about the size of two pins' heads, through which the air had escaped. The right lung weighed twenty ounces and three-quarters; œdematous. There was hardly any blood in it. The pleura was covered with recent lymph. Heart, liver, kidneys, and spleen normal. Intestines full of gas; otherwise normal.

EMPYEMA—PARACENTESIS THORACIS.

(Under the care of Dr. FRIPP.)

W. H., aged 18, admitted June 2. Patient had rheumatic fever eight years ago; with the exception of this has been healthy all his life. Had an attack similar to the present one just after last Christmas. For the last month has not been feeling well, but did his work up to three days ago, when he gave up. He says he felt no pain, only he was too weak to go on with it. He shivered, and his breath became very short. He felt a great deal of pain in his left side yesterday, but not before. Coughs, and expectorates a little phlegm. Lungs.—Anterior: Percussion dull on left side, resonant on right side. Posterior: Percussion dull at left base and along left wall of chest, resonant at right base. Respirations.—Anterior: Harsh, tubular. Posterior: Inaudible at left base; right base harsh; absence of vocal fremitus at left base. Heart is displaced to the right of the sternum. Morning: Pulse 126; respirations 34; temperature 101·4°. Evening: Pulse 126; respirations 36; temperature 101·6°. June 8.—Morning: Has continued about the same; complains of more difficulty in breathing; physical signs remain the same. Pus was thought to be effused on account of the temperature being so high and the severe constitutional disturbance. Pulse 126; respiration 38; temperature 100·6°. Evening: Pulse 138; respiration 48; temperature 101·6°. The shortness of breath being severe, the House-Surgeon, Dr. Elliott, tapped with the pneumatic aspirator, and removed forty-two ounces of fetid pus.

9th.—Expresses himself easier. Pulse 124; respiration 32; temperature 101°. Evening: Pulse 128; respiration 33; temperature 102·4°.

10th.—Pulse 120; respiration 32; temperature 100°. A drainage-tube was now passed; the pus discharged was fetid. Surgical emphysema came on at the left side of the anterior surface of the chest. Evening: Pulse 122; respiration 32; temperature 100·4°.

11th.—Emphysema has disappeared. Physical signs remain the same. A great discharge of pus on the poultice. Breathing easier. Morning: Pulse 120; respiration 34; temperature 99·6°. Evening: Pulse 128; respiration 32; temperature 101·6°.

16th.—The discharge having got very much less in quantity, the drainage-tube was withdrawn. Feels better. Coughs a little. Physical signs remain the same, except that a faint

respiratory murmur can be heard at the left base. Morning: Pulse 118; respiration 28; temperature 99·4°. Evening: Pulse 126; respiration 34; temperature 102·4°.

19th.—Diarrhœa. Discharge still continues on the poultice.

26th.—Diarrhœa ceased. No cough. Discharge continues. Pulse weaker. Say he feels very weak. Physical signs remain the same.

July 3.—Physical signs remain the same. Discharge still continues. Pulse is getting weaker. Evening temperature is generally two or three degrees higher than the morning; breathing is easy, and he does not complain of pain. He continued in the same state until death, July 19, apparently dying from exhaustion.

Autopsy (July 21).—Body emaciated. On opening chest, the left cavity was half full of pus. The pleura was thick, soft, and suppurated; it appeared to be nothing but a slough. The chest-wall on the upper part was ulcerated; in the lower part smooth. There were adhesions to the chest-wall and diaphragm. The left lung weighed 21 ozs.; it was in a state of atrophy; it floated in water; there was not any collapse. The bronchial glands were enlarged; some calcareous bodies were found in the lung substance. Right lung weighed 21 ozs.; the substance was pale and œdematous. Heart weighed 11 ozs.; normal. Liver weighed 4 lbs.; substance lardaceous. Spleen weighed 3½ ozs.; soft. Kidneys: Weight of both 13½ ozs.; pale. Intestines: There were some patches of congestion in the ileum, but otherwise the intestines were normal.

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Medical Times and Gazette.

SATURDAY, AUGUST 23, 1873.

SEWAGE AND DISEASE.

The discovery of the cause of the outbreak of enteric fever in Marylebone has naturally led to much public discussion as to the mode in which the poisonous material has been conveyed into the milk. In our article on the propagation of zymotic disease by milk, last week, we discussed two methods—one a tolerably certain one, the other a probably possible one—in which the contagium of disease may be conveyed into milk. The certain mode is by polluted water, the more doubtful by polluted air. But the outbreak has led to the publication of speculations as to the mode of infection of milk, to which the actual facts of the case give not the slightest confirmation, but which nevertheless, in the very imperfect state of our knowledge of the precise methods in which diseases are propagated, may be allowed to demand examination.

On Saturday last a well-known member of our profession—Mr. Alfred Smee, F.R.S.—published a letter in the *Times* newspaper, in the first sentence of which he announced that he is "in a position to explain the occurrence of typhoid fever from the use of milk." The subsequent part of his communication, however, fails to corroborate the opening sentence; for the only fact which Mr. Smee adduces as capable of throwing light upon the occurrence is that some cows of his own, fed on two occasions with sewage grass, produced a milk which, after keeping for twenty-four hours, had a slightly rancid odour, and a butter of an offensive character, which turned rancid a day or two after it was made. Mr. Smee, however, does not add that anyone who partook of this milk or this butter was made ill in the slightest degree by it. Now, in the first place, we are informed on the best authority that the pastures of the farm from which the infected milk was exported were not irrigated by sewage, nor in any other mode was sewage manure specially employed. We cannot, therefore, but think it a great pity, so far as this particular outbreak of fever is concerned, that a theory should have been started which might have had the effect of diverting the attention of the scientific public from the real source of the mischief. The account which Professor Corfield, the expert employed by the milk company, has published in a medical contemporary, proves that there were ample means and opportunity for contamination of the water used in the dairy operations at the farm from the privy in which the excreta from one, if not two, patients suffering from enteric fever were received; but Dr. Corfield does not say one word as to sewage irrigation or the employment of putrid manure in the pastures. On one occasion a quantity of blood and putrid matter, discharged from the bowels of the farmer who died in June, was buried by order of the doctor in a field immediately outside the farm premises. But burying in one isolated spot is quite a different thing from manuring by sewage, and there is no evidence that the cows were fed in the field in question. On the other hand, there is a direct communication by soakage from the privy to the well, and the water of this well, which supplied the pump used in the dairy, is so bad that it has long been condemned by medical men as unfit for drinking purposes, and was not so used by the residents on the farm. Besides the soakage from the privy, the well is so situated as to drain the whole premises, including soakage from a ditch which received fluids from the pigsties, the dairy, and a manure heap on which the house slops were thrown. Anything worse than the arrangements, from a sanitary point of view, could scarcely be conceived. The epidemic itself is an instance of widespread typhoid poisoning, in which the poison was collected in a well in Oxfordshire, and thence carefully conveyed, and distributed in London. The middle ages believed that epidemics were produced by poisoning wells; it has been reserved for the nineteenth century to prove the fact.

We are justified, therefore, in saying that as there is nothing in the facts alleged by Mr. Smee which would support the hypothesis that milk produced on land manured by sewage is capable of giving specific enteric fever, so neither does the Marylebone outbreak lend a shadow of confirmation to that hypothesis. But, separating the hypothesis from this special outbreak, it is of vital importance that the inquiry be made whether there is any evidence that sewage used as manure is capable of so affecting the produce of the land—either animal or vegetable—as to render it unfit for human food, and the means either of propagating the germs of specific disease derived from the sewage or of producing other toxic effects. *In limine*, it must be acknowledged that disease has from time to time appeared to arise in the neighbourhood of land irrigated with sewage as a consequence of the

pollution of the air or water. In the *Medical Times and Gazette* of April 17, 1869, is a notice of an outbreak of dysentery in the Cumberland and Westmoreland Lunatic Asylum, which seems to have been due to emanations from some sewage-irrigated land in close proximity to the Asylum. In the number for May 24 of the present year we noticed an outbreak of enteric fever at Ecton, near Northampton, which was investigated by Dr. Buchanan, and which appeared to have originated amongst some labourers who were at work on a farm irrigated by the sewage of Northampton, and who drank some water from a brook which received the water that had drained through the soil of the farm, as well as any of the sewage that had been discharged from the farm without passing through the soil. These occurrences, and others of a similar bearing, may be held to prove that sewage itself can produce toxic effects, and that sewage irrigation, unless proper care be taken, not only in its application, filtering, and deodorisation, but also in apportioning precisely the quantity used to the area over which it is spread, is not a proceeding entirely devoid of danger. But it does not help us to an answer whether the toxic qualities of sewage are capable of reappearing and producing their effects in animal and vegetable produce.

With regard to vegetable produce, we have, on the one hand, Mr. Smee's assertion that putrid matters can affect vegetables, but whether by communicating to them toxic qualities he does not say. On the other hand, there is an enormous mass of evidence that the vegetable produce of much sewage-irrigated land is eaten both by man and animal without any ill effects accruing. In the *Times* of Tuesday, for instance, is a letter from Dr. Williams, of the Sussex Lunatic Asylum at Hayward's Heath, who states that thirty cows and twelve horses are fed with the ryegrass grown on land irrigated with the sewage of the Asylum, and that the inmates of the Asylum get their dairy produce from the cows, and that no bad effects have ever resulted. But besides ryegrass, beet-root, oats, and other vegetables have been raised on sewage farms and made the food of man and animals with impunity. We have no evidence that the poison of enteric fever can produce that fever either in carnivorous or herbivorous animals, and all proof is wanting that any poisonous effect other than enteric fever has been produced in animals by sewage vegetable produce. With regard to man, evidence is also lacking. Of course if sewage has been used in a proportion too great for the soil to absorb and decompose, it may remain on the surface and adhere to the vegetables grown. It is conceivable that a danger might arise were such vegetable matter made human food. But we believe there is no evidence of mischief having arisen from such contamination.

The other question of possible contamination through animal produce, and especially through milk, is that of greatest interest at the present juncture. Positive evidence of the toxic contamination of milk and other animal produce by sewage we believe to be entirely wanting. It was supposed that sewage pastures would spread far and wide entozoa amongst our population. But, although theoretically this would appear probable, we know of no evidence that diseases of this kind have increased since cattle have been fed on sewage grass. With regard to dairy produce, one outbreak of typhoid in the neighbourhood of Croydon was attributed to milk from a sewage farm, but tadpoles were found in the milk, which settled the question as to the real source of contamination. On the other hand, the observations of Dr. Alfred Carpenter of Croydon, Professor Corfield, and a number of other scientific witnesses are unanimous as to the excellent character both of milk and butter produced from sewage grass, and we may confidently assert that the greatly preponderating weight of evidence is against the occurrence of any contamination. But it may be dangerous to dogmatise as to its possibility. No secretion of the body is more delicately sensitive to diet than the mammary. To say nothing of the epidemics of obscure disease which in the United States are referred to milk, it is well known that milk may be rendered poisonous by cows or goats being allowed to feed upon poisonous umbelliferous and other toxic plants. It is also certain that some organic poisons may be passed through the systems of several animals without losing toxic power. Thus the blood of an animal killed with the poison of the cobra is itself poisonous, and will rapidly kill if it be injected into the veins of another. But beyond such scattered facts, which may be supposed to be analogous, there is no evidence that the germs of a specific disease, such as typhoid, can be taken into the cow's system through the channel of sewage grass, be thence excreted by the mammary glands, and, producing no toxic effect on the cow, can spread enteric fever amongst the children who drink her milk. Such a sequence of events is most likely impossible; but if possible, there has been no outbreak of fever or other disease in this country which would warrant us in believing that it has taken place.

THE RELATIONS BETWEEN PRESCRIBERS AND DISPENSERS.

An inquest involving some points of interest to the profession was held at Ramsgate last week, before Mr. Martin, the coroner. The questions arising out of the case seem to us of so much importance that we shall offer no apology for reproducing the following somewhat lengthy abstract of the evidence. The deceased was an ironmonger in King-street, Ramsgate, and was 34 years of age. It appeared that he was occasionally in the habit of drinking to excess, and had had more than one attack of delirium tremens. On the previous day (Wednesday) he was observed to be in a highly excited state, but not very violent. His ordinary medical attendant, Mr. Cresswell, being from home, Mr. J. R. Leake (on the Retired List of her Majesty's army), L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., was called in at ten o'clock in the morning to see the deceased. He found him sitting on the sofa, suffering from the usual symptoms of delirium tremens. He ordered him to bed, and gave him one grain of opium. He saw him again in the afternoon; he was still in a high state of excitement, but he had had sleep. Other medicine was ordered, which had the effect of producing more quietude. At eight o'clock at night, the effect of the medicine having passed off, and the excitement having returned, Mr. Leake ordered the following draught:—Tincture of digitalis half an ounce in half an ounce of distilled water. This prescription Mr. Fisher, a druggist in the town, refused to dispense, observing that anyone who took it would be a dead man, or words to that effect. On visiting the patient again at 10.30 p.m. Mr. Leake found that the draught he had ordered had not been taken, and that the medicine could not be procured. Mr. Leake said:—

"I gave the deceased something out of my own medicine-chest—a dose of morphia; but it was too mild, and had no effect. I had no other medicine in the house. I then left the deceased, and did not see him again. I forgot to state that on account of this message from Mr. Fisher, the mother of the deceased told me that from what she had heard she had lost all confidence in me, and that she did not know what to do. I was summoned again at one o'clock, but I sent back word that as they had lost all confidence in me, and my medicine had not been made up, I could not take any further care of the case. I should also state that at half-past eleven, seeing that the draught I had given had not produced sleep, I gave them a pill containing two grains of opium, which would have produced some sleep, but I afterwards found he had not even taken that."

In answer to questions, Mr. Leake said that he had known persons who had taken a similar dose of digitalis with the best results. He had read a paper on the subject before the British Medical Association at Leeds, and he had known cases

in which larger doses were given for palpitation of the heart and delirium. He thought Mr. Fisher was not justified in refusing to make up the medicine, and that upon him (Mr. Leake) the whole responsibility respecting the matter rested. Mr. Fisher explained that, seeing the dose of digitalis ordered was so much beyond the usual one—being, in fact, about eight times more than that recognised by Squire and the British Pharmacopœia,—he declined the responsibility of making up such a dose, and said that any medical practitioner wishing to give such a dose as that ought to come and explain the case requiring it. Mr. Cresswell, having entered the room at this time, was examined as a witness. He was the ordinary medical attendant of the deceased, and saw him for the last time on Tuesday evening, and prescribed for him. He was then suffering from a slight attack of delirium tremens, which threatened to be very severe if not attended to. Deceased was of intemperate habits, and he had attended him for two or three attacks of the disease before. The dose of digitalis ordered by Mr. Leake was not an ordinary one. Under such conditions as prevailed in this case he (Mr. Cresswell) should have had no objection to give it. An ordinary dose in such a case as this would be like "throwing feathers upon him." He had given doses of morphia in such cases which might astonish many there. In his opinion, then, the draught ordered by Mr. Leake should have been dispensed and administered at the time, as everything depended in these cases on the promptitude with which they were applied. Mr. Fisher desired to call some medical witnesses, and asked the coroner to allow two chemists who were with him to give evidence that they would not have dispensed the prescription. There was no law which bound him to dispense such a dose. A juryman having asked Mr. Fisher that, as the medical gentleman who ordered the medicine was a stranger to him, ought he not to have gone for an explanation? Mr. Fisher replied—"No; we are not bound to run after medical men." In his summing-up the coroner observed that all the jury had to do was to determine the cause of death. He said:—

"You can have little difficulty in arriving at a conclusion as to this point, because the medical evidence showed that the deceased died from exhaustion and natural causes, and from nothing which was given him. If you think proper to add a rider to your verdict, you are at perfect liberty to do so; but this question as to whether the chemist was bound to make up the prescription is a delicate one, and not one that I think you ought to go into. I have referred to Squire's 'Pharmacopœia,' and the dose is put there as from ten to thirty minims; the dose here is half an ounce, which is equal to 240—certainly a startling difference, and it is entirely for you to say whether you will consider it. You must remember that the evidence will be put before the public by means of the press, and if Mr. Fisher, as the chemist, has done wrong, there are the means of coming to a proper conclusion as to that point through a proper tribunal. You see that the deceased had been so before, and that last Tuesday, in opposition to the advice of his medical attendant, he continued drinking, and so brought on the further attack which resulted in his death."

The room was then cleared, and the jury left to themselves for consultation. After some time, the coroner having returned, the foreman said the verdict was that death had resulted from natural causes, accelerated by excessive drinking, and the jury thought the chemist ought to have dispensed the prescription of the physician.

Since the inquest several communications have been made to the *Kent Coast Times*, one of them, numerously signed by medical practitioners and chemists, justifying the conduct of Mr. Fisher. This case is one of very considerable importance to the profession—first, in reference to the dose of digitalis ordered; and secondly, in regard to the conduct of the druggist in refusing to dispense the prescription. As to the first, it is quite true that the ordinary dose of the tincture of digitalis is that stated by the coroner; but if, in addition to Squire and the Pharmacopœia, the Court had had the opportunity of referring to Waring's "Manual of Practical Therapeutics"—a very useful book,—it would have been seen that the dose of digitalis ordered by Mr. Leake had been frequently administered with most beneficial results by Dr. Jones, of Jersey, in cases of delirium tremens. Dr. Peacock and Dr. M. Mackenzie and others have administered this remedy in what might be considered very large doses. Dr. Peacock draws the following conclusions:—(1) That digitalis, when exhibited in full doses, does not by any means produce the amount of depression which our previous experience of its action in small doses would lead us to expect; and (2) that the remedy, in conjunction with other means, may probably be very usefully employed in certain cases of the disease, and especially when it occurs in young and robust persons, whose strength has not been broken down by prolonged habits of intemperance. It should be stated, however, that Dr. Laycock, on the other hand, regards the evidence in favour of the calming effect of digitalis in this disease as of the vaguest kind, and states that there is no indication of the class of cases in which it may be safely prescribed. Dr. Sharkey has related several cases in which he administered from two to four drachms of the tincture of digitalis in a single dose for epilepsy, in the majority of which it was productive of decided benefit. Dr. Waring himself states—"There appears to be a peculiar tolerance of digitalis in these affections, but its use in the above-named doses can hardly be regarded as safe or admissible in a majority of cases." So much for the first question involved in the inquiry. With regard to the second, we think it was Mr. Fisher's bounden duty to have sought an immediate interview with Mr. Leake: the case was imminent, and life was at stake; and we cannot endorse his flippant remark that, under certain circumstances, he was not "bound to run after medical men." In cases in which there may be a reasonable doubt that some mistake has been made by the practitioner prescribing, we contend that the dispensing chemist would not be justified in failing to consult the prescriber. In the present case there might have been a suspicion in the mind of Mr. Fisher that half an ounce had been inadvertently prescribed for half a drachm. Beyond this we cannot go, and we think the jury had no other alternative than to censure the conduct of Mr. Fisher, bound as they were to find their verdict in consonance with the evidence which was produced before them.

YARKAND AS SEEN BY A PHYSICIAN.

The interest which recent events have excited with regard to Central Asia is one which has long existed in the minds of some, and has fed itself on the scanty details available for giving a faint acquaintance with countries which have been closed since the days of the Ser Marco Polo even to our own time. The latest information we have as to Eastern Turkestan is mainly from the pen of a physician.(a)

The interest of such an expedition was great, and Dr. Henderson entered on his duties with corresponding hopes. Unfortunately, the orders given to Mr. Forsyth were very explicit, necessitating a quick march and speedy return, and hence but comparatively few opportunities were afforded for seeing the domestic arrangements of the country. The third of the three Europeans, however, who constituted the expedition was Mr. Shaw, who had already made his adventurous way into the heart of the country, and to his book the reader might refer for details not to be found in Dr. Henderson's, whilst the latter very far exceeds the former in accurate scientific information. Most unfortunately for science, Schlagentweit, a German traveller,

(a) "Lahore to Yarkand: Incidents of the Route and Natural History of the Countries traversed by the Expedition of 1870, under T. D. Forsyth, Esq., C.B." By George Henderson, M.D., F.L.S., Medical Officer to the Expedition, Officiating Superintendent of the Botanic Gardens, Calcutta; and Allan O. Hume, Esq., C.B., F.L.S., Secretary to the Government of India for the Department of Agriculture, Revenue, and Commerce. London: L. Reeve and Co. Pp. 370.

who had collected much information as regards this country, was murdered by Wali Khan—a ruffian who preceded the present Atalik Ghazi in the rule of this country. The visit of Mr. Forsyth was a purely friendly one, hence his instructions to keep out of all political disputes or questions. First the way led through Kashmir, which, being now a favourite excursion-ground of the British officer on leave from the plains, is tolerably well known in all parts, even far into what we are accustomed to call Thibet. Dr. Henderson has, however, contrived to enhance our interest in the country by photographs taken on the march, and here published in heliotype. At Srinagur the travellers met Mr. Hayward, who had also visited Yarkand, and was now on his way to explore the Pamir Steppe; a few weeks after he, too, was barbarously murdered. In truth, it requires no slight devotion to the work of geographical exploration to attempt it, even, in such bigoted countries, where scientific instruments are looked upon either as instruments of devilry or the first step in the onward route of conquest the inhabitants fear on the part of England. From Kashmir the travellers crossed by a pass 16,000 feet high into Ladak, but that was not by any means the greatest elevation attained. This pass is, however, stopped, or nearly so, by snow in winter. Beyond this pass the people begin to assume the Tartar type, are mostly Buddhists in religion, and are generally addicted to the sport, recently naturalised amongst us, called "polo," which is the national game in all parts of Central Asia where horses abound. Among the Buddhists of Thibet, as elsewhere, the monastic system is in full force, the monasteries being usually perched high up on a rock. Their worship is mainly conducted by machinery. They make use of cylinders of wood or copper, containing a roll of parchment on which prayers have been written. Each turn of the cylinder is held to be equal to a single repetition of the prayers, and so the "lamas," as they are called, are, if not otherwise occupied, generally engaged in turning one of these machines. Sometimes they are turned by water-power.

At Lé the travellers had to provide for one of the most trying journeys it is possible to contemplate. The country beyond to the borders of Yarkand is a stony desert, devoid even of grass for cattle save here and there near streams. The distance is nearly a month's journey—twenty-seven marches,—and this had to be performed at an elevation of about 15,000 feet—*i.e.*, nearly the height of Mont Blanc. A few days out from Lé, however, they had to cross a pass—the Chang-la—18,000 feet high. In so doing almost everyone suffered from the rarity of the atmosphere—in Mr. Forsyth's case the pulse went up to 100, the respirations to 22 per minute. Some complained of a feeling of suffocation, and could not sleep; but a few deep inspirations relieved this feeling. Intense headache was complained of, with great prostration of mind and body, the temper became irritable, and there was most distressing nausea. In some the lips became blue; and in Mr. Shaw's case the temperature, as indicated by the thermometer, sank one or two degrees. Such is the exceedingly interesting account given of the effects of great rarification of the atmosphere by Dr. Henderson. We may mention that here the barometer stood at 15·73°, the thermometer at 61° Fahr., and water boiled at 181° Fahr. Such unpleasant effects do not last long: they pass away as soon as travellers have become habituated to the elevation, for 500 feet below the top of the pass they came to a well-cultivated valley, and all nausea and other symptoms passed off. On descending from the pass on the northern side, however, the traveller reaches only the high table-land already spoken of, which in some places—especially away to the west, on the upper waters of the Oxus—reaches a tremendous elevation, constituting what the natives are wont to call the Dome of the World. In these regions rain hardly ever falls, even snow falls lightly, and the whole water seems rapidly draining off. Wherever water can be obtained, however, cultivation goes on. Up to a height of 15,000 feet above the sea grain crops grow and ripen. Higher up still willows grow, and their leaves serve as fodder for the cattle.

In crossing the desert beyond Lé, Dr. Henderson remarked with surprise that the native Thibetans or Bots always slept in the open air, with a bank of stones raised behind them to keep off the cold wind; but this sleeping in the open air is common enough in temperatures very much lower on the northern steppes. Here it was only 23° Fahr., but in Siberia up towards Anadyrsk the traveller will have to sleep out with the temperature at 40° below Zero. (See, *passim*, Kennan's "Tent Life in Siberia," and Brook's "Reindeers, Dogs, and Snow-shoes.") The clothing of the natives of these parts consists to a considerable extent of sheepskins with the wool turned inwards, and they are excessively dirty. The highest point where the travellers rested for the night was 18,850 feet above the level of the sea. Yet here Dr. Henderson remarks that though the servants found it impossible to cook pulse, from the low boiling-point (180° Fahr.), ravens and butterflies flew with as much vigour as they did lower down. In these regions a cold wind of great intensity sometimes blows, and is very dangerous—especially as men and horses are exhausted from the extreme rarity of the air. In such a position it is hardly pleasant to find provisions failing, yet that was the predicament in which our travellers found themselves—deceived as usual by native officials; but by a few forced marches they reached Shahidulla and the Atalik Ghazi's territories. In this part of the journey they passed over a deposit of pure sulphate of magnesia not less than twenty feet in thickness. On reaching the borders of Yarkand, our travellers were introduced to Yarkandi fashions by the presentation of a *dastarkhan*—literally a tablecloth, but meaning a feast of sweatmeats, fruit, etc., with which it is the custom of the country to begin the repast, just as we end with them. In this district the Kirghiz and Wákis were the travellers' carriers, but they complained greatly of the turbulence and insolence of the latter. The reason of this is not very apparent, but even in their native Wakán the Wákis do not seem to be over-obliging.

In Yarkand proper the country seems not unlike England; fruit of all kinds abounds, game is plentiful, and the mutton of the country delicious. So our travellers feasted. Even the cooking was unobjectionable. The beverage of the country is tea—probably, though this is not mentioned, of the kind called brick-tea, which is mainly used in these regions. Under the reign of the present monarch the laws seem strictly enforced—and bloody laws they are. One prominent feature of the country seems carelessness of human life; for the most trivial offence the native is liable to have his throat cut—the national mode of execution. Not many details are given us as to the diseases of the country, save that goître is unusually prevalent. Cataract, too, is common, and Dr. Henderson saw one case of leprosy and one of elephantiasis, both in boys.

Canals are common; the cotton and Indian corn cultivated are excellent; in short, the country is a most fruitful one. But we must take leave of our travellers, commending Dr. Henderson's book to our readers, especially for the admirable description and figures of birds and plants contained in its latter portion, to which we are unable further to allude. Their stay at Yarkand was brief, for they had strict orders to return before winter, and they left without seeing the Atalik Ghazi.

THE WEEK.

TOPICS OF THE DAY.

The epidemic of enteric fever in the West-end of London may now, we hope, be said to be at an end. No fresh cases have been heard of, and although it is estimated that about

500 persons have suffered, the mortality has not been great. Of course, a number of people are still ill, and some are even dangerously so, but as a rule the type of the fever does not seem to have been severe. Amongst its victims we are sorry to count the Rev. Mr. Butler, curate of All Saints', Norfolk-square, and secretary to the Dudley Stuart Refuge. The cause of the fever is now so clear—the contamination with typhoid excreta at the farm in Oxfordshire of a well from which water used in dairy purposes was drawn is so clearly established, and the limitation of the fever to persons who partook of the milk so contaminated has been so carefully made out—that further proof is almost superfluous. It is furnished, however, by the fact that the spread of the fever has abruptly ceased with the discontinuance of the infected milk-supply. There may, however, even yet be a danger of its extending if the utmost care be not taken in every case to destroy by processes of disinfection the contagium which is contained in the excreta of each patient.

England continues free from cholera—a fact on which we may greatly congratulate ourselves, considering its prevalence in Hamburg and the Baltic ports. The last advices contain the official announcement of its presence at Stettin. It is also at Munich; and if the accounts of the numbers who have succumbed to the disease in Hungary are rightly reported, it is clear that the cholera of 1873 has lost none of the virulence of former years.

The Executive Committee of the General Medical Council met on August 7. A letter was read from the examining bodies in Ireland co-operating for the formation of a Conjoint Board of Examinations, which stated "that the licensing bodies co-operating in this scheme have unanimously resolved to adhere to the Preliminary Examinations defined in Clause V. of the Scheme (June 28, 1872), and to add to the number of examiners two additional Examiners in Practical Pharmacy, to be nominated by Apothecaries' Hall." They also request that the Committee will convene a meeting of the General Medical Council to consider the Scheme as so amended. Subsequent correspondence shows that the number of examiners to be appointed by the Apothecaries' Hall in pharmacy has been raised to three with the consent of the King and Queen's College of Physicians and the other co-operating bodies. The whole of the correspondence was ordered to be entered on the minutes, but the Executive Committee (very wisely, we think) resolved "That it is inexpedient to call at present a meeting of the General Medical Council." It would therefore seem that the Conjoint Scheme in Ireland is accepted by all the medical authorities except the Queen's University. But if the General Medical Council is to be called together each time a medical examining body sends in its adhesion to one of these schemes, the accounts of the Council would soon show a far less flourishing state of finances than at present. If it be true, as is rumoured, that the Government will early next session give the Apothecaries' Society of England the same aid in passing an enabling Bill through Parliament that was given to the University of London, we may see a Conjoint Board in England started with the adhesion of all the English examining bodies in 1874. But Scotland still breathes defiance, and we shall have an exodus of English students to Scotland, drawn thither by the attractions of examinations cheaper in money and requirements.

The gloomy apprehensions which we thought it right to make public with regard to the Ashantee war are only too likely to be realised. The *Times* correspondent's letter tells of small-pox, enteric and remittent fevers, and dysentery of unusually severe type. The sanitary arrangements seem until quite recently to have been as bad as possible, and there was no proper sanitary inspection or staff of sanitary officers. Deputy Surgeon-General Home, V.C., C.B., is now doing all he can, with the help of a sanitary commission, to improve the state of things; but he himself has been very ill with dysentery, although he courageously refused to leave his post and to return to England. The *Times* correspondent writes—"The unhealthy condition of Cape Coast continues, and is daily and hourly increasing. We may add that the Ashantees are not yet conquered."

We learn from a statement in the *Bristol Times* that the resignation of the honorary medical and surgical staff of the Bristol Hospital for Women and Children arose, not from the fact that a lady doctor had been appointed house-surgeon, but simply because she refused to carry out the orders of the honorary staff. The same paper announces that the hospital is now under the care of an efficient honorary medical staff. We do not know who may compose the new staff, but we hope that no professional men of any standing and respectability would take office in an institution from which the medical officers have been compelled under such circumstances to retire.

There has been a report circulated in some of the daily papers that Dr. Braxton Hicks, of Guy's Hospital, had died from a poisoned wound. We are most glad to say that this is unfounded. Dr. Braxton Hicks, we believe, did injure his right hand, but he is now, we are happy to say, quite convalescent.

We are glad also to observe that Mr. Erichsen is now recovered sufficiently to appear in professional circles again, and will be prepared to commence work in October at University College.

Nélaton, the eminent French surgeon, still lies in a very precarious state.

INDIAN MEDICAL SERVICE.

The new Royal Warrant for the Indian Medical Service (says the *Army and Navy Gazette*) has at length been published. Its prominent feature is the abolition of Assistant-Surgeon—Henceforth the Surgeon takes the lowest step in the scale, rising, after twelve years' service and due passing of tests, to the rank of Surgeon-Major. His subsequent rise to a Deputy Surgeon-General and a full Surgeon-General will be determined by "selection for ability and merit." At fifty-five years of age the Surgeon-Major, if unpromoted, must retire, and the same lot will await all Surgeons of the two highest grades after sixty-five years. This rule, however, is partially relaxed in favour of Surgeons who entered the service before January 13, 1860. Room is also left for "special cases" when the continuance of an officer in active employment may "appear to be for the good of our service." This Warrant is more liberal than might have been anticipated, but it still, in some respects, shows a spirit unfriendly to our brethren. It is to be hoped that the "relaxation" of the rules mentioned will be carried out to its utmost extent in favour of those whom it concerns.

INFLAMMATION OF THE CORNEA IN AFFECTIONS OF THE TRIGEMINUS.

Professor Eberth, of Zürich, proposes a new explanation of the occurrence of keratitis after section, injury, or disease of the fifth cranial nerve. This pathologist, whose observations and opinions are worthy of the greatest respect, has for some time maintained that the severity of the process in traumatic keratitis depends upon the conveyance of bacteria into the cornea by the foreign body, and not upon the trauma directly. He now describes (*Centralblatt*, July 19, 1873, No. 32) the occurrence of a similar keratitis without any external wound whatever—by the settlement of the organisms in the cornea after section of the trigeminus. The exophthalmos, loss of sensibility, diminished nictitation, and the desiccation of the exposed corneal surface lead on to inflammation, with the production of bacteric masses indistinguishable by the microscope

from the condition in diphtheritic keratitis. The most superficial puncture of the affected spot causes a rapid extension of the disease. The second element, therefore, which has not been previously recognised in the etiology of keratitis after injury of the fifth nerve—but which, according to Eberth, is essential—is the presence of bacteria in the atmosphere. Both the condition of the globe after the section or disease of the nerve, and the condition of the atmosphere, will of course vary in different cases. The occurrence of the keratitis will therefore be influenced by the degree and extent of the desiccation, the amount of protrusion, and the size of the ocular aperture. And, on the other hand, the quantity of bacteria in the air and the presence of epithelial abrasions will determine the severity, rapidity, and extent of the inflammatory destruction.

DEATHS FROM STARVATION.

In the central division of Middlesex, according to a Parliamentary return issued last week, no fewer than eighty-three persons died from starvation last year, or from disease accelerated by want of food. Only four of these persons were receiving outdoor relief. Thirteen deaths so caused occurred in the Eastern Division of Middlesex, and one only in the City and Liberty of Westminster. No death from privation occurred in the City of London and Southwark.

VACCINATION IN SHOREDITCH.

According to the last periodical return, presented to the Shoreditch Guardians last week, there had been 2627 births in the half-year ending at the commencement of June last, and of these 2039, or 85 per cent., had been successfully vaccinated.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

The thirty-fourth annual report of the Registrar-General has just been issued for the year 1871. It is most valuable and interesting for its comprehensive details, and statistics of the health, disease, and mortality of England. It exhibits great skill in its design and arrangement, is clear, intelligible, and masterly, and affords information and suggestions of the highest importance to the national health.

"The number of deaths registered in 1871 was 514,879, or 450 less than were returned in 1870 out of a population which is estimated to have increased by 281,496 in the following year. The excess of births over deaths registered in 1871 was 282,549; with the exception of the years 1867 and 1868, the greatest balance on the side of growth ever recorded in any year since registration was instituted in this country. To every 1000 of the population there were 22·6 deaths in the year, the mortality having been slightly below the rate for 1870, while it was also a little above the average annual rates in thirty-four years. Such average, represented by the mean of thirty-four annual rates, was 22·4 per 1000; in sixteen years of lowest mortality since 1840 the average annual rate was 21·5, in fourteen years of highest mortality 23·4: the year 1871 approached more nearly to the high than to the low average. In the most unhealthy year (1849) of the series there was one death to every forty persons living, in the healthiest year (1856) one in forty-nine. The healthy and unhealthy years do not alternate singly, but mostly in groups of three or four years; a reason for this appears in the fact that the death-rate is to a great extent governed by the mortality from zymotic diseases, and that an epidemic of either of these commonly takes two or more years to run its course.

"*Sex and Age.*—The 514,879 deaths registered in 1871 comprised 265,563, or 51·6 per cent. of males, and 249,316, or 48·4 per cent. of females. Males constitute 49 per cent., females 51 per cent. of the living population, and the ratio of males dying to males living in 1871 was 23·9 per 1000, of females dying to females living 21·3. So taking the deaths alone the proportion of males to females dying was as 107 to 100, but having regard to the larger number of females in the population out of which the deaths occurred, the proportion of male to female deaths out of equal numbers of both sexes living was as 112 to 100. The rate of mortality at all ages among males has somewhat increased of late years, while the female rate has diminished. The ages of the population at the Census of 1871 having now been ascertained, the rate of mortality of the two sexes at different ages in 1871 was, of males at the rate of 23·9 per 1000 living; of females 21·3. In the first five years of life the male rate was 71·7, the female 62·4; at ages 5 and under 10 years 8·3 and 7·5; at 10-15 the rates are at their lowest, 4·4 for males, 4·5 for females; at 15-25 both sexes experienced a nearly equal mortality, 7·7 and 7·4; thenceforward both male and female rates increase to the end of life, the male being invariably highest, as at 25-35 male 11·1, female 9·7; at 35-45 male 14·4, female 12·3, and so on. Comparison of the mortality in 1871 with the average annual rate in 1861-70 shows for males a diminution of nearly 2 per 1000 in the rate of deaths at ages 0-5, an increase of about 1 per 1000 at ages 25-65, and a decrease at the more advanced ages; the female rate in 1871 at ages 0-5 was 1·4 per 1000 below the ten years' average, at ages 5-55 there was no difference worthy of note, at 55-65 there was an increase, and at 75-95 a decrease. The rates at the extreme ages of 95 years and upwards fluctuate greatly in consequence of the relatively small number of cases coming under observation."

The causes of death in 1871 were—

"1. *Zymotic Diseases.*—The 123,030 deaths by this class of causes, marshalled under four orders, exceeded the average numbers; and the excess was entirely due to small-pox. In the previous year the excess was due to the epidemic of scarlet fever. Since the year 1865 diarrhœa has been unusually fatal. The cholera epidemic of 1866 was preceded and followed by epidemics of diarrhœa. In the miasmatic order, scarlet fever, which was at its maximum in 1870, was still a leading disease; but fever was declining. Enteric fever was by far the most fatal of the three forms of continued fever. Among the enthetic diseases, syphilis is the most fatal, for to it 1742 deaths were referred. The rate of mortality by this disease is lower than it was in the three previous years. Hydrophobia prevailed quite epidemically in this year. Never before did so many die of this distressing disease. The deaths by it in the four years 1868-71 were 7, 18, 32, and 56. To alcoholism in one form or other 740 deaths were referred; 370 having been registered as delirium tremens and 370 as intemperance. This class of deaths attained the highest pitch in 1865, when 612 deaths by delirium tremens, and 437 by intemperance were recorded; since that date the deaths have declined. No doubt many other diseases are indirectly the result of drinking to excess, so that the deaths by alcoholism are understated; but as the relative accuracy of the returns is probably increasing, the fall of the deaths from 1049 in 1865 to 740 in 1871 is evidence of decrease in the bad habit of drunkenness. The parasitic diseases, including thrush as well as worms, were not more fatal than usual.

"2. *Constitutional Diseases.*—One of the diathetic diseases, gout, is more fatal than delirium tremens, and in its various forms is sometimes entered under disguised names. Scrofula, tabes, hydrocephalus, and phthisis were all below the average rate of their fatality.

"3. *Local Diseases.*—The most fatal order embraces the diseases of the respiratory organs; and it is growing yearly more fatal. The death-rate by bronchitis rose from 1188 per 1,000,000 in the years 1850-59 to 1749 in the ten years following, to 2097 in 1870, and to 2112 in 1871; bronchitis under its name is apparently absorbing cases formerly accounted as pneumonia or asthma and perhaps as phthisis. The deaths by affections of the brain, nerves, and senses vary little from the average; and there is no evident increase. To convulsion fewer deaths were referred than in previous years; yet their number was 25,309. Apoplexy and paralysis and insanity were somewhat more fatal in the year than previously. Heart disease is occurring more frequently in the returns than it did, and its causes require fuller investigation. It is now fatal to 1 annually in every 1000 living, and the deaths in the last year were 26,219. Diseases of the digestive organs were not fatal to so many; yet of them 21,621 died, including 8711 by the various affections of the liver. The diseases of the urinary organs were fatal to 7628 people; those of the organs of generation, locomotion, and the integumentary system together were fatal to only 4616 lives.

"4. *Developmental Diseases.*—9650 deaths are ascribed to premature birth, 1418 to malformations, including 570 by cyanosis, 390 by spina bifida, 458 by other malformations, and

4108 by teething. The mothers who died in childbirth were 3935, including 1464 by puerperal fever (*métria*), which during the last two years has been more prevalent than it had been since 1864 and 1865, when the disease was epidemic. The excess in the number of 2471 deaths from what have been called the accidents of childbearing tells strongly in favour of the efforts that are being made for the education of the midwives by whom so many of the women of England are attended. The deaths of children under one year of age amounted to 125,868. No less than 9650 of these were born prematurely. The causes of the deaths of 22,463 are returned as atrophy and debility; these are cases of defective nutrition. Nearly the same number, or 20,089, are classed as deaths by convulsions. Then 15,662 of the deaths were by diarrhœa. Thus, adding these numbers together, we have 58,214 deaths of infants from causes by no means clear; by ill-defined diseases; or by diseases which are symptoms either of other diseases or the consequences of improper nutriment. The deaths of 1224 infants are directly ascribed to the want of breast-milk, and no doubt this is only a small proportion of the numbers who die or are irreparably injured for want of nature's food. A large number of the deaths of infants were from small-pox, measles, scarlet fever, and hooping cough; scrofula, tabes, phthisis, water on the brain. Bronchitis and pneumonia are two of the other great causes of infant death; to those diseases 18,245 deaths are due. 1723 infants died violent deaths, of which 1568 were returned as accidental, including 1098 infants suffocated, generally by overlaying. 147 cases of infanticide out of the 125,868 dying were returned by the coroners.

"5. *Violent Deaths.*—The number of violent deaths in England is exceedingly great, and it is increasing. The numbers so returned were 11,727 in 1838, 14,040 in 1854, and 16,993 in 1871. A part of the increase is due to increase of population; but correcting for this, the general result is, that in the year 1854 the violent deaths to 1,000,000 living were 759, on which there was no considerable increase until the years 1863-4-5, when the rate of violent deaths rose to 772, 826, and 835; that year 1865, was the maximum, for through the next five years the rate declined to 745 in 1870, but was 752 in 1871. By suicide the deaths to the million living were remarkably uniform; 66 in 1858, and 66 in 1871. By homicide, including infanticide, in the same years the rate was 18 and 17, there having been a slight swell up to 23 in the cholera year 1866. Executions declined. The greatest reduction is in the violent deaths by burns and scalds, which fell from 162, 153, and 161, in the years 1858-59-60, to 116 in each of the last two years 1870-71. The deaths by drowning registered at home have also declined. The numbers drowned at sea were registered by the Registrar-General of merchant seamen; they amounted to 2476, of which 1500 happened by wreck, 976 by other accidents or negligences."

FROM ABROAD.—TREATMENT OF RECOVERING LUNATICS—DEATH-RATES IN AMERICA AND EUROPE — SUPPRESSION OF AN ANATOMICAL MUSEUM IN BOSTON.

THE *Philadelphia Medical Times* (June 28) publishes an interesting letter from a recovered lunatic, some portions of which we reproduce, under the conviction that they advert to points that are not sufficiently taken into consideration. After stating that he had been an inmate of three asylums, and that he had inhabited one of these long after being sufficiently well to observe and form a judgment of what was going on, and adding that in all these asylums he had received great kindness, he proceeds to say—

"I have talked with many insane people, and found that many of them have pains and physical annoyances which are not much looked after in asylums. I was surprised to find lately that examination of the urine is necessary, and know that no one in any of these places did look at mine. Asylum doctors cannot be much blamed, because where I have been there was always too few doctors, and the youngest ones were always going and coming. Even if a doctor lives among crazy people constantly he must tire of their complaints, of which so many are false, and therefore must be heedless of real ones. My remedy would be to get one or two doctors outside to come once a week and see such cases, and perhaps they would be fresher to see into bodily ailments.

"I saw in asylums many persons who were harmless, and who I guess would be more happy at home, and sometimes were really incurable. I suppose that if the cause of a man's madness was in what surrounded him at home he ought to be away from it; but if this is not so, why must he be in an asylum unless he be so handled by his disease as to be dangerous? It may seem a little thing, but I used to have at home a great variety of eating, and in one asylum, though food was in plenty, it was coarser than people well off at home are accustomed to, and it was not various. Perhaps if the visiting doctors could come in at meals now and then, it would be a good thing. As to managers, they come on set days, and know very little of all that goes on. The worst complaint I can make is what kept back my recovery a long while. I saw in asylums many people who were just so far well that the monotony of their lives was dreadful. You cannot amuse a man all the time; and if a man has been a hard worker, as he gets better he ought, as I think, to be put to work. I would say—Do so much labour of one kind or another, and if you do it you will have certain privileges—better diet, a moderate use of tobacco if wanted, or a ride outside. I was a long while just so that if I had had a reason to work I would gladly have done it, in a garden or a field. Cannot this be carried out as a system in some asylum? No one but a nearly sane man knows what it is to have to walk about with more crazy people all around, and to have just games and the like to fill up his day. My own feelings would make me think that good hard labour would help some people as they got better."

Dr. Russell read a paper at the New York Academy of Medicine on the "Mortality in the various States of the Union," of which the following abstract is given in the *New York Medical Record*, July 1. Both the American and foreign data have been obtained from official sources:—

"The highest death-rate in the United States was given by Memphis—viz., 46·6 per 1000 inhabitants; in Savannah it was 39·2; in Vicksburg, 36·5; in Troy, 34; in Hoboken, 32·9; in New York, 32·6; in Newark, 31·6; in New Orleans, 30·6; in Boston, 30·5; in Philadelphia, 26·1; in Brooklyn, 28·1; in St. Louis, 20·1; in Chicago, 27·6; in Baltimore, 25·1; in Cincinnati, 20·5; and in San Francisco, 17·2.

"Of the larger British cities, Dublin yielded the greatest death-rate—viz., 29·9, that of Manchester being 28·6, of Glasgow 28·4, of Leeds 27·9, and of Liverpool 27·1. The death-rate of London was as low as 21·4—less than that of any other important city. On the Continent the highest death-rate was the enormous one at Prague of 48·9 per 1000. It was also excessive in Cadiz—44·7. In Munich it was 41·8; in Rome, 36·7; in Naples, 35·7; in Florence, 31·1; in Athens, 33; in Berlin, having a little less population than New York, the mortality is nearly the same—viz., 32·3 per 1000. In Bologna it was 32·2, and in Vienna, Genoa, Stockholm, and Nice 31·8—the deaths of invalid strangers greatly augmenting the mortality of this last city. High death-rates also prevailed in Havre, Rotterdam, Leghorn, Venice, and Milan, ranging between 31 and 30. In Paris it was stated at 21·1; but all deaths of strangers and travellers are there excluded. The lowest mortality was given by the Swiss cities in Zurich, Geneva, and Basle—viz., 13·9, 19·4, and 20·9, and in Christiania 20·7. Algiers furnished the rate of 33·6. Those of Bombay and Calcutta were by no means high—viz., 29·2 and 25. In Madras the rate rose to 35, in Montreal to 37·3, and in Havana to 35·1. The highest known rate prevailed at Valparaiso (the only South American city returned), where it was 66·9 per 1000."

We believe that some of the figures here given need verification.

From an account which appears in the *Boston Medical and Surgical Journal* of July 24 we learn that that city has been as well as our own, defiled by one of the so-called "Anatomical Museums." However, prompt and decisive action has been taken for its suppression. It seems that no such exhibition can there be opened without the licence of the Corporation, and a successful application has been made for the withdrawal of this.

"It will be remembered that the destructive fire of May 30 swept away one of the disgraces of the city, 'Dr. Jourdain's Gallery of Anatomy.' The exhibition was a type of its class. It was a collection of anatomical models and dissections, with

representations of skin and venereal diseases, most improper for public exhibition, and calculated to excite the morbid curiosity of the young, together with its peculiar forms of hypochondria. Vile pamphlets were at hand to induce those having or fearing disease to consult the proprietor. The harm which this single establishment must have done cannot be calculated. Directly after the fire a sensational notice appeared in the papers to the effect that orders for new specimens had been sent by telegraph to some of the capitals of Europe, and that the place would reopen."

This, however, was prevented by the prompt application of the "Boston Society of Medical Observation" to the Mayor and Council, calling upon them in the name of morality and public decency to refuse their licence, and offering to produce evidence as to the indecent and immoral character of the exhibition in question. The Society received the gratifying reply that not only would the licence be withheld, but that a similar licence which had been applied for on account of a similar exhibition had been refused. The Society calls upon the profession in other parts of the country to imitate this line of action; for even when such prompt co-operation on the part of the civic authorities may not be forthcoming, at least the public will be made aware that a protest against so mischievous a nuisance has been entered, and in that way its opinion eventually influenced.

PROFESSOR HOLMES'S LECTURES AT THE COLLEGE OF SURGEONS.

Abstract of Lecture VI.

Continuing the subject of the treatment of axillary aneurism, Professor Holmes remarked that although he had dwelt on the possibility of the cure of this disease by compression, and had urged its trial in the place of the ligature of the subclavian, he would not have it supposed that the treatment is one to be lightly undertaken or easy to carry out. Experience has proved that there are cases in which intermitting or rapid pressure may be successfully employed; but can we distinguish such cases? or ought the surgeon always to commence treatment by a trial of pressure? The latter would be an improvement on the indiscriminate resort to the ligature, but Mr. Holmes is not certain that indications may not be found for selecting those cases in which pressure gives most promise of success, or in which it is most desirable to reject that treatment. In the first place, there are some cases usually classed as axillary aneurism, but which may be more accurately described as rupture of the axillary artery, on which, as far as present experience goes, pressure has but little chance of succeeding. In these the essential features of aneurism—viz., a sac capable of contracting on the coagulating blood—is wanting, and without the assistance of this contraction not even the ligature of the artery above can be trusted to succeed, still less the certainly feeble influence of indirect compression. The Professor thinks that in cases where there is good reason to believe that an artery has been ruptured and no complete sac has formed, the old operation, if practicable, should always be preferred; and he referred to a very interesting paper by Dr. Liddell in the *American Journal*, January, 1864, in which the author describes a case of traumatic aneurism from gunshot, and concludes (without having at that time seen Mr. Syme's writings) that in many such cases the old operation is to be preferred.

Again, there are cases of axillary aneurism in which the tumour—or, as Professor Spence thinks, the action of the nerves irritated by the tumour—has raised the clavicle so much that compression of the subclavian is rendered doubly difficult. In such instances the ligature of that artery is also an operation of much difficulty and danger, and the surgeon, before attempting it, should maturely weigh the other plans which have been proposed for the treatment of such aneurisms—viz., electro-puncture, coagulating injection, manipulation, and the old operation as practised by Mr. Syme. They may be taken, perhaps, in that order. Electro-puncture is, Professor Holmes thinks, on the whole the least dangerous. The injection of perchloride of iron will usually be prohibited by the impossibility under these circumstances of suspending the circulation, though, if the elevation of the clavicle is not extreme, it may be possible to compress the artery for the short time requisite for this purpose, and it then holds out a more definite prospect of cure than galvano-puncture. Manipulation can only be expected to succeed when the sac is of rather small size and contains some clot already. But then a tumour of this kind can only under exceptional circumstances so elevate the clavicle as to preclude the more ordinary methods of treatment.

The use of electricity in the treatment of aneurism has up to the present time been reserved almost exclusively for the treatment of internal aneurisms; and very properly—since, whatever may be the future prospects of electrolysis, we do not as yet know enough of its effects on the blood of an aneurism to enable us to predict what will be its results in any given case with any approach to certainty, and for external aneurisms we possess means far more uniform in their action, and far more successful.

That manipulation might be successfully practised in axillary aneurism Professor Holmes does not doubt, though it seems to him that the effects of this method of treatment are too uncertain to render it likely ever to come much into use in a form of aneurism like the axillary, where the artery leading to the tumour is usually fairly accessible. Yet, if pressure has been tried in a case and failed, if the condition of the patient or of the artery renders the surgeon unwilling to risk the operation of ligature, and if there is evidence of the presence of a good deal of clot in the sac, in such a case there would be a fair opportunity for attempting to dislodge a portion of this clot and push it into the distal opening of the sac.

The surgeon's object in manipulation is to produce the same effect designedly as occurred accidentally in two cases referred to by the lecturer—viz., one by Beck, of spontaneous cure of axillary aneurism by the impaction of clot; and the other a similar case related by Poland, in which spontaneous cure by impaction occurred under the use of a compressing bandage. But much more experience of the manipulation-treatment is necessary before we can say what the chance of success may be.

Finally there is the bold proposal of Mr. Syme of reviving the old operation. If the tumour extends so high that pressure cannot be used, and whilst its size prevents the use of manipulation and galvanism, or coagulating injections are either contraindicated or have been tried in vain, the choice of the surgeon must be between the ligature of the subclavian and the old operation. The former is very fatal under these circumstances; the latter is as yet untried except in cases of ruptured artery such as those operated on by Paget, Syme, Callender, and others. The form of the sac and its exact relations to the vein and nerves become now matters of the most vital importance. Besides the great dangers which beset the old operation in every part of the body—viz., disease of the arterial coats where the ligature is applied, and of discovering the lower end of the vessel—there are two dangers special to the operation in this particular situation, one resulting from the close connexion between the brachial plexus and the sac, and the other from the very large relative size of the branches of the axillary artery. The many risks of this operation should therefore lead to its use being restricted to some exceptional cases such as have been specified; and any surgeon who chooses to resort to it must have made up his mind to an operation involving difficulties which he has no means of foreseeing. He cannot tell where the opening of the artery will be found, nor what part may be in contact with the tumour he is going to lay open, nor what branches he may have to tie besides the trunk. He must make all necessary preparations for amputation in case it should prove necessary; and a preliminary incision above the clavicle, through which the subclavian can be immediately secured in this latter event, is a precaution which should never be neglected.

The facts brought forward in reference to axillary aneurism, Professor Holmes thinks, are sufficient to establish the following propositions:—

1. That there are a great number of these aneurisms, both traumatic and spontaneous, which are amenable to gradual intermitting pressure, when carefully applied to the artery above the tumour.

2. That in cases where this is not possible, from the pain which the patient experiences on pressure, the application of rapid total compression under anæsthesia may effect a cure.

3. That the ligature of the subclavian artery is so dangerous

an operation, both from its own risks and from the proximity of the sac, that it ought to be restricted to cases where pressure has failed, and to those in which, from the size and rapid growth of the axillary tumour, the surgeon thinks pressure unadvisable.

4. That the old operation is to be preferred to the ligature of the subclavian in cases of ruptured artery, and that it may be practised in cases where, from the elevation of the shoulder, or from the extent of the tumour, the surgeon would find it difficult to tie the subclavian, or fears in doing so to injure the sac; but that the anatomical relations of axillary aneurism render this a peculiarly hazardous proceeding, and the surgeon should always be prepared to amputate if necessary.

5. That in very large axillary aneurisms, if any treatment be adopted, the arm should be amputated at the joint after ligature of the subclavian.

Aneurisms occurring below the axilla may be divided into arterial ancurisms of the brachial artery, arterio-venous aneurisms at the bend of the elbow, and aneurisms, of the arteries of the forearm and hand.

Arterial aneurisms of the brachial artery are almost always the result of wounds. Yet cases of spontaneous aneurism of this artery are on record. Mr. Birkett gives one such case in the Guy's Hospital Reports for 1862. Another and a very interesting case recorded by Kade was referred to by the lecturer; and references are given by Fischer to three other cases of spontaneous brachial aneurism; and if the three cases by Pelletan, Liston, and Spanton, another reported in the *Gazette des Hôpitaux*, 1860, p. 770, and a second case by Mr. Birkett since the publication of his first case, are added to these, we have all the cases of spontaneous aneurism of the brachial artery of which the Professor had been able to obtain any knowledge. Spontaneous aneurism of the brachial artery is therefore a very rare disease, and when it occurs it is generally significant of disease of the heart, aud is the effect probably of the lodgment of an embolic clot in a weakened artery. Much care should be bestowed on the examination of such a case, and its treatment should obviously not be too active. If cardiac disease or extensive arterial degeneration exists, the patient's life cannot be prolonged, and he is a very bad subject for the ligature; nor is the disease usually in itself so formidable as to justify the risk. So that persevering attempts at pressure should be made (digital by preference), and the artery is so accessible that they will in all probability succeed.

Traumatic brachial aneurism is still more under the influence of compressiou. Fischer's table contains references to fifteen cases which seem to have been merely arterial—*i.e.*, in which there is no mention of any injury to a vein. Digital compression was successfully used in twelve of these cases; in a thirteenth direct pressure effected a cure; in the fourteenth case the brachial artery was tied, but the patient died from erysipelas; in the remaining case digital pressure failed, but no further treatment is recorded. In these aneurisms if compression fails it may be a question whether the old operation is not better than the Hunterian ligature, for the sac is often imperfect, and coagulation consequently either very slow or altogether deficient.

The arterio-venous aneurisms at the bend of the elbow, the result of unskilful bleeding, are now very rare in this country.

The treatment, when any was adopted, before the introduction of digital pressure, consisted usually in the incision of the sac and the ligature of the arterial orifices. Instrumental pressure did occasionally succeed, but not very often, on account of the venous congestion which it caused, and the Hunterian ligature was justly discredited. Such cases as that of Sir C. Bell, of which the preparation was produced, where he tied the artery above the tumour, and the patient died of gangrene, show both the inefficacy and the dangers of tying the artery at a distance from the sac, while the old operation is not very dangerous, and is indubitably curative.

Digital pressure, however, even applied only to the artery above, has frequently effected a cure. Fischer's tables give twelve cases, nine of which were successfully treated by digital compression. In some of these nine cases the pressure was applied to the artery only, but in at least four of them digital compression was applied both directly to the venous orifice of the aneurism and indirectly to the artery leading to it.

The lecturer here referred to a diagram representing the method employed by Vanzetti. The artery and vein are seen communicating on either side with a sac, and Vanzetti had noticed that slight pressure on the apex of the sac stopped the continuous venous murmur. A finger is represeuted in the diagram at this point obstructing the entrance of the venous current into the sac, thus placing the tumour for the time under the same conditions as a common ancurism. Pressure is then made by another finger on some convenient part of the artery above.

Knowing as we now do the efficacy of direct pressure thus applied in conjunction with indirect compression of the artery for the cure of varicose aneurism, it may be worth while to treat cases of aneurismal varix by the prolonged application of that slight amount of pressure which would probably suffice in many of them to close the venous orifice. Allowing that in many of these cases the symptoms are not urgent, still the disease is worth curing if it can be done without danger.

Lastly, we have aneurisms below the bend of the elbow. These are usually traumatic, and therefore, as a rule, affect the most superficial parts of the vessels and those most exposed to injury—the radial and ulnar near the wrist or the palmar arch. But spontaneous aneurism of the arteries of the forearm is by no means so rare as used to be thought. It usually depends either on diseased heart, or is a symptom of extensive disease of the arteries. In either case the patient's general condition is of far more importance than the local mischief. On the subject of spontaneous aneurisms occurring below the axilla, an interesting paper will be found in the *Medical Times and Gazette* for 1865, vol i., p. 567, by Mr. D. Spanton. He discovered records of four cases of spontaneous aneurism of the arteries of the forearm, and, upon inquiries at forty-one of the principal metropolitan and provincial hospitals, he was able to learn of only three other cases. Out of eleven cases of aneurism of the forearm, disease of the heart was proved to exist in five, and was suspected in a sixth. Compression was tried in three of these eleven cases, but with no benefit. Apart from the concomitant disease of the heart or great vessels, these aneurisms are easily curable. Even in the presence of such disease they are very frequently treated with success. Traumatic aneurisms, as well as spontaneous aneurisms, of the forearm and hand are also very often curable by compression, although this treatment also often fails. This depends mainly on the formation of the sac. If the sac is completely formed of stout resilient tissues, compression is likely to succeed. If, on the other hand, there is a weak, flaccid tumour which collapses a little but does not disappear when the pulsation is stopped, leaving an ill-defined bag of fluid blood, the probability is that pressure will fail. If the patient were nervous and irritable, likely to be depressed by failure, and sensitive to the pains of pressure, it would be better to perform the radical operation at once. There is this advantage in the application of pressure to aneurism of the upper extremity which the method does not possess in its application to the lower limb—namely, that it does not necessitate confinement to bed, but the patient can all the while enjoy the benefit of fresh air and exercise. The list of 337 cases of aneurism tabulated by Professor Holmes contains thirteen below the bend of the elbow: seven of these are said to have been traumatic, and an eighth (an aneurism of the palmar arch) probably was so; it was cured by direct pressure.

Indirect pressure was tried in three of the seven cases, and in two with success. In the case where pressure failed, and in three others, the clots were turned out of the tumour and both ends of the artery tied, and in all instances with success. In the remaining case—one of ulnar traumatic aneurism—it is merely noted that the ulnar artery was successfully tied. There was a ninth case, in which an aneurism of the palmar arch had been cut into before the patient's admission into hospital, and where the hæmorrhage proved fatal.

There remain four cases of spontaneous aneurism, one of the radial and three of the ulnar artery. Digital compression was used successfully in one case, the brachial was tied successfully in two; and in the remaining case compression of the brachial failed, but, as the man was near his death from aneurism of the aorta, nothing further was done, and he died a month afterwards.

In Fischer's tables are references to thirteen cases in which digital compressiou has been employed—none of them being comprised in Professor Holmes's list. One of these was a spontaneous aneurism of the ulnar in a patient with diseased heart, and one a spontaneous aneurism of the radial with no note as to any concomitant disease. In the former compression failed, and nothing further was done; in the latter it succeeded.

Of six cases of traumatic aneurism of the radial and five of the palmar arch, all but two were cured by compression. In one of these two cases the injection of perchloride of iron, and in the other the ligature, effected a cure.

It will be seen from this account that in traumatic aneurism of the arteries of the forearm there is good prospect of cure by digital pressure. When this has failed, Professor Holmes would always be in favour of the ligature of both ends of the vessel, not being aware of any case in which it has failed. They have, it is true, been treated with success in various other ways—by the injection of perchloride of iron, by the action of chloride of zinc, and by galvano-puncture. It is even possible that cures may have been effected by the Hunterian operation. But all these methods are, to say the least, quite as dangerous as the simple incision of the sac, and far more uncertain; so that there seems no reason for submitting the patient to any such experimental surgery. In those cases of spontaneous aneurisms in which, after the failure of compression, the surgeon wishes to proceed further, the brachial artery, the Professor considers, should be tied. But it must be remembered that many of these tumours seem to be of embolic origin, and it is the opinion of many good pathologists that such aneurisms are slow to rupture. It is only, then, in case of rapid growth of the aneurism, or some exceptional condition, such as pain from the neighbourhood of a nerve, that any such operation should be contemplated.

NOTES ON MADRAS AS A WINTER RESIDENCE.

No. IV.

A Few Words on Snakes—Visit to Dr. Shortt—Experiments on different Snake Poisons and different Animals—Properties of Potass as an Antidote.

Coming as I did to India fresh from the perusal of Fayrer's magnificent "Thanatophidia of India," and puzzled, as one cannot help being, by the controversy connected with Professor Halford's discovery of the use of ammonia in snake-bite, I hoped eagerly to be permitted to see some of the experiments of the great Madras ophiologist Dr. John Shortt; and I was not disappointed, for Dr. Shortt not only devoted a morning to the demonstration of his most interesting and dangerous collection of live snakes, but invited all the leading members of the medical profession to be present, and gave a sumptuous breakfast afterwards, to which the ladies of their families were invited. Nothing in the shape of hospitality could be more perfect, and nothing could offer a stronger or more exquisite contrast to the horrors and dangers of the snake experiments.

At 7 a.m. on a certain January morning the party assembled at Dr. Shortt's house near Madras. There we were invited to walk into an adjoining yard, where our curiosity was first gratified by the sight of Dr. Shortt's snakemen—a wiry set of naked savages from the hills, whose dexterity and courage in handling the snakes we had plenty of opportunity of admiring. When they put a stick neatly on the back of a snake's neck, and their great toe on the end of the creature's tail, it was quite at their mercy.

Then we inspected the snakes themselves, which were kept in cages in an outhouse, and learned incidentally how they would eat frogs when refusing every other aliment. There was the cobra, the bungarus, and the daboia—the last a sluggish, virulent brute with a shawl-pattern.

Then began some experiments—first, to show us the effects of the poison generally. Our host's snakemen had collected a set of most mangy, miserable dogs—creatures with wolf-like jaws—whom it was necessary to handle as cleverly as they did the snakes, and who little dreamed of the euthanasia in store for them. One of these was bitten by a cobra on the upper and inner part of the thigh. He cried out when the bite was inflicted, but, being let go, soon walked under a bench, where he sat down and began licking the wound, apparently in no pain. It was soon noticed that he dragged the leg a little after him, then that he became drowsy and torpid; after this, salivation, some diarrhœa, and a convulsive fit; but, speaking broadly, I should say that the death was an easy one—the creature seemed to sleep its life away, as if it had been poisoned with some intense narcotic poison. To show us the difference in the action of the poison on different animals, a fowl was bitten, which slept itself to death likewise, but much more speedily. It was curious to see how the poor creature tried to keep itself awake and upright, and how it supported its head by resting its beak on the ground.

In these experiments the dexterity and fearlessness which Dr. Shortt exhibited in fixing the snake—first by putting a stick on the back of its neck, then seizing it by encircling its throat close to the head with the finger and thumb, the thumb being applied to the back of the head and the index finger to the lower jaw, so that the snake could not open its mouth without leave, meanwhile he allowing the creature to coil itself round his arm; the evident spiteful delight which the snake took in biting, for it was no mere nibble, but a good firm grasp that he gave, taking as much as he could between his jaws; the look of malignant satisfaction in his dull eyes; and the evident danger of the experiments to the operator and possibly to the bystanders,—all these things, I confess, made me feel horribly nervous, as I was not very well that day, whilst some gallant officers present, though brave as lions, were compelled to ask for a *peg* and quit the scene of operations.

Attempts were made to get snakes to bite each other, and after some trials a cobra bit one rat snake (not poisonous), and a daboia another; but no ill-consequence followed. We then were shown the different effects of the poison of different snakes. For instance, a dog which died from a cobra-bite was cut open, and all the blood from its heart and great vessels taken in a glass vessel. It coagulated firmly, and had the appearance of healthy blood.

We next saw the process by which snake poison is collected and preserved for experimental purposes. The bowl of a spoon covered with silver paper is presented to the snake, and he bites at it. His fangs go through the paper and press against the inside of the bowl of the spoon, where a few drops exude, which can be collected and dried for future use. It was curious to see how unwilling the snake was to let go the spoon, and how Dr. Shortt performed the perilous feat of opening its mouth.

Well, a little of the poison of a daboia so collected was mixed in a spoon with some blood from a living dog. The effect was remarkable. The blood did not coagulate, as did that from the heart of the dog bitten by the cobra, but degenerated into a shiny liquid of arterial colour; and whilst the blood from the cobra-bitten dog displayed its red globules in a natural condition, that mixed with the daboia poison presented them all in a state of dissolution—the globules were shrunk up, collapsed, and empty. This was remarkable considering how little difference there was in the symptoms of the two poisons in the living animals. Nothing like an increased growth of cells of any kind was observed.

We next witnessed a set of experiments to show the effects of liquor potassæ on the snake poison and on animals poisoned with it. For this purpose a solution was made of four grains of dried cobra poison in half an ounce of distilled water. The dried poison had not lost an atom of its virulence (as we afterwards saw) although it was taken in August, 1870. The solution was slightly opalescent. On adding liquor potassæ to a still further diluted quantity, some striking chemical change evidently took place, for it speedily became of a bluish-black colour—at first slight; afterwards intense, like newly prepared ink.

Having satisfied us of the reaction between the potass and the poison, experiments were made on animals. Two dogs injected with the solution of cobra poison into the cellular tissue of the parietes of the chest died in one hour and thirty-five minutes and in two hours and forty-seven minutes respectively; whilst one dog that was injected first with cobra poison, and with diluted liquor potassæ afterwards, survived for four hours and fifty-seven minutes; and a rabbit that was injected with the dark mixture of cobra poison and liquor potassæ was quite unaffected by the operation.

This is a short summary of a most interesting series of experiments which lasted for three hours, and of which I only pretend to give the general results, for I was very unwell at the time, and my memoranda scanty. The reader will see at once that in the effects of the liquor potassæ Dr. Shortt seems to point if not to an antidote yet to something like one. I subjoin an extract from the *Madras Monthly Journal of Medical Science*, containing a case in which Dr. Shortt's diagnosis and treatment were both exemplified. The hæmorrhagic symptoms

from stomach, mouth, and kidneys and the broken-up corpuscles in the urine pointed to the *viper* rather than to the cobra, whilst the use of the potass by mouth, by enema, and by bath, and the recovery, show that there is a thread here in Dr. Shortt's hands which is well worth following out.

Snakes are by no meaus rare in Madras. I heard Dr. Shortt say that there was no "compound"—*i.e.*, garden—without its cobra. One of the largest of his live stock came from the garden of one of the most eminent medical dignitaries. People who walk out at night always carry lanterns, and some carry a piece of chain, which they rattle against the ground to frighten snakes away. It is said that the bangles and metallic anklets of the women are of use in this way. During four months that I spent in a country house near Madras, there was no week in which a snake was not killed near the house—and they came in sometimes. By one of those odd coincidences which puzzle us, whilst I am writing this letter, on the morning of May 23, up rushes a servant, saying, "Please, sar, snake in muster's bed-room." So down I go, and sure enough there is a little olive-green snake, which was discovered under the edge of the matting close to my dressing-table. How did it come there? Why, the matting was rolled up yesterday and taken out into the "compound" to be dusted, and before it was brought in probably one of the snakes which live in the palmyra trees hid himself in it. In fact, where any living creature can hide, a snake can. The fortunate thing is that they seem more inclined to run away than to fight.

It is in vain that you ask for cases of snake-bite at the General Hospital. The people who are bitten die before they can be brought in; but there is one class of exceptions. Dr. Paul tells me that occasionally, but very rarely, a juggler, who had been meddling with his snakes when tipsy, is brought in. But the number of deaths ascribed to snakes in the mortuary register is great, though vague.

Population and Deaths from Snake-bite in the Madras Presidency (*total population* 30,839,275).

Year.	Snake-bite.	Killed by wild beasts.	Snake-bite and killed by wild beasts.
1866	1890	313	—
1867	1810	334	—
1868	2344	288	—
1869	2317	242	—
1870	—	—	2729
1871	—	—	3387
1872	—	—	3116

(In England and Wales, with a population of 22,712,266 in 1871, there were 1126 violent deaths on railways and 1229 deaths from horse conveyance. In London, with a population of 3,254,260, there were in the same year 228 deaths from street accidents.)

The snake deaths and wild beast deaths were *lumped* by command of the Government of India for 1870, 1871, and 1872. They will be separated next year. [The sums paid for destruction of snakes shall be dealt with in my next.] Snake-bites, as I said, are rare in hospitals; but I saw one on June 29 in the Gencral Hospital, Madras. The patient in the preceding night had been bitten by a small bungarus. The snake was killed and identified. The patient was brought to the hospital, where the little toe of the left foot presented two minute punctures. He complained of pain, and was in a desperate fright. The punctures were each converted into a free incision; the foot was put into warm water, with a ligature round the ankle to encourage bleeding; some brandy was given; and next morning the only remaining vestige of injury were the two small parallel cuts. The man was bitten, without doubt, but *certes* there was not a symptom of poisoning.

I subjoin reports of two cases of snake-bite by Drs. Shortt and Paul from the *Madras Monthly Journal of Medical Science*:

Case of Snake-bite—Recovery.(a)

(Under the care of J. L. Paul, A.M., M.D., Surgeon to the General Hospital.)

Y.C., carpenter, aged 40 years, was brought to hospital by the police at 4 a.m. on May 16, 1871. Patient stated that he was bitten by a snake, the character of which he could not recognise, on the dorsum of his left foot at 7 p.m. last night, while on his way to Washermanpettah. He returned in a cart, but did nothing for the relief of his symptoms beyond lying on the pyal of a friend's house in Cholay, where he was found by the police vomiting and purging.

On admission, patient presented symptoms of great depression; he had a stupid, drunken look; eyes dull, listless, with drooping lids and inactive pupils; answered questions rationally but listlessly and in monosyllables; skin cold; pulse very rapid and feeble. The lips were swollen, and some bloody fluid was flowing from the mouth. It seemed at first to issue from the gums only, which were ecchymotic, with the corresponding teeth loosened as if the patient had fallen on his face. But the blood issuing from the mouth was soon found to come from the stomach as well. The urine that he passed was also bloody, and in a few hours he passed a bloody stool. On examining the left foot it was found to be slightly swollen, hot and painful to the touch. On its dorsum a small puncture could be seen from which fluid blood issued on pressure. A plasma of ipecacuan was applied over the wound, and ammonia ℥xxx. and brandy ʒj. every half-hour were prescribed by Mr. Brockman, who saw the case on admission. Dr. Shortt kindly saw the patient at noon, and recognised the symptoms as those arising from the bite of the viper tribe. He recommended the substitution of potash for ammonia, as in his own experiments he had found that snake poison previously mixed with potash was innocuous on injection into animals, and therefore he believed it a better antidote than ammonia in cases of poisoning. Liquor potassæ ℥xx. with brandy ʒj. and water ʒss. was ordered to be given every twenty minutes, and an enema with brandy ʒss. and liq. potassæ ʒj. every hour. The wound was scarified and allowed to bleed, and the patient put into an alkaline bath and retained for half an hour. To have beef-tea and what nourishment he can take. Urine acid, sp. gr. 1020. On boiling a precipitate of albumen fell, tinged with the colouring matter of the blood. Before boiling the urine emitted a bloody or fleshy smell, but after boiling it was distinctly urinous. Under the microscope tesselated epithelium from the bladder, and broken up blood corpuscles were seen.

May 16, 5 p.m.—Bloody discharge from the mouth continues; passed urine, still bloody in character, three times since noon, and has had three or four motions, which are very dark like those passed in melæna, and contain several clotted masses. Drowsy, eyelids drooping; twitching of the muscular fibrillæ in both upper and lower extremities noticed. Temperature rising; as taken by the thermometer 102·8°. Pulse has ranged about 140 since noon. Urine still acid to litmus paper.

17th.—Patient has continued in the same drowsy and listless state, but having little or no sound sleep. He complained of pain in the foot and also in the abdomen several times. Pulse varied, from 130 to 150, small and irregular; temperature 102·3° at 2 a.m. Vomited twelve times during the night, the vomited matter consisting of bloody fluid with clots of blood, which ceased after vomiting a large quantity at about one o'clock; passed eight motions, all more or less bloody, and urine five times. That passed in the earlier part of the night was very dark in colour and acid in reaction; that passed as the morning advanced was lighter in colour. He complained of thirst and took all the nourishment that was given him, with the exception of beef-tea, which he refused on one occasion. Continue the potash and brandy every half-hour and the enemata every third hour. Evening: Patient feels stronger; vomited once during the day some curdled milk, but no blood. Passed four bilious stools with very little blood, and twice urine of lighter colour. Pulse 128; skin warm; says he feels sick from his medicine. Continue medicine and enemata.

18th.—Is still drowsy-looking, with drooping lids. Conjunctivæ yellow, with some jaundice of face. Vomited four times in the night, and had five stools; the vomited matters contain no blood, and the stools are large, dark, and watery, and contain little or no blood. Urine still stained with blood, sp. gr. 1012, of acid reaction. Temperature 100°; pulse 120. Omit all medicine and brandy. Evening: Had three stools during the day, fæculent, frothy and offensive; complains of giddiness and confusion; vomited twice, no blood. Temperature 100·3°; pulse 104. Slept during the day for three hours.

19th.—Patient is still drowsy; sight hazy; conjunctivæ yellow; no motion last night; vomited once; urine contains no blood, sp. gr. 1010, not acid; temperature 99·6°; pulse 98. Poultice to foot.

20th.—He is not so drowsy this morning; eyelids slightly drooping; can discern objects at some distance; conjunctivæ and face still jaundiced. Bowels were moved twice yesterday, the stools are natural; he has passed urine five times, the urine is

(a) Reprinted from the *Madras Monthly Journal of Medical Science: Madras Hospital Reports.*

of a light straw colour, neutral to test paper, sp. gr. 1010; skin warm and moist; temperature 99·4°; pulse 78; the wound is painful and is discharging a thin fluid. Continue poultice.

21st.—Patient looks lively this morning; eyelids still slightly drooping; conjunctivæ yellow; eyes are dim; bowels moved twice, stools are natural. Passed urine five times the same as yesterday; skin warm and moist; temperature 99·4°; pulse 78.

22nd.—Patient states this morning that he feels quite well, expresses a desire to have his food increased; had no stool; temperature 99·2°; pulse 70. There is a little pain complained of in the foot. Continue poultice.

23rd.—Patient is much the same. Continue poultice.

24th.—Patient is improving. Continue poultice.

25th.—Patient is gaining strength, and is improving in health. Continue poultice.

26th.—Patient is doing well; the scarified part is nearly well. To have it strapped with adhesive plaster.

27th.—Quite well. Discharged.

Cases of Snake-bite.(b)

(By John Shortt, M.D., Surgeon Superintendent-General of Vaccination, Madras Presidency.)

To the kindness of Dr. Balfour, Inspector-General Indian Medical Department, I am indebted for a copy of the following letter from Dr. Robertson, of the 1st Regiment N.I., Kamptee:—

"With reference to Circular Memorandum No. 2408, dated May 19, 1871, from the Secretary to the Inspector-General, Indian Medical Department, Madras, I have the honour to report that on the 4th and 5th instant two fatal cases of snake-bite occurred in this cantonment. It appears that on the afternoon of the 4th a woman was collecting some leaves in a garden about a mile beyond the cavalry lines when she suddenly found herself bitten by a snake. She hurried home to her friends in the bazaar, and is reported to have died in about an hour from receipt of the injury. It is believed no treatment of any kind was adopted. Her body was subsequently brought to the dispensary. Immediately above right heel two small punctures were observed, from which a little blood had trickled; there was no œdema or congestion of the limb. About noon on the 5th a man was brought to the dispensary by the police on account of a supposed snake-bite. It was reported that he had slept during the previous night in the verandah of a house distant about two miles from the cantonment; that about 3 a.m. he felt bitten in the back by some insect, but at the time took no further notice of it and went to sleep again. In the morning he felt very unwell, and the neighbours, becoming alarmed, reported the circumstances to the police. On admission he appeared drowsy, but answered questions satisfactorily, and confirmed the above statement. At the part pointed out by him there was no apparent mark of injury, but subsequently two very small punctures were discovered, about two inches to the left of the first lumbar vertebræ. He complained of pain generally all over the body, had slight spasms, and suffered from a choking sensation in the throat, with difficulty of swallowing; pulse small and feeble. After admission he rapidly became quite unconscious; pupils were dilated, and spasms increased in severity and frequency till about 6 p.m., when he died. Immediately on admission half a drachm of liquor potassæ dissolved in two ounces of brandy was given. Unfortunately, the patient was able to swallow only one dose, but an enema containing one ounce of brandy and a half-drachm of liquor potassæ was given every half-hour for the first three hours, and subsequently an enema containing one ounce of brandy and two drachms of spirit. ammon. aromat. The part supposed to have been bitten was rubbed with liquor potassæ. As no punctures were then visible, cupping was not applied. Sinapisms were also applied to the nape of the neck, chest, and epigastrium, and turpentine frictions to the lower extremities. Once or twice after the enema the pulse rose for a short time, otherwise the treatment employed did not appear to produce any effect."

This case is of considerable interest, and it is to be regretted that the other means—such as the potash bath, etc.—were not tried, more especially as the patient was unable to swallow; and it is a pity that in testing the potash treatment any other remedy should have been used.

It will be observed that in Dr. Paul's case of snake-bite—republished above—the patient was not taken to the hospital till nine hours after he was bitten, and on admission he was treated with brandy and ammonia by the Resident Assistant-Surgeon (Mr. Brockman), and as he became worse and passed large quantities of blood by the stomach, urethra, and bowels, and as blood was also oozing freely from the gums, a few doses of perchloride of iron were administered as a styptic to arrest bleeding from the mucous surfaces, but without effect. Mr. Brockman now kindly invited me over, and when I arrived at the hospital it was 12 noon, or eighteen hours after the patient had been bitten. The man was quite drowsy and listless; pulse thready and fluttering; skin dry; mouth, lips, moustache, and hands were stained with blood, which was also oozing freely from the gums. The patient was easily aroused, and replied correctly but listlessly to questions, and soon relapsed into the same drowsy, listless state, with the eyes dull, half-closed, and turned upwards with evident ptosis and inability to look upwards or raise the upper lids. He complained much of pain and numbness in both the lower extremities from the pelvis downwards, the muscles of which were acting spasmodically with constant twitching of the fibrillæ. The left foot was swollen, and the instep had a sodden feel; the visible fang-point was laid open to the extent of two inches; the part was infiltrated with dark blood, and a little oozed out. In my presence both bladder and bowels were voided, and contained much venous or dark-coloured blood. As the man was evidently sinking, and on ascertaining from Mr. Brockman that the patient was getting much worse, I suggested a trial of the potash treatment, to which he kindly assented. The treatment was commenced at 12.30 noon, when the liquor potassæ and brandy, as noted in the case, were administered. The patient was then made to sit in a hot hip-bath, to which was added four ounces of the liquor potassæ, the warm water was thrown over his body, from the shoulders downwards, the incision on the left instep was opened out by the finger, and well washed in the bath with the potash water. The effect of the bath was to relieve the spasms of the lower extremities immediately. The patient was made to wash out his mouth frequently with the water from the bath, in which he was kept for half an hour; and as the wound bled freely in the bath, a pledget of lint was placed over it, a bandage applied to the foot, and on his removal his foot was kept immersed in the bath for some time longer. The patient was seen by Dr. Paul in the evening, who kindly permitted the potash treatment to be continued. On boiling, the urine contained (half-and-half) equal parts of (blood) albumen and urine. The snake that bit him is called rutha vyrien, the bungarus arcuatus, which is readily recognised by the natives, and stands next to the cobra in the deadliness of its wound, except that death does not take place quite so rapidly as in that of the cobra; but it seems characteristic of this species of snake poison to render the blood so fluid that the vessels can no longer retain their contents, which consequently ooze out from most of the mucous openings, and on this account this snake has in Tamil been characteristically termed the blood viper or rutha vyrien. From my own experiments, also, the viperine poison generally has a tendency to cause a fluidity of the blood, and in this quality the bungarus stands at the head of the list. Many people, however, disbelieve this fluidity and oozing of the blood from mucous surfaces by snake-bite, and attribute such reports as fabulous, originating in "travellers' tales." The patient was seen by Drs. Paul, Chipperfield, and Brockman, the Surgeon, Physician, and Resident Assistant-Surgeon of the General Hospital, and also by Dr. Rickard, Assistant-Surgeon doing duty at the General Hospital, Madras. This is the third case of snake-bite cured by the potash treatment: the first two were occasioned by cobras and the present one by a bungarus; the first case was published in the *Lancet*, vol. i., 1870, page 540, the second case in the *Madras Monthly Journal of Medical Science*, vol. i., January to June, 1870, page 450, and the present is the third case. In the first, suction and ligature were called into play; in the second ligature only, in addition to potash treatment; but in this last neither suction nor ligature was made use of, but the potash treatment alone was relied on. The treatment is rational, and not ostensibly miraculous, as reported in the Australian newspapers, where patients from snake-bite are said to be moribund, and on the injection of a few drops of ammonia into a vein immediately start up on their legs perfectly well. Long before I had the opportunity of testing the action of the liquor potassæ on the human subject, I ascertained the property it possessed of neutralising snake poison, and the difficulty I experienced was to introduce some means to expedite its action in the living blood. After repeated trials and experiments, I found that

(b) Reprinted from the *Madras Monthly Journal of Medical Science*.

brandy as a diffusible stimulant roused the nervous system, excited the circulation, and thus carried the potash into it as rapidly as possible, and enabled it to overtake and neutralise the poison in the blood. The secret of success, then, consists in bringing the patient's system rapidly under the influence of the brandy—or in other words to make the patient *drunk* as speedily as possible, and maintain this effect for some time after. During the first forty-five hours of the patient's stay in hospital he took seventy-two ounces of brandy and four ounces and a half of the liquor potassæ by the mouth, fourteen ounces of brandy and three ounces and a half of the liquor potassæ by means of enemata through the rectum, and four ounces of the liquor potassæ was used in the bath he had. In all eighty-six ounces of brandy, and eleven ounces of the liquor potassæ were used in this case!

TREATMENT OF SNAKE-BITE BY INTRAVENOUS INJECTION OF AMMONIA A CENTURY AGO.

Extract from a Letter from F. Fontana *to* M. Gibelin, *Aix-en-Provence.* ("*Opuscoli Scientifici di Felice Fontana*," *page* 125). *Dated Florence, July* 10, 1782. (*Translated from the Italian.*)

"It is very true that our Italian journals report several cures by *ammonia injected into the veins of persons bitten by the viper:* and it is also true that these cases partake of the marvellous and almost of the miraculous. It appears, moreover, that certain individuals have had great pleasure in assuring the public that a true specific against that poison has been discovered,—that which I had sought in vain for many years, and which with philosophical candour I had declared the inutility of searching for. I must confess that it did not occur to me that I should find a remedy in 'Medicinâ Infusoria.' . . . I have experimented with lambs and rabbits. The lambs have been bitten two or three times, but the rabbits twice only, in the thigh, and the ammonia has been injected into the jugular vein immediately after the bites were inflicted. The doses used were of twenty to forty drops—not sufficient, as I had ascertained by experiment, to destroy the animals, for larger quantities might have been hurtful. Three lambs were thus treated, and they all died—two in less than two hours; one in a few minutes. Of several rabbits that were bitten, only two lived for ten hours, the rest died in less than an hour. Twelve experiments, I know, may not be sufficient to prove the absolute inutility of the ammonia in the treatment of viper-bite; but they are sufficient to prove that that fluid is not a specific as it is reputed. And they show moreover that one should not place any confidence in the few favourable cases that are quoted by the supporters of that remedy.

"So long as physicians do not perform experiments, the useful art of healing will not make much progress, and this is the reason why the medical art has remained stationary from the days of Hippocrates until now, whilst all other sciences have been making gigantic strides. The physician regards as a remedy for the disorder that medicament which has been followed by recovery, when in sound logic no other deduction can be drawn than that the vaunted remedy has not killed the patient; and we see that the physician quietly reasons and believes that the sick person would have certainly died had he not been treated by him, and with this supposes that which he does not know, and which is most likely altogether untrue. And it is not sufficient that the patient has recovered, but he is further convinced that without the remedy he must have died."

With reference to the use of ammonia as an external application or administered by the stomach, he says (p. 111, Fontana on Poisons)—"It is, then, a fact proved that ammonia is entirely useless, whether applied simply to the bitten part or whether taken internally, and there is even reason to suspect that it was hurtful."

Royal College of Surgeons.—At a meeting of the Council on Thursday, the 14th inst., Mr. Thomas Rivington Wheeler, of Tunbridge, Sevenoaks, was elected a Fellow; his diploma of Membership dated May 10, 1843. The Council will not meet again until October.

Académie de Médecine.—At the meeting of Aug. 12 the Academy elected into the section of Medical Pathology Professor Hirtz, formerly of Strasburg, and now of Nancy.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, August 18.

Condition of the Maternity Wards, and Causes of Mortality in the Paris Hospitals—Value of New Remedies and Dressings—Cotton-Wool Dressings—Jardin d'Acclimatization—Fattening Chickens—Training Zebras.

In continuation of my note on hospitalism in Paris, I may here observe that the remarks I made as to the insanitary condition of the hospitals in the French capital apply with redoubled force to the maternity and lying-in wards. Here, as in the surgical wards, septo-pyæmia—known under the name of "puerperal fever"—commits great havoc, which may also be attributed to overcrowding; for in one room, where there should not be more than six or eight patients, you will find at least twelve, with only a metre between the beds, and if to this be added the new-born infants, the number is nearly doubled. The cradles of the infants are placed between the patients' beds, which must necessarily reduce the cubic space to a considerable extent; and although this is rather more than that allowed in the other wards, it is still far from sufficient for the well-being of any human subjects, whether healthy or otherwise. Many attempts have been made to remedy this deplorable state of things, but the apathy of the French in these matters is incomprehensible, and the red-tapeism by which the hospital physicians and surgeons are hampered places it out of their power to propose any reform. In confirmation of this, I have heard a celebrated hospital accoucheur say that he had, some twenty years ago, applied for certain measures for the amelioration of the lying-in women and their offspring, and it is only lately that one of those measures has been conceded. This consists in the employment of wet nurses to replace the mothers prematurely confined, or otherwise unable to suckle their children, at least during their stay in hospital.

In conversation with a well-known surgeon on the subject of the great mortality in the Paris hospitals, he said that the true cause was not to be sought either on the walls, in the atmosphere, or in germs, but in the different operative procedures, and the low vitality of the subjects operated on; and in order to prevent septicæmia or pyæmia, the surgeon should have recourse to such methods of operation as would reduce these accidents to a minimum, supporting at the same time the strength of the patient by wine and good diet. The former he would answer for, and his plan consisted in crushing or tearing, not cutting, the tissues, which latter leaves the vessels gaping, and thus facilitates the absorption of putrid or putrescent matter; and if the diet and other comforts were properly attended to, he should never have had a single death in his wards, as he never had one in his private practice. In the hospitals, he continued, the patients had the best medical and surgical advice, but the want of proper nursing and good food nullified all other advantages, and the patients either succumbed from starvation or indirectly from its effects.

Whenever anything new is introduced in medicine or surgery it is generally adopted with more or less of enthusiasm, and before a proper trial is given the operation or cure is often held up as infallible; but, like all things human, its fame is but transitory, or it lasts only till eclipsed by another nine days' wonder, and so on. Thus, it was thought that in the eucalyptus globulus a good substitute was found for quinine in intermittent fever, and balsam of copaiba in gonorrhœa—in both of which these new remedies have signally failed. The propylamine, so much vaunted in rheumatism, is a complete failure; and chloral hydrate as a hypnotic is not in much favour in the Paris hospitals, but it is considered a good antiseptic, and has been lately employed as a detersive in foul ulcers. You are aware that carbolic acid has also been proposed as a substitute for quinine as a febrifuge; but as its use as such has been attended with uncertain results, it has almost been abandoned, and recourse is had to the time-honoured antiperiodics. It is now recommended as a nervine, but whether it will be entitled to take its place as such remains to be seen. M. Bert, a young physiologist, after some

experiments with carbolic acid on animals, which he injected pure into the stomach in doses of three to four grammes for a dog, and one gramme for a rabbit, has come to the following conclusion:—"That carbolic acid in large doses acts principally on the excitability of the spinal marrow, whence result convulsions of a clonic and irregular character which affect in succession different parts of the same muscle. These convulsions leave intact muscular contractility and nervous excitability properly so-called, and are arrested by chloroform, chloral hydrate, ether, curare, etc. In other words, carbolic acid in poisonous doses is a convulsivant, which fact would point to its utility in certain forms of paralysis, or as an antidote to certain poisons. This action of carbolic acid on the nervous system is altogether independent of its effects of another order which it exercises on the organic corpuscles, and of the sort of imputrescible combination which it forms with the divers agents of fermentation and putrefaction which exist in the air." But even as an antiseptic or disinfectant, carbolic acid has considerably fallen, and the essence of the eucalyptus globulus is now extensively employed in its stead. The eucalyptus globulus has certainly a more agreeable odour, but whether it possesses antiseptic properties is another question, which time and clinical experience alone can solve.

The accidents that have lately occurred with the aspiratory instrument have shaken the faith of many physicians and surgeons, and the old plans of treatment in the cases in which the instrument has been employed are being resumed. The "pansement à l'ouate," or cotton-wool dressing, is already on the wane. It is considered by some as being unscientific, and not free from danger; but, setting aside the prejudice entertained against the cotton itself, this mode of dressing large wounds and amputated limbs has somewhat disappointed the expectations of most surgeons here. Not wishing to condemn it without giving it a fair trial, some who had adopted it told me that it was certainly most useful in amputations: the patients felt comfortable with it, but they do not approve of its being kept on so long undisturbed (thirty days on an average) as recommended and practised by Alphonse Guérin, as fatal cases of secondary hæmorrhage have occurred which might have been prevented with the other modes of dressing; whereas, with the cotton-wool employed according to the rules laid down by M. Guérin, it is impossible to see what may be going on under it. Besides this, when suppuration takes place—which it does not always prevent—the pus is retained, putrefaction of the latter takes place, and becomes a source of danger, not only to the patient himself, but to those around him. Taking all these disadvantages into consideration, some surgeons, looking upon the germ theory as a myth, at least so far as regards wounds and ulcers, have made a sort of compromise between the cotton-wool and the ordinary modes of dressing. For instance, Professor Dolbeau, of the Beaujon Hospital, applies the former, and keeps it on for about fifteen days, and then replaces this by other dressings according to the circumstances of the case. He had recourse to this plan, as, in a case of amputation of the leg he had treated in this way, mortification set in, of which he only became aware by the stench which emanated from the limb, which, to save the man's life, he was obliged to remove from above the knee. From his own experience M. Dolbeau also found that in wounds dressed with cotton-wool the process of cicatrisation was undoubtedly slow, and in cases of fracture the formation of the callus was very much retarded. Some surgeons will not have the cotton-wool dressing in their wards on any account—at least, not to the extent employed by M. Guérin. Besides the disadvantages mentioned above, cotton-wool is a dirty dressing, for whilst preparing the wool for use the surgeon and his assistants are covered with particles which become detached and float about in the air, much to the annoyance of the patients in the ward. M. Tillaux, I must say, has been more successful with the cotton-wool dressing, and he employs it in a variety of cases. At the Hôpital Lariboisière, to which he is now surgeon, he lately removed an enormous tumour from the right breast of a woman aged 57. He then covered the wound with cotton-wool and sent the patient home, where she was watched and followed, and recovered in six weeks after the operation, the dressing having been only once changed during all that time. The tumour, which was elastic, irregular, and fluctuating where the skin was red and somewhat thinned, weighed 6½ kilos. (about 13 lbs.) It was not adherent to the pectoral muscles, and began at the nipple. There were no diseased glands in the axilla. The circumference of the tumour at its base was thirty inches and a quarter; vertical diameter, six inches and three-quarters; transverse ditto, eight inches and three-quarters; circumference in the middle, thirty-one inches and a half; and the wound left by its removal measured, when stitched, fifteen inches and a quarter in length. The development of the tumour took place rapidly, and it attained its present size in the space of two years. M. Tillaux diagnosed it to be an adeno-sarcomatous tumour.

Among the promenades in summer, the "Jardin d'Acclimatization" forms one of the greatest attractions. It is situated in the "Bois de Boulogne," just outside Paris, and was founded about thirteen years ago by a private company. The Jardin d'Acclimatization, as it names implies, is intended for the acclimatisation of every species of exotic animals or vegetables, useful or agreeable, domestic or wild; but besides these are also to be found the best specimens of indigenous animals and plants. These gardens suffered a good deal during the Prussian siege and the Commune, and many of the animals disappeared to serve as food for the starving Parisians. They are, however, being restored, and under the able superintendence of M. A. Geoffroy Saint-Hilaire, son of the great naturalist, the Jardin d'Acclimatization is fast recovering its former splendour. I shall not here attempt to give your readers a description of the grounds and all to be seen in the place, but I may mention, *en passant*, that having visited the splendid aquarium, aviary, hothouse, menagerie, etc., I was attracted to a cottage with the words "Engraissement Mécanique des Volailles" written over the door. This is a new establishment, and intended to show how poultry may be fattened for the table at the least possible expense and delay. The process is a cruel one, but, when one considers that these creatures are destined for the food of man, it matters little whether they are killed outright or be prepared for ultimate slaughter. The birds, which consist of common fowls, ducks, and turkeys, are confined in small open stalls, which are just large enough to receive them, and in which they are so fastened that they can hardly move. Here they are fed with an emulsion composed of milk and oatmeal, which is pumped into their gizzards at stated hours. This is all the food they get, and, with the exception of the ducks, which are allowed a little water, they have no other drink. This, I was told by the director, who is also the inventor of the machine, is sufficient to fatten them in from twelve to eighteen days. They are taken in from three to six months old, and the cost of feeding is trifling compared with the other modes. A little further on is to be seen a young filly just foaled, which is looked upon as a curiosity, as it is the offspring of a marc-mule with an Arab horse, and the first specimen of the kind known in France. With the exception of the colour of its coat, which, like that of its dam, is of an iron grey, the filly takes more after its sire. The zebras are the finest specimens I have seen, and M. Geoffroy Saint-Hilaire, the present director, has been trying to train a pair for draught, but he has had to give it up, owing to the indomitable nature of these animals. A cross between a zebra and a horse was produced about six years ago in these gardens, but the colt, which was like its dam, did not survive more than six weeks. The zebras here have never been known to breed among themselves.

PROVINCIAL CORRESPONDENCE.

BIRMINGHAM.

August 6.

GUARDIANS AND THEIR MEDICAL OFFICERS—SURGEONCY OF THE GAOL—SURGICAL INSTRUMENTS—HEALTH OF THE TOWN.

THE medical officers of the Birmingham parish have just had administered to them a most unmerited snubbing by the guardians. It appears that they had the temerity to apply for an increase of salary to the extent of £50 a year, basing their application on length of servitude—most of them having been in office over eleven years,—increased cost of living, both for men and beast, and a decrease of parochial income, in consequence of the loss of the vaccination appointments which they formerly held, and from which they derived considerable emolument. Instead of their application being received in a proper and courteous manner, it was pronounced to be "extraordinary," and unceremoniously shelved for other business of a totally opposite character. In one instance, however, the guardians relaxed in their rigid parsimony in favour of one

of the staff, whose salary they increased by £25 a year, owing to the large number of midwifery cases which occurred in his district.

For the surgeoncy to the gaol, the stipend of which has been reduced to the paltry sum of £100 a year, there are only four candidates, and these all strangers to the town. This shows the slight estimation in which the appointment is held by resident surgeons, who consider the pay for the labour and responsibility involved totally inadequate. The work at the gaol is heavy, and we predict that the authorities in whose hands the office rests will, in the long run, find to their cost that it is not the wisest policy to have work done cheaply.

Our town is becoming quite famous for the designing and manufacturing of surgical instruments. *Apropos* of this subject, we may mention that our attention has been directed to the assortment of Mr. Salt, of this place, who is an F.R.S.L., and who has for many years occupied a foremost place in the list of provincial surgical instrument makers. He is not only a manufacturer, but an author of several important surgical works as well. His new "insufflator," made on the suggestion of Mr. Clay for the treatment of uterine diseases, is a very useful and ingenious instrument. It has been used in chronic, inflammatory, and malignant affections, and the results have been most satisfactory; it is now well known in the profession. This instrument of Mr. Clay's has been modified by Mr. Wilders, of the Queen's Hospital, and made subservient to the treatment of diseases of the urinary passage, more especially in gleet and gonorrhœa, with marked success.

Mr. Salt's clinical thermometer is one of the best of its kind, although two others, similar in appearance and construction, have lately appeared in the market. This thermometer is fixed in an "aluminium" case, and is propelled and retracted in a manner somewhat similar to the American pencil—viz., by rotating the small end to the right and left respectively. In addition to being portable when sheathed and long when protruded, it is the only instrument in which case and thermometer are inseparable. The shape of the case (fluted) prevents it from rolling off the table, and as, when retracted, the thermometer is wholly within the case, it is protected from being broken whilst the index is being replaced. The instrument is neat in appearance, and convenient for the waistcoat-pocket or the ordinary dressing-case.

Mr. Salt has also made a new vaccinator, quite unique of its kind. It is called the "mitrailleuse," and contains within itself a good supply of capillary tubes and two lancets—one fixed and the other movable. It is a capital invention, and will doubtless become a favourite with all public vaccinators.

With the decline of small-pox diarrhœa has sprung up and is assuming epidemic proportions. Coming on with incessant sickness and purging, it is succeeded by cramps and exhaustion. The mortality from it to the present time has not been great. We are inclined to think that one of the principal causes of this complaint here in adults arises from the large quantities of bad beer, in a state of fermentation, which is drunk by the working classes—that which is brewed and concocted on the premises, and which is very far from being pure and unadulterated.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Aug. 14:

Boodle, Robert Maxwell, Park-terrace, Highbury.
Emmerson, Wm. Lindsay, Seaton Colliery, Durham.
Satchell, Walter Alfred, Argyll-road, Kensington.

The following gentlemen also on the same day passed their primary professional examination:—

Bartlett, Henry, Guy's Hospital.
Kellard, James T. W. S., Guy's Hospital.
Collenette, Frank de Beaucamp, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CONOLLY, FULLOM, M.R.C.S. Eng., L.S.A., L.R.C.P. Edin.—Assistant Medical Officer of the Derbyshire Lunatic Asylum, Mickleover, *vice* Mr. Courtenay, appointed Resident Medical Superintendent of the Limerick District Lunatic Asylum.

DAVIES, JOHN, M.R.C.S.E.—House-Physician to the Westminster Hospital for twelve months.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Jacob Edward Dyas, to be Staff Surgeon in her Majesty's Fleet, with seniority of July 12, 1873.

WAR OFFICE.—MEDICAL DEPARTMENT.—Staff Assistant-Surgeon Alexander Neill, from half-pay, to be Surgeon, *vice* Francis Alfred Turton, promoted.

BIRTHS.

BINGHAM.—On August 6, at Church-street, Alfreton, the wife of John J. Bingham, L.R.C.P., M.R.C.S., of a son.

DURHAM.—On August 15, at West House Aldwick, near Bognor, the wife of Arthur E. Durham, M.B., F.R.C.S. Eng., of 82, Brook-street, Grosvenor-square, of a daughter.

EDGELOW.—On August 17, at 18, Hertford-street, Mayfair, W., the wife of George Edgelow, M.D., of a son.

ELLIOTT.—On August 18, at Manor-road, Forest-hill, the wife of John W. Elliott, M.R.C.S. Eng., of a son.

HAYES.—On August 14, at Basingstoke, the wife of Hawkesley Roche Hayes, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

PARSONS.—On August 6, at St. James's-street, Dover, the wife of Charles Parsons, M.D., of a son.

PROVIS.—On August 15, at The Chantry, Mere, Wilts, the wife of W. Provis, L.R.C.P. Edin., M.R.C.S. Eng., of a son.

SAXBY.—On August 2, at Inveray, the wife of Henry L. Saxby, M.D., of a son.

SHILLITOE.—On August 13, at Birch Mount, Sydenham-hill, the wife of Buxton Shillitoe, F.R.C.S., of a daughter.

SMITH.—On August 16, at Vine Cottage, Babbicombe, Torquay, the wife of Clement M. Smith, M.D., of a daughter.

MARRIAGES.

BROWNING—NETTLEFOLD.—On August 16, at St. Stephen's, North Bow, Henry S. Browning, Esq., of 24, Paternoster-square, to Amelia Elizabeth, only child of the late Edward Nettlefold, M.D.

CAVAFY—RALLI.—On August 16, at the Greek Church, London-wall, John Cavafy, M.D., son of G. Cavafy, Esq., of 26, Pembridge-gardens, W., to Marigo, daughter of Antonio Ralli, Esq., of Clapham-park.

CLARKE—MACGREGOR.—On August 6, at 43, East Claremont-street, Edinburgh, Alexander Carson Clarke, M.D., M.R.C.S.E., Manchester, to Jane, only daughter of the late John MacGregor, Esq., Edinburgh.

FORREST—RODGER.—On August 14, at St. Luke's Church, Cheltenham, John, son of the late Dr. John Forrest, C.B., Inspector-General of Hospitals, Honorary Physician to the Queen, to Eveline, younger daughter of John Graham Rodger, Esq., of 1, College-lawn, Cheltenham.

HARRIS—BUCKLAND.—On August 11, at St. Stephen's, Shepherd's-bush, William Harris, L.R.C.P., etc., Melton, Suffolk, eldest surviving son of Henry Harris, M.D., F.R.C.S., etc., Redruth, to Annie Buckland, R.A.M., daughter of James Warwick Buckland, Esq., late of her Majesty's Customs, London.

JELLARD—GEDDES.—On August 13, at Wrabness, Essex, Frederick Pering, only son of the late P. Jellard, Esq., of Kingsbridge, Devon, to Mary Margaret, elder daughter of the late David Geddes, M.D., R.N.

KOUGH—MILLAR.—On August 12, at Monkstown Church, county Dublin, Edward Kough, M.B., of Windlesham, Surrey, to Mary Elizabeth, daughter of Adam Millar, Esq., of Queen's-park, Monkstown, county Dublin.

MAIR—MORGAN.—On August 13, at Llansamlet, Glamorganshire, A. Hunter Mair, M.A., M.B., C.M., of Morriston, Swansea, to Annie Margaretta, second daughter of the Rev. M. L. Morgan, B.D., vicar of Llansamlet.

LANG—SMITH.—On August 13, at St. Patrick's Church, Waterford, Thomas B. Lang, M.D., of Groombridge, Sussex, to Emily, second daughter of Thomas D. Smith, Esq., of Waterford.

SLATER—BEAN.—On July 14, at St. Paul's Cathedral, Calcutta, John S. Slater, Esq., C.E., Public Works Department, Bengal Presidency, third son of the Rev. S. Slater, Simla, to Jessie Frances, daughter of John Bean, Surgeon-Major Bombay Medical Service, retired.

SLIMON—CRONDACE.—On August 12, at St. Mary's, Putney, George C. Slimon, M.D., to Ellen Elizabeth, eldest daughter of the late George Crondace, M.R.C.S., Durham.

WEBB—LOVELL.—On August 12, at St. Michael's, Compton Martin, Somerset, Anthony Edward Webb, of the city of Bath, solicitor, to Ellen Mary, eldest daughter of William Frederick Lovell, of Compton Martin, Somerset.

WILSON—ANDREWS.—On August 12, at Broadwater Church, Taylor Dalrymple Wilson, Lieutenant 21st (R.N.B.) Fusileers, third son of Dr. T. W. Wilson, of Worcester-park, Surrey, late Presidency Surgeon of Calcutta, to Fanny Amelia May, eldest daughter of C. G. Andrews, late Surgeon-Major H.M. Indian Army.

DEATHS.

AUSTIN, EDWARD V., M.R.C.S. Eng., L.S.A., at Reigate, Surrey, suddenly, of heart disease, on August 9, aged 63.

DIXON, HALLAM MOORE, M.D., Medical Superintendent on board H.M.S. *Hamadryad* Hospital Ship, Cardiff, on August 6, aged 43.

EDWARDES, ROBERT, M.R.C.S. Eng., Staff Surgeon R.N., on August 15, aged 38.

SAXBY, HENRY L., M.D., at Inveray, on August 4, aged 37.

TRAVIS, NATHANIEL, F.R.C.P. Lond., M.D. Edin., F.R.C.P. Edin., of Nice, eldest surviving son of William Travis, M.D., formerly of Scarborough, at Brussels, on August 14, aged 71.

WADD, MABEL AGNES, daughter of Frederick J. Wadd, M.B., M.R.C.S. Eng., at Beaconsfield, Bucks, on August 15, aged 2 years.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

ARDWICK AND ANCOATS NEW DISPENSARY AND HOSPITAL, MANCHESTER.—Senior House-Surgeon. Applications, with testimonials, to the Rev.

W. Hutton, Honorary Secretary, 57, Higher Ardwick, Manchester, on or before August 30.

Bournemouth Dispensary.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the President of the Bournemouth Dispensary, care of J. G. Douglas, M.B., on or before August 28.

Brighton Hospital for Sick Children.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

Brighton and Hove Lying-in Institution.—House-Surgeon. Candidates must be M.R.C.S. of Great Britain or Ireland, and L.R.C.P. or L.S.A. Lond. Applications, with testimonials, to the Chairman of the Committee of Management, 76, West-street, Brighton, on or before September 3.

Burton Infirmary and Dispensary.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, J. C. Grinling, Esq., Burton-on-Trent, on or before September 1.

Clayton Hospital and Wakefield General Dispensary.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to John Binks, Esq., Honorary Secretary, Wakefield.

East Suffolk Hospital, Ipswich.—House-Surgeon and Secretary. Candidates must be unmarried, and M.R.C.S.E. and L.S.A., or L.R.C.P. Applications, with testimonials, to the Secretary, on or before September 2.

Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.—Registrar. Particulars may be obtained from the Hospital.

General Hospital, Birmingham.—Resident Registrar and Pathologist. Candidates must be duly qualified. Applications, with testimonials, to the House-Governor and Secretary, on or before September 6.

Inverary (Parish of).—Medical Officer. Applications, with testimonials, to A. Henderson, Esq., Town Clerk, Town Clerk's Office, Inverary, on or before August 30.

Manchester Royal Infirmary, Dispensary, and Lunatic Hospital.—Honorary Assistant-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Board, on or before August 30.

Newcastle-upon-Tyne Borough Lunatic Asylum.—Assistant Medical Officer. Candidates must be registered. Applications, with testimonials, to John Atkinson, Clerk to the Committee of Visitors, on or before August 30.

St. Thomas's Hospital.—Resident Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Treasurer.

Skipton and Settle Union, Yorkshire.—Medical Officer of Health. Candidates must be legally qualified medical practitioners, and registered. Applications, with testimonials (three copies of each), to Thomas Brown, Esq., solicitor, Skipton, on or before September 5.

Ripon Dispensary and House of Recovery.—Resident House-Surgeon and Dispenser. Candidates must be unmarried, and duly qualified Applications, with testimonials, to the Honorary Secretaries, on or before August 30.

Wantage Union.—Medical Officer. Candidates must be duly qualified, Applications, with testimonials, to Edward Ormond, Clerk of the Union. Wantage, on or before September 8.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Alresford Union.—Mr. George Hayles has resigned the Second District; area 22,094; population 3510: salary £100 per annum.

East Ashford Union.—Mr. W. F. Brook has resigned the First District; area 15,752; population 2901; salary £60 per annum. Also the Workhouse; salary £55 per annum.

Loddon and Clavering Union.—The Second District is vacant; area 15,522; population 3834; salary £55 6s. 4d. per annum. Also the Workhouse; salary £40 per annum.

Romney Marsh Union.—Mr. F. H. Wood has resigned the Brookland District; area 7686; population 966; salary £50 per annum.

Tendring Union.—Mr. Allen Freshfield has resigned the First District; area 3306; population 5070; salary £56 per annum.

APPOINTMENTS.

Banbury Union.—John Colegrave, M.R.C.S. Eng., L.S.A., to the Bloxham District.

Bridgwater Union.—Ephraim F. H. Burroughs, L.R.C.S. Ire., L.A.H. Dub., to the Middlezoy District.

Cirencester Union.—John D. Watson, M.D. and C.M. Univ. Edin., to the Western District.

Wigan Borough.—Mr. Ralph Betley as Analyst.

Woburn Union.—George A. D. Mahon, M.R.C.S. Eng., L.S.A., to the Aspley Guise District.

SUPERANNUATION ALLOWANCES.

Longtown Union.—Dr. Wm. Graham has been granted an annual allowance of £30 per annum, after having served as Medical Officer for the Low District and the Workhouse for a period of over thirty years.

Rochdale Union.—Mr. A. Coventry, late Medical Officer for the Spotland District and the Workhouse, has received an annual allowance of £50 after twenty-eight years' service.

Dr. J. R. Shields has been appointed Medical Officer of Health for Llanidloes.

The following medical officers of the volunteer service have lately passed the necessary examination at the Army Medical Board in order to obtain the increased capitation grant for their corps, viz.:—Dr. Baines, Surgeon, and Mr. William Keen, Assistant-Surgeon, 1st Middlesex Engineer Volunteers.

Professor Rokitansky.—This distinguished ornament of the Vienna Medical School has announced to the Professoren-Collegium that next year he will have attained his seventieth year. According to the regulations he should then retire from his professorship, and be placed on the pension-list. It seems, however, that, seeing the great loss his retirement would inflict on the Vienna School—the founder of which he may be almost considered,—an effort will be made to have his case regarded as an exceptional one as long as his present good health and teaching-power continue.

The Anderson School of Natural History.—This establishment, on Pennikese Island, was formally opened on July 8 by an address of Professor Agassiz, the director. The number of students has been limited to fifty-six, being but a small portion of the applicants. There is scarcely a State in the Union that is not represented, most of the pupils being professors and teachers in normal and high schools and colleges. The building which is being erected will contain on its upper storeys the dormitories, while the floor will be arranged as laboratories. Each of the two wings (united by a spacious lecture and dining hall) will contain twenty-eight aquaria and working tables—one for each student, who is responsible for their condition. Want of attention in this matter will forfeit the right of remaining at the School. The island is about sixteen miles south of New Bedford, and is about three-quarters of a mile long by half a mile round, and comprises about one hundred acres. Mr. Galloupe has followed up Mr. Anderson's magnificent present of the island by giving the school a yacht of eighty tons. Professor Agassiz will be assisted by numerous "scientists," among whom are Drs. Wilder and Packard, Count Pourtales, Professors Waterhouse Hawkins, Mitchell, Brown-Séquard, Guyot, etc. In the circular which Professor Agassiz has addressed to applicants he says that Pennikese Island is to be regarded, not as a place for recreation, but real hard work and original observation, little or no recourse to books being encouraged during the summer session. "I want to prepare those who attend to observe for themselves, that they may hereafter be able to make the most of their opportunities for study of nature." It will be obligatory on the part of the students to make special collections to carry home and use as a basis for teaching others.—*New York Medical Record*, July 15.

Cod-liver Oil Loaves.—MM. Carre and Lemoine state that of all means of disguising the taste of cod-liver oil its introduction into bread during panification is the best. Every pound of bread should contain seventy-five grammes of oil (five spoonfuls) and about ninety grammes of milk. Small loaves may be made weighing 150 grammes, and containing only two spoonfuls of oil. They are very white and pleasant to look at, and have so little taste of the oil that both children and adults eat them with ease. Thirty-four of these rolls are delivered every day at the Enfants Malades for the use of M. Bouchut's little patients, and the children look out for them with pleasure. They are easily digested, and create no repugnance whatever. In private practice adults make use of them as their ordinary diet.—*Bulletin de Thérap.*

Removing Bitter Taste of Medicines.—Sugared substances in concentrated solution much diminish bitter tastes. Thus, while the infusion of gentian is excessively disagreeable, its syrup can be very well taken if it be not diluted with water, and weakening the action of the sugar. But the body that seems to enjoy this property in the highest degree is glycerhizin, or the sweet principle of liquorice. By its aid we can almost immediately dispel the bitter taste of quinine, colocynth, aloes, quassia, etc.—merely chewing a morsel of liquorice-root. Aloes may thus be powdered and sifted without inconvenience. The liquorice must be kept in the mouth for a longer time in proportion as the bitterness of the substance to be overcome is intense or its solution more concentrated.—*Rev. Méd.*, July 5.

Electricity in Toothache.—In an interesting paper in the *Bulletin de Thérapeutique* (July 15), M. Bouchaud relates several cases in which this has been successful, and thus sums up his opinion upon the subject:—"If in odontalgia we employ a continuous or constant electric current, derived from a mean of ten elements, applying the positive pole to the cheek on a level with the painful tooth, and the negative pole to the anterior-lateral region of the neck, we are enabled almost always in the course of a few minutes to procure nearly absolute relief, which in the majority of cases persists indefinitely."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Berryman, St. John's, New Brunswick.—Letter with enclosure received.

Lady Students.—The Universities of Göttingen and Heidelberg have resolved not to admit any lady students.

Quis.—Dr. George Bate died at his house in Hatton-garden, April 19, 1668. He was buried at Kingston-on-Thames.

C. and P.—Mr. Graham, Registrar, Somerset House, states that between 1860 and 1869 no less than 26,185 persons were drowned accidentally in England and Wales, giving an average of 2680 per year.

We are requested to state that the Aylesbury Dairy Company is not the company which has been mentioned as having supplied the infected milk in Marylebone and its neighbourhood.

B. E. V.—Mr. Anderson is the House-Surgeon of the Jamsetjee Jeejeebhoy Hospital, Bombay.

Ambrose.—On September 23, 1518, the College of Physicians was incorporated by letters patent granted to Thomas Linacre and others, who were constituted a perpetual "Commonalty or Fellowship of the Faculty of Physic." To Linacre is due the merit of establishing the College.

Secundus.—Peter Templeman was a physician, and practised in London, but in 1753 he obtained a situation in the British Museum as keeper of the Reading Room, and from that time diverted his attention from the profession, and devoted his whole time to literature. He wrote several medical works; was born at Dorchester in 1711.

F. F.—A small edition of "Fruits and Farinacea, the Proper Food of Man," by the late Mr. Smith, of Malton, has been edited for the Vegetarian Society by Professor Francis W. Newman. It is published by Mr. F. Pitman, London.

COMMUNICATIONS have been received from—

Dr. W. Arding; Dr. J. M. Lindsay; Mr. Stocker; Dr. Britton; Mr. J. Ashton; Dr. Braxton Hicks; Dr. H. Harris; Dr. Strange; An Army Medical Officer; Mr. J. Chatto; Dr. Peacock; Mr. F. Howell Thomas; Dr. J. Hughlings-Jackson.

PERIODICALS AND NEWSPAPERS RECEIVED—

New York Medical Journal—Le Progrès Médical—Gazette Médicale—The Halifax Guardian—Guy's Hospital Gazette—Tribune Médicale—France Médical—Lancet—British Medical Journal—Gazette Hebdomadaire—London Medical Record—American Journal of Insanity, July—Berliner Klinische Wochenschrift Centralblatt für die Medizinischen Wissenschaften.

BOOKS RECEIVED—

Moore on Meteorology in its bearing on Health and Disease—Balfour's Statistics of Cholera—Economical Cookery, by Lady Style—Hogg on Skin Diseases—Galabin on the Connexion of Bright's Disease with Changes in the Vascular System—West Riding Lunatic Asylum Medical Reports, vol. iii.—Report on the Hospital for the Insane, Gladesville, New South Wales—Report of the State Lunatic Asylum, Utica, N.Y.—The Harveian Oration for 1873, by Professor Rolleston—Carter on the Microscopic Structure of Urinary Calculi.

APPOINTMENTS FOR THE WEEK.

August 23. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

25. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

27. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 16, 1873.

BIRTHS.

Births of Boys, 1109; Girls, 1127; Total, 2236.
Average of 10 corresponding years 1863-72, 2040 1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	867	741	1608
Average of the ten years 1863-72	760·0	709·0	1469·0
Average corrected to increased population	...	...	1616
Deaths of people aged 80 and upwards	...	...	9

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	4	2	1	8	...	5	...	58
North ...	751729	...	2	2	...	6	...	6	2	100
Central ...	334369	...	...	...	1	6	...	3	...	41
East	639111	1	13	8	...	16	1	4	1	77
South	967692	...	13	4	1	15	2	4	2	129
Total	3254260	1	32	16	3	51	3	22	5	405

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·855 in.
Mean temperature	63·5°
Highest point of thermometer	85·6°
Lowest point of thermometer	48·0°
Mean dew-point temperature	55·0°
General direction of wind	S.W. & W.S.W.
Whole amount of rain in the week	0·55 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 16, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Aug. 16.	Deaths Registered during the week ending Aug. 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2236	1608	85·6	48·0	63·5	17·50	0·55	1·40
Portsmouth ...	118280	12·4	90	31	76·0	48·8	63·5	17·50	0·37	0·94
Norwich	81677	10·9	61	25	81·5	47·5	60·4	15·78	0·43	1·09
Bristol	189648	40·4	137	77	76·4	53·5	61·8	16·56	0·40	1·02
Wolverhampton ...	70084	20·7	44	38	74·7	48·1	61·1	16·17	0·38	0·97
Birmingham ...	355540	45·4	278	188	74·1	50·7	61·1	16·17	0·55	1·40
Leicester	102694	32·0	130	86	...	...	...	...	...	...
Nottingham ...	89557	44·9	62	54	75·6	49·0	59·9	15·50	0·07	0·18
Liverpool	505274	98·9	397	334	70·2	52·0	58·8	14·89	0·36	0·91
Manchester ...	354057	78·9	259	241	76·0	50·5	61·0	16·11	0·59	1·50
Salford	130468	25·2	111	87	74·5	48·6	59·2	15·11	0·56	1·42
Oldham	85141	20·4	58	40	67·0	...	...	...	0·81	2·06
Bradford	156609	23·8	109	83	70·4	50·6	59·0	15·00	0·15	0·38
Leeds	272619	12·6	216	159	75·0	49·0	59·8	15·44	0·09	0·23
Sheffield	254352	11·1	209	152	77·2	46·4	60·6	15·89	0·07	0·18
Hull	128125	35·9	93	72	...	...	...	...	...	...
Sunderland ...	102450	31·0	89	46	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	100	89	69·0	46·0	57·3	14·05	0·12	0·30
Edinburgh	208553	47·1	116	72	69·4	51·3	59·6	15·33	...	...
Glasgow	498462	98·5	331	253	66·4	40·2	56·4	13·55	1·92	4·88
Dublin	314666	31·3	147	99	73·6	45·1	59·9	15·50	1·19	3·02
Total of 21 Towns in United Kingd'm	7507575	34·5	5273	3834	85·6	40·2	60·2	15·66	0·51	1·30

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·86 in. The highest was 29·96 in. on Thursday evening, and the lowest 29·69 in. on Saturday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture VI.—Valvular Diseases.

(*Continued from page* 170.)

Aortic Valvular Disease.

1. When the aortic valves are malformed, the segments may either be increased in number or deficient, and in either case it is probable that the valvular apparatus is less efficient, and more liable to become the seat of disease in after life. The most common condition is that there are only two segments, one of them being much larger than the other, and displaying on its upper or arterial side the appearance of a rudimentary separation. Less frequently all the curtains are more or less completely united, and there are the indications of imperfect division in the form of three frœna, or, as they were termed by Mr. Hunter, *cross bars*, on the upper side. When there are only two curtains, the larger one is imperfectly supported towards the centre, and is apt to be stretched and fall below the other, and often its edge becomes everted, in either case admitting of regurgitation. The larger fold also is apt, at the point which indicates the imperfect division, not to expand adequately with the progress of growth and in correspondence with the increasing calibre of the aortic orifice, and so when the valves fall back an aperture may be left by which the blood may regurgitate into the ventricle. This condition is, therefore, more especially liable to lead to incompetency; but the valves are also apt to be the seat of acute or chronic inflammation, and so, being thickened and indurated, to become also a source of obstruction.

When there is only one imperfectly divided valve, there is probably always some obstruction to the flow of blood from the ventricle, though the gradually increasing power of the muscular walls may so completely compensate for the narrowness of the opening that no symptoms of the defect may arise. The condition is, however, a constant source of irritation, and the valves may thus become increasingly thick and rigid, till at length, the obstruction being no longer capable of being overcome, or the power of the ventricle being prostrated under some general depressing influence, or the muscular structure undergoing interstitial changes, and so becoming incapable of active contraction, the symptoms of aortic obstruction develope themselves. In other cases the symptoms arise during the progress of an attack of rheumatic fever from the occurrence of endocarditis of the defective valves, which under such circumstances are specially liable to become the seat of inflammation, and so the original defect is aggravated. A remarkable example of this kind, in which there were only two valves, one much larger than the other, with indications of imperfect division of the larger valve into three rudimentary segments, recently occurred in the Hospital, and has been exhibited by myself at the Pathological Society. In this case there could be no doubt that the aortic valvular disease originated in malformation; but the probable origin of the valvular disease in defective formation of the valves may be inferred in many other cases. Indeed, the condition of the valves described is often seen in combination with other obvious malformations of the heart, and occurs not unfrequently in very young children, and occasionally in infants that have never breathed. In other cases the condition in a very aggravated form is found in persons who die after comparatively short illness and have previously been entirely free from indications of any serious cardiac defect. I have seen several cases of this kind, in which a man has died after only a very short attack of illness, and in which after death very aggravated disease, which could obviously not have arisen in a short time, has been found; and in such cases the congenital origin of the disease may, I think, fairly be inferred.

2. Injuries of the aortic valves may be immediate or gradual. The valve may be torn, one of the angles being separated from its attachment to the wall of the artery, or the free fold may be lacerated, or the valve may be torn from the fibrous zone. The valve may also be gradually stretched so that the curtain hangs down at a lower level than natural. The former accidents generally occur while the patient is using some violent exertion; the latter condition ensues upon long-continued strain from hard work extending over several years. In either case the first effect is to occasion incompetency, but subsequently the valves become thickened and hardened, so as to be also sources of obstruction. It is, probable, also, that in some cases in which the valves become incompetent from injury the fibrous zone which bounds the orifice may become tonically contracted, so that the capacity of the orifice is diminished and the incompetency lessened; or there may be depositions of lymph on the edges of the torn valves and partial thrombosis, so as to reduce the space through which the blood can regurgitate.

3. Defects in the efficient action of the valvular apparatus may also result from alterations in the capacity of the orifice. This must be regarded as a tube of the depth of the valves, and either the outlet or inlet of the tube may be altered in capacity. In cases of dilatation of the ascending portion of the aorta the outlet of the orifice is generally expanded; and so the valves, which ought to come in contact over a considerable space when they fall back, overlap to a less and less extent, till at length they touch only at their edges. The edge then readily becomes everted, and so regurgitation occurs. On the other hand, with great dilatation of the ventricle the inlet of the orifice is often expanded, and in this case the tendency is for the sinus of the valve to become deepened, and then for the fold to give way at the most dependent point, so also allowing of regurgitation.

4. Lastly, the valves may be the seat of inflammation either as the primary source of disease or superinduced upon one or other of the conditions previously described. Thus, vegetations may form on the edges of the valves; or the surfaces may be thickened, the thickening either occupying the crescentic edge over which the valves in their healthy state come in contact when expanded, or the surface of the segments which are exposed to the ventricle under the same circumstances. In such cases the tendency is for the segments to be shorter and the sinuses shallower than natural, so that in addition to the obstruction caused by the thickened valves they become incompetent. Sometimes the obstruction thus occasioned is excessive; the valves become hardened and studded with cretaceous deposit, and the capacity of the orifice is very greatly reduced: instead of being, on the average, 35·6 Paris lines (80·1 mm. 3·14 E.I.) in men, and 34 (76·5 mm. 3·01 E.I.) in women, I have known it to measure only 24 (54 mm. and 2·13 E.I.), and even 18 Paris lines (40·5 mm. 1·59 E.I.); and in one very remarkable case, in which the obstruction probably originated in congenital malformation, there being only two segments, the aperture was a mere slit ten lines in length (22·5 mm. ·88 E.I.), and the valves were so extremely thickened and indurated as to be scarcely capable of separation.

In these cases of extreme obstruction there is often a tendency for the blood to burrow underneath the valves, so as to form a passage leading from the ventricle towards the commencement of the aorta, and such passage occasionally opens into the aorta, so that the blood flows into the artery during the systole and regurgitates into the ventricle during the diastole. Several cases of this kind have at different times fallen under my notice; you will find a preparation illustrating the condition in the Museum, which was described in the *Pathological Transactions* by Dr. Bristowe, and I have several specimens in my own collection at the Victoria-park Hospital.

Whether the disease of the aortic valves occasions obstruction or regurgitation, or both these defects, and whatever be the immediate cause upon which the disease depends, the left ventricle undergoes remarkable increase of capacity and strength, and thus the heart is larger and heavier than natural. If there be obstruction, the tendency is especially to increased thickness of the walls of the ventricle, the increased width being most marked at the base and diminishing towards the apex, so that the organ has a peculiarly pointed form. If, on the other hand, there be incompetency, whether as the primary disease or dependent upon previous obstruction, the special tendency is for the ventricle to be dilated; the cavity becomes very large, and is rounded at the apex, and the walls, though increased in thickness, have the increase more equally distributed over the parietes. In both these conditions, though the changes are the most marked in the left ventricle and auricle, the right side also becomes sooner or later involved, and in some cases the increase in the size and weight of the heart is very remarkable. I have found this organ to range in weight, in cases of aortic valvular obstruction, in males from

14 to 21 ounces avoirdupois, and in females from 13 to 18½ ounces; and in aortic regurgitation from 14 to 34 ounces in men, and from 16 to 23 ounces in women—this being a very striking increase of weight, for, as you will recollect I told you, the ordinary weight of the healthy heart is in men from 9 to 11 ounces, and in women from 8 to 10 ounces.

Mitral Valvular Disease.

Mitral valvular disease may originate in various ways.

1. The idea was first advanced by Mr. Burns, and has been supported by Dr. Farre, that mitral valvular contraction is sometimes congenital; but though it is probable that some of the very marked cases of contraction to which the term "button-hole" mitral has been given may be congenital defects, it is not often that malformation can be confidently assigned as the cause of the disease. One case, however, of the kind is included in the table, which occurred in a female of sixteen, in whom the foramen ovale was unclosed; and it is possible that some others, in which the patients had not had any other cardiac disease, and had been ailing all their lives, may equally have been of intra-uterine origin.

2. Injury has also in some few cases been a cause of mitral disease, the fold being torn through or the tendinous cords ruptured.

3. Probably, however, the largest proportion of cases originate in inflammatory changes; the folds of the valves may be thickened, the two curtains may be blended together, or the attached fold may become adherent to the lining membrane of the ventricle, and the edges and auricular surface of the valves may be studded with vegetations or larger or smaller deposits of fibrine, so as to be sources of obstruction to the flow of blood from the auricle into the ventricle. The valves also may become hard and unyielding, so as not to admit of closure, or the tendinous cords may give way so as to allow a portion of the fold to flap back with the systole; and in either case the blood will regurgitate from the ventricle into the auricle.

4. The orifice also may be dilated while the rest of the organ is unaltered, so that the valves are no longer capable of closing it; or the walls of the left ventricle may become dilated from overstrain, atrophy, or interstitial change, and incompetency may be occasioned by the imperfect adjustment of the valves so resulting. The simple dilatation of the orifice is, however, rare, though a case of the kind was in the wards during the course of last winter. We occasionally also meet with cases which present all the evidences of mitral regurgitation without the valves or orifice being diseased, and which can alone be explained on the assumption that the valves were not perfectly adjusted so as to close the orifice.

The changes which take place in the heart in cases of mitral valvular disease are scarcely less striking than those which occur in aortic valvular disease. In cases of mitral contraction in young subjects the folds of the valves become greatly expanded and are protruded forwards into the ventricle so as to fill a large portion of its cavity, the right auricle becomes greatly enlarged and its walls increased in thickness, and the lining membrane is thick and opaque and often rough. Thrombosis also not unfrequently occurs in the appendix of the auricle, and more rarely in the sinus, constituting the so-called aneurism of the auricle. Of the former condition I have a very good specimen at the Victoria-park Hospital; and of the latter there is also one in our own museum, which was described by Dr. Elliotson in his Lumleian Lectures. In cases of mitral constriction the right ventricle becomes large and its walls very thick and resisting, and the right auricle is dilated; the left ventricle being, however, not generally much altered in capacity or power. In cases of mitral regurgitation, on the other hand, and especially when of long duration, the left ventricle as well as the auricle and right cavities are dilated, and the whole organ becomes very wide and its apex blunted. But as in both cases the stress of the disease falls chiefly on the right side, the increase in the weight of the heart is less marked than in cases of aortic valvular disease. I have, however, weighed hearts thus diseased in males ranging from 14 ounces to 17 ounces in weight, and in females from 13 ounces to 18 ounces 8 drachms.

The degree of contraction of the mitral orifice is also sometimes very remarkable; often it is only a mere slit or a small oval aperture, and I have found it to have only a circumference of 18 (40·5 mm. 1·59 E.I.), 12 (27 mm. 1·06 E.I.), and 11 Paris lines (24·78 mm. ·96 E.I.), the natural circumference being 45·2 Paris lines (101·7 mm. 4 E.I.) in men, and 45 Paris lines (181·25 mm. 3·99 E.I.) in women.

It is scarcely necessary to dwell upon the cases of combined aortic and mitral valvular disease, except to remark that as regards the size of the heart these affections occupy also an intermediate position between the two separate forms of disease—the weight being less than in aortic and greater than in mitral disease. Thus, I have weighed organs which ranged from 14 ounces 8 drachms to 21 ounces 8 drachms in males, and from 7 ounces 8 drachms to 23 ounces in females.

I have already stated that the cases of aggravated pulmonic valvular disease, and of combined mitral and tricuspid, and of aortic, mitral, and tricuspid disease are probably always congenital.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGY AND CLINICAL USE OF THE SPHYGMOGRAPH.

By F. A. MAHOMED,
Resident Medical Officer to the London Fever Hospital.

No. X.

(*For Photo-lithographic Plate vide "Medical Times and Gazette," August* 9, 1873.)

Aneurism of Ascending and Transverse Aorta: Effect of Drugs—Abdominal Aneurism: Effect of Compression—Aneurism simulated by Endarteritis—Summary of Sphygmographic Evidence.

Aneurisms occurring in the course of the vessels going to the upper extremity formed the subject of the last communication, and their effect on the pulse-wave, the aorta not being involved, was found to be very great; while in those where the sac comprised part of the aorta, the difference between the two radial pulses was either extremely small or not to be distinguished. In the present paper aneurisms of the aorta itself will be discussed, and, though the results may be found in some cases disappointing, in others the testimony will prove of the highest value.

The first six tracings in Pl. viii. were obtained from a patient with aneurism of the ascending part of the arch. They are introduced to show how the effects of different drugs may be watched, and also to distinguish between the pulsation of an aneurismal tumour and that of the heart. T. S., a man aged 56, was admitted into Guy's under Dr. Wilks on June 24, 1873, with a pulsating tumour partially eroding the sternum and costal cartilages of the right side. He had all the symptoms of aneurism of the ascending part of the arch well marked. No doubt was entertained about the diagnosis. After remaining in the hospital for some months he left, his condition remaining unchanged.

Fig. 1, Pl. viii., represents his pulse under ordinary conditions. There was no difference to be detected between that of either side. The form of pulse is identical with that which accompanies hypertrophy of the heart and atheroma of the aorta, both of which were probably present: the tidal wave is prolonged, the pressure employed considerable, but no indications of aneurism are given. This is accounted for by two reasons—first, that the aneurism occurring previous to the point of origin of the innominate, both sides would be equally affected; secondly, aneurisms of the aorta, as previously remarked, frequently do not alter the character of the pulse, for no diminution of blood passing down either of the subclavians occurs, nor is there any diverticulum into which the blood flows before reaching the radial.

Fig. 2, Pl. viii., represents the pulse of the same patient after taking veratria for six days. He had been kept perfectly quiescent in bed, and this drug was exhibited, on account of its so-called depressant action on the vascular system, with the view of putting the patient in the most favourable condition for coagulation taking place in the sac. The very opposite effect is seen by the tracing to have been produced; the action of the heart has become more powerful and excited, the size of the pulse-wave being much greater, and the pressure employed also has been increased.

Fig. 3, Pl. viii., was obtained after the veratria had been discontinued for one day. The pulse has already visibly changed in its character: it is slower and softer, one ounce of pressure being all that is now required, instead of four ounces as on the

previous day. In one day more the pulse had returned to its usual condition.

Fig. 4, Pl. viii., shows the effect of digitalis administered in Mxx. doses of the tincture three times a day for seven days. The pulse is increased in size, and not retarded; neither of the drugs appear to have produced their usual physiological effect on this patient; the tracings, however, are only inserted to illustrate how accurately the effect of a drug on the vascular system may be gauged and demonstrated to others; and in no class of disease is it so important to be able to do so as in the one under consideration.

Figs. 5 and 6, Pl. viii., may be compared; they are tracings from two different forms of pulsation occurring in his chest-wall—Fig. 5 being produced by the tumour, Fig. 6 by the heart's apex. It is extremely interesting to notice the difference between them. In the former there is the single arterial movement, the sudden expansion, and the gradual and continuous collapse; in the latter the sustained contraction of the hypertrophied ventricle is demonstrated, the commencement and termination of the contraction being equally sudden.

Figs. 7 and 8, Pl. viii., are tracings of very great interest. In this case a double aneurism of the aorta was diagnosed by the sphygmograph. The pulse of the right side (Fig. 7) is decidedly aneurismal, the percussion being very slight—it only requiring one ounce of pressure, the up-stroke and apex seen in the tracing having been obtained with the greatest difficulty, while the tidal wave is prolonged and the dicrotic much diminished. On these grounds aneurism or dilatation of the ascending part of the arch before the origin of the innominate was diagnosed. On the left side (Fig. 8) the pulse has altered and become still more aneurismal in its character, percussion being much diminished and the tidal wave more prolonged, so that a square summit to the tracings is produced. On these grounds it was stated that another aneurism probably existed beyond the origin of the innominate, and in such a position as to interfere with the passage of blood down the left subclavian. A similar diagnosis was arrived at with some difficulty from physical signs by Dr. Wilks, and at the post-mortem was found perfectly correct; the ascending part of the arch being dilated to seven inches in circumference, and exactly opposite the origin of the left subclavian, behind and below it, was situate another aneurism pressing upon the trachea and touching the left side of the œsophagus. There was also a third aneurism two inches below the left subclavian. Here, then, is a case where the aorta alone was implicated, and yet an alteration was produced in the pulse of this side.

The next case illustrated is more obscure, the result not having transpired:—S. J., aged 46, a fish porter, was admitted under Dr. Wilks, June 7, 1873: a healthy-looking man, with good family history; had never had symptoms of constitutional syphilis; accustomed to carry heavy loads. He appeared in perfectly good health, appetite good, and bodily functions all regular; his only complaint was of partial aphonia, slight cough and expectoration, and a little pain on the left side of the neck, where there are some indurated glands. When he speaks, his voice is rough and hoarse; he makes no noise while breathing; there is no dyspnœa. His larynx appeared healthy when examined by the laryngoscope. Good resonance and normal respiratory murmur all over the chest, with the exception of slight occasional rhonchus. At the base of heart a systolic and diastolic bruit can be heard; the latter is transmitted down the sternum. The systolic bruit is harsh and rough, and can be heard between the scapulæ on a level with the third dorsal vertebræ. The pulsation of the aorta can be easily felt through the upper third of the sternum. The diagnosis was extremely obscure till the tracings of the pulse on either side were obtained by the sphygmograph, when they were found to differ greatly.

Fig. 9, Pl. viii., represents the pulse of the right side; it indicates especially an hypertrophied heart, and probably bad vessels. The pressure used was much greater than normal—namely, five ounces and a half; the percussion-wave is exaggerated; and the tidal sustained.

Fig. 10, Pl. viii., was obtained from the left side. The same pressure was used; it is, however, very much smaller than the pulse of the right side. The percussion, tidal, and dicrotic waves are all diminished, especially the first two. There is a tendency to rounding of the tops, and the pulse by comparison appears decidedly aneurismal. On these tracings a diagnosis of aneurism of the aorta between the origin of the innominate and left subclavian arteries was diagnosed. The man left the hospital two or three weeks after his admission, his condition being unchanged.

The next four tracings in the plate were obtained from J. D., a man under the care of Dr. Moxon and Mr. Durham, suffering from abdominal aneurism, whose case is fully reported in the volume of the Medico-Chirurgical *Transactions* for 1872, where the tracings also are published. Suffice it to say, that an aneurism of the abdominal aorta was ascertained to exist by post-mortem examination.

Fig. 11, Pl. viii., shows a perfectly normal, firm pulse, obtained with a pressure of three ounces from his right radial; while Fig. 12, Pl. viii., was obtained with a similar pressure from the left radial—*i.e.*, the one approximate to the aneurism. The waves are all more distinct and separated in this tracing. Why they should be so it is difficult to apprehend. One can only conclude that the proximity to the aneurism conduced to the result. Some difference has been found to exist in the pulse of the two radials in more than one instance of abdominal aneurism, though by no means in all. The difference is not sufficiently constant to found any rule or guide to diagnosis.

Figs. 13 and 14, Pl. viii., were obtained from the same patient while under chloroform, preparatory to compression of the abdominal aorta. Fig. 13, before compression was applied, is similar to the corresponding tracing in Fig. 11, except that one ounce more pressure was now employed; but immediately compression was commenced the pulse underwent an instantaneous and remarkable change: it became extremely dicrotic, as represented in Fig. 14. So marked and instantaneous was the alteration in its character, that by watching the lever of the instrument, while the back was turned to the operator, it was easy to tell the moment the artery was subject to pressure, and whether or not it was completely under control. This change was caused by the increased tension produced in the arterial system, or rather that part supplying the head, neck, and upper extremities, by the additional amount of blood contained in these vessels, while the supply to the lower half of the body was cut off. This brought the elastic coat of the aorta more fully into play, it being more distended and in turn contracting with greater vigour. It has been suggested that the stimulus of the pressure on the vaso-motor nerves altered in some way the condition of the blood-vessels, and so produced this result; but the effect was too instantaneous to be accounted for in this manner. Moreover, an exactly similar phenomenon to the one under consideration can be produced experimentally in a schema of the circulation by compression of the part representing the abdominal aorta.

The last two tracings are placed in the plate as examples of errors that may be made by the sphygmograph in the diagnosis of aneurism. E. F. was admitted into Guy's under the care of Dr. Moxon, November, 1871. His symptoms very closely simulated those of aneurism of the left subclavian involving the aorta, the principal being a rough systolic bruit heard in the aorta and transmitted along the left subclavian, severe but not constant pain down the left arm, and attacks of angina pectoris; there was, however, no pulsating tumour to be felt. The pulse-tracings in the two radials were found to differ, that in the left being the smaller. Fig. 15, Pl. viii., represents the pulse in the right, and is perfectly normal in appearance; while Fig. 16, Pl. viii., represents that of the left radial, and possesses aneurismal characters; the upstroke is distinctly sloping, and the percussion, tidal, and dicrotic waves are all diminished. This, taken with his other symptoms, led to a somewhat confident diagnosis of aneurism of the subclavian involving the aorta being made, in which, however, Dr. Moxon never agreed, he regarding the case as one purely of angina. The patient, after remaining in the hospital for some months, went out, and died suddenly the next day. A post-mortem was obtained, when ulceration and partial blocking of the coronary arteries were found, while the left subclavian was considerably diminished in calibre by endarteritis, producing great thickening of its walls, and diminishing its sectional area by fully one-half. There were patches of recent atheromatous inflammation of the aorta, but its elasticity was not perceptibly diminished.

From these tracings it will be seen that it is impossible to distinguish by the sphygmograph alone between diminution of the pulse from blocking of an artery by endarteritis and that produced by aneurism; but the presence or absence of a tumour will generally afford ground for a diagnosis, the other symptoms being similar. The presence of a tumour can generally be ascertained, and, if none can be discovered, endarteritis must be remembered as a probable alternative. Lastly,

in cases where tumour actually exists, and the diagnosis lies between a tumour *external* to the artery and aneurism, the sphygmograph will often distinguish between them; for while in aneurism, as we have seen, the secondary waves of the pulse—especially the percussion—are all diminished, and the upstroke becomes sloping, in cases of tumours external to the artery, pressing upon it and diminishing the pulse-wave, the upstroke is never sloping, it always remains vertical, while the percussion-wave remains well marked, sometimes more in proportion to the tidal than before; the dicrotic is diminished and sometimes annihilated. These results can be easily verified experimentally by partially compressing the brachial and obtaining tracings under these circumstances.

Finally, after reviewing the evidence afforded by the sphygmograph in cases of aneurism, we may sum up as follows:—

If the aneurism is one of an artery going to the upper extremity, and the aorta be not involved, valuable evidence will be given.

If the aneurism is one of a similar artery involving the aorta, frequently no difference can be detected in the pulsation of the radials.

If the aneurism be one of the aorta itself, and situated in the ascending part of the arch, no difference in the pulse of either side can be detected.

If of the transverse part of the arch, the pulse may or may not give evidence of its existence.

But in all cases the sphygmograph is useful in watching the effect produced by the treatment on the arterial system generally.

(*To be continued.*)

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
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(*Continued from page* 171.)

THERE is one phenomenon which, according to my experience, is constantly present after death from snake-bite—viz., rigor mortis. This has been referred to, I think, by Dr. Weir Mitchell, as tending to negative the idea that rigor mortis is due to coagulation of the fibrine in the muscles, seeing that it occurs in perfection in those cases in which the blood-fibrine is apparently completely destroyed.

Of what importance is this loss of coagulating power of the blood? Are we to take any notice of the altered colour of the arterial blood?

If we regard, with the great Harvey, the blood as "both author and preserver of the body, the primogenial matter and vital spark, the first to live and the last to die, the immediate seat of the vegetative faculty of the animal, and every other part of the body subordinate or posthumous to the blood," we cannot be indifferent to such great changes as almost invariably occur after snake-poisoning.

Both the colour of the blood and its coagulating power depend largely, according to modern research, upon the cruorine and globuline of the blood. We can conceive that anything hindering or diverting the oxygen-carrying property of the red corpuscles would be baneful to animal life—as would equally any substance coming between the fibrinogen and globuline of the corpuscles. May not even the fibrinogen be dissipated into other forms?

In suggesting these questions I do so more with the view of attracting the thoughts of others than with the hope of approaching to any satisfactory answer to them myself.

It has always been considered that a free supply of oxygen not only heightens the scarlet colour of the blood, but at the same time renders this fluid more coagulable. With a free supply of oxygen also all the animal faculties are exalted. If with malicious deadly intent we sought physiologically for any power which should by its presence divert the oxygen from its normal carrier, and dissolve the colloids (fibrinogen) of the blood, we should, I think, examine the secretions of the various glands throughout the animal kingdom. Knowing the power of the salivary glands to convert almost instantaneously starch (a colloid) into sugar (a crystalloid), we should, to limit our work, in the first place experiment with these, and having hit upon a venomous serpent, and injected the contents of his parotids, we should see accomplished all that we had sought for—diminished energy in our victim, purple cruorine circulating in the place of scarlet; partial, then general torpor, and death; and accompanying all this, and increasing in inverse ratio to the signs of life, destruction of the fibrinogen of the blood.

We are apt to forget how rapid are the processes passing within us, that one minute after the introduction of this poison into the veins is sufficient for its distribution throughout the body. We need not wonder when Dr. Weir Mitchell tells us that he has seen the whole blood of a dog rendered permanently fluid within eighteen minutes.

There is one very remarkable difference between the effects of the poison of our Australian snakes and that of the rattlesnake. Although the physical condition of the blood after death is alike in both cases, yet the following from Dr. Weir Mitchell, so far as putrefaction is concerned, does not, that I know of, apply to hoplocephalus curtus or other Australian snakes:—"The venom of the crotalus, like that of other snakes, is a septic or putrefacient poison of astounding energy. The rapid decomposition of the blood, and of the tissues locally acted upon by the venom, leaves no doubt upon the matter, and makes it apparent that an incipient putrefaction of this nature may so affect the blood as to destroy its power to clot, and perhaps also to nourish the tissues through which it is urged." I have even thought that here a preservative power was imparted to the body of the bitten animal. I have read occasionally of cases the very opposite, but will mention one case of death in the human being, where the body the day after death was singularly sweet, and when exhumed, as it was a month or so afterwards, was still not at all offensive. That it is as Dr. Weir Mitchell says, with rattlesnake poison, I have myself, through his having kindly supplied me with some, fully confirmed.

But there are certain symptoms of snake-poisoning that are so constant in India, America, and here, and so prominent, and yet withal varying with the species of animal bitten, as to require more than a passing notice. I allude to those referable to complications of the nervous system. The great difficulty to decide is to know whether they are to be referred to influences primarily acting on the nerve-tissue or to secondary results due to the first deterioration of the blood by the action of the poison. Dr. Weir Mitchell has well stated the difficulty of arriving at any conclusion in his excellent treatise above referred to. It is quite possible that an altered blood circulating through the brain and spinal cord and sympathetic ganglia might produce all the symptoms to which I am alluding—viz., coma, convulsions, and contractions of the smaller arteries leading to the capillaries. On the other hand, it is equally possible for the poison to act primarily on the nervous centre to which, in the course of circulation, it becomes applied. If we could get rid of the known effects upon the corpuscular elements of the blood, and the great fact of the marvellously short time—less than a minute—for all the blood in the body to make its circulation, and likewise of the other known fact of the rapid and persistent action of such germinal particles as ptyaline and pepsine, to which I will add the germinal matter of the serpent's poison, then we should probably decide in favour of the direct action of the poison on the nervous tissue. But we cannot do this. Rather than occupy time unsatisfactorily, I will relate what, in Victoria, the symptoms implying affections of the nervous system are.

Man is characterised from the lower animals by the great development of the intellectual faculties. These we know may be in abeyance and yet life continue. Consequently the deepest coma may not be so serious a symptom as paralysis of the spinal system and base of the brain.

A very common course of events after snake-poisoning in man is first vomiting (most probably reflex from the brain), then dilated pupils, followed by lethargy and coma. A less frequent course is vomiting, dilated fixed pupils, consciousness slightly or not at all affected, and a few muscular spasms, chiefly about the neck, and trismus. Now, the appearance of the man with the first set of symptoms is to everybody alarming. The second set of symptoms, coming on more slowly, excite little or no alarm. And yet I think they are more frequently followed by a fatal result. Some cases, presently to be detailed, are in this regard worthy the reader's attention.

Dogs, when bitten, usually become convulsed in a few minutes, and, recovering from this, vomit and stagger about, and finally lie down and die with the consciousness unaffected to the last. Some are never convulsed, vomit, lie down, and die.

Birds die rapidly; but they are so differently organised to man that they form improper subjects for comparison. The

almost universal contraction of the small arteries, producing coldness, sleep, and dilation, and more or less stagnation in the venous system, may be referred to paralysis of the spinal system of nerves, or, as suggested by Dr. Day, of Geelong, to irritation of the sympathetic system. The widely dilated pupil admits, also, of either explanation—viz., paralysis of the centre for the third nerve, or irritation of the sympathetic filaments of the ciliary ganglion. This state of itself, if not counteracted, would in the end induce death as surely as external cold does, and it demands from us additional attention, as that to which all the so-called stimulating treatment is applicable, and above all the simple uncomplicated treatment I have recommended.

Treatment.—In the beginning of our Australian summer, 1868, about the end of October, I for the third time recommenced a yearly series of experiments on the treatment of snake-poisoning. I had hitherto completely failed in obtaining any beneficial results. I did not direct my mind to the discovery of any so-called antidote, but to a mode of treatment that might help us, if possible, towards a better *rationale* of the treatment of other blood affections; for, however difficult the subject of snake-poisoning might be, I considered it the simplest problem given to us to solve. Here there is no mystery. One animal bites another, which sooner or later dies. Let all the resulting conditions be fully examined, and the *modus operandi* of the virus might yet be discerned. A whole lifetime might be necessary for the work and the ramifications to which it would give rise, but yet the results to the world would more than repay the trouble and expense of the inquiry.

Without much hope of success, I then (October, 1868) reconsidered all that had been written on the subject and observed by myself. I was induced to think that perhaps ammonia had the greatest claim to be considered useful in snake-poisoning. I had hazarded the hypothesis of the germinal matter of the snake appropriating to itself the inspired oxygen, or at least diverting it from the cruorine of the blood corpuscles; whereby we obtained an explanation of the lessening of all the vital phenomena, the absence of fibrine after death, and in its place millions of nucleated and maculated leucocytes, be they simply altered white corpuscles or new cells. Of their existence there was not then, nor is there now, the least doubt, nor of their still increasing or presenting themselves in greater abundance in the blood of the bitten animal many hours after death.

I may mention that I had, when opportunity offered, busied myself greatly with examining the blood of patients dead from pyæmia, fever, puerperal fever, and leucocythæmia, but never found appearances like those after death from snake-bite. In leucocythæmia we should expect the nearest resemblances if the maculated cells were simply altered white corpuscles. But I failed to discover them; and Dr. McGillivray, a known microscopist and surgeon in Victoria, after having carefully examined the blood of patients dying of leucocythæmia, and recorded the totally fluid character of the blood and the enormously increased quantity of white corpuscles, proceeds to say—"I ought to mention that the cells in leucocythæmia are quite different from the large, uncleated, maculated cells found in the blood of animals killed by snake-poison, for an opportunity of examining which (in a dog) I am indebted to Professor Halford. The specimen I examined agreed in all respects with his description. The maculated cells appear very different from the ordinary white corpuscles and the cells of leucocythæmia, and are probably of a different nature."

Subsequently Dr. Stuart, of Sandhurst, examined the blood of a man who had died within two hours after the bite of an Australian snake. He wrote me as follows:—"I found the maculated corpuscles even more marked than you delineate them, and send on a portion of the blood to you as a confirmation of your explanation of the action of the poison." Unfortunately, the weather being then intensely hot, by the time the blood arrived in Melbourne its corpuscular elements were all broken up. It was perfectly fluid, and of a dirty light plum colour, exactly like what I had before so often seen, but find it impossible to describe.

Being then (in October, 1868) possessed of certain facts, and thinking upon the probable value of ammonia, I received from England a letter from Staff-Surgeon Lewin, in which was the following paragraph:—"I see you used ammonia in D——'s case, but if your theory about the living germs in the blood using up its oxygen be correct, the indication of treatment is to use any deoxygenated volatile agent in enormous doses, so as to deoxygenate the blood as completely as possible, and for that purpose ammonia in its most concentrated form seems most suitable. Doubtless stimulants (hydrocarbons) are also useful, but I think it very desirable that ammonia should have a fair trial, and it might easily be tried on dogs. My idea is that the fluids of the body should be rapidly saturated with the substance. It might be given internally in large doses, and also be smelt and breathed so far as spasm of the glottis allows. Its success would be an excellent negative proof of the correctness of your microscopical observations. . . . . I hope you will try the ammonia treatment on dogs. It must be given in large doses. The animal must be deluged with it." I am glad I have preserved this letter; the suggestions it contains are now highly interesting. I did try to deluge dogs with ammonia, but discovered no means of effecting it till I hazarded its injection into the veins.

The results of my first experiments were that in all stages of snake-poisoning dogs were improved by it—in many the symptoms were instantly stopped, and if they returned were again checked by another injection. I then felt bound to suggest a similar treatment in the case of men being bitten. A very few days only elapsed before a serious case occurred at Buckworth, Victoria. Dr. Dempster was bold enough to inject the man, who forthwith rose up from his previous comatose and threatening condition and speedily recovered. From this time (November 11, 1868) commenced a new era in the treatment of snake-bite in Victoria.

But, before proceeding with the detail of cases, it will be as well to consider what may be the action of ammonia when thus injected into the human body. In no other way can such an immense quantity of ammonia be introduced into the blood. By this process both the stomach and the lungs are avoided. A back way is sought to enter the citadel of life—the heart. The forts stationed at the glottis and along the stomach and alimentary canal are attacked in the rear, and whatever the snake has added to the blood is speedily pursued, and probably, if too much time have not been lost, overtaken by the ammonia.

That the ammonia exerts no influence upon the constituents of the snake-poison itself is nearly certain; for, long ago, Dr. Weir Mitchell had shown that when it is thoroughly well mixed with the strongest liquor ammoniæ and injected beneath the skin of a dog, death follows as certainly as if it had been unmixed. This I found to be the case also with the poison of our snakes. But that it does counteract the effects of the poison when injected into the circulation is seen by the resulting animation almost immediately following. If we suppose that the coma and general paralysis are due to deficient oxygenation, then the removal of these conditions should depend upon the re-establishment of the chemical processes of alternate oxidation and deoxidation. How ammonia can bring this about, except by arresting the molecular changes going on in the blood, it is difficult to say. Indeed, we know next to nothing of the molecular changes taking place in living organs. Who can trace the functions of ammonia in the sap of plants?—and yet it stands in as important a relation to plants, and subsequently to animals, as heat itself. It is the source of all the nitrogenous elements of both. Very much the same idea as originally presented by me of the action of snake-poison is enunciated by Dr. Broadbent(a) when speaking of the action of prussic acid. He remarks that in death from the latter poison there is no paralysis of the muscles of respiration, and yet there is apparently everywhere deficient oxidation; and he further adopts the hypothesis that "nascent carbon and hydrogen set free in the nervous structure to exercise their affinity for oxygen, would seize it and anticipate the normal oxidation." In 1867 I pointed out that there was no obstacle to the entrance of air in snake-poisoning—that the mystery was what became of the oxygen. I imagined that probably the snake-poison diverted it from its ordinary carriers, the blood corpuscles, and that instead of heat we had molecular motion induced for the aggregation of molecules and the growth and development of leucocytes. I know not whether we may assume that ammonia might be broken up in the animal organism into its constituent nitrogen and hydrogen; if it could be, we are still not in a position to say what might be its *rôle* of action in the course of recovery from snake-poisoning, since we have no ultimate analysis of the poison itself.

But we can now leave these considerations for others of the more obvious and mechanical effects of the injection of liquor ammoniæ into the veins.

The most remarkable, because unlooked for, effect is the conversion of feeble rapid heart-beats into slow powerful beats,

(a) *Journal of Anatomy and Physiology*, Nov., 1868.

which keep up for some time. Attendant upon this is a freer circulation through the peripheral vessels. This is followed by returning warmth to the body, normal colour to the surface, and more or less consciousness.

Now, these are most important facts for us to consider, and I shall treat of them as carefully as I am able. It may be remembered that I referred to the contracted state of the smaller arteries in snake-poisoning, whereby the capillary systems were poorly fed and the veins stagnating and full. This state, if persistent, must end in coma and death; but by the injection of ammonia it is at once removed. How is this brought about? I was pleased to excess in finding soon after my own observations of these facts some physiological explanation of this remarkable and, as I have said before, unlooked-for process. No one would certainly have expected the number of the heart's pulsations per minute to be reduced by throwing liquor ammoniæ into the veins or even into the heart itself; but MM. Cyon and Ludwig have shown that there arise in the interior of the heart certain nervous filaments which converge to one or two branches which pass to the pneumogastric and thence to the medulla oblongata. Stimulation of the central end of the cut nerve is followed by dilatation of all the arteries of the body. Stimulation of the peripheral end of the cut nerve produces no effect either upon the heart itself or upon the coats of the arteries. The reflected impression was traced from the cord along the splanchnic nerve to the arteries.

Now, with these facts before us, what may be the action of ammonia upon the inner surface of the ventricles? The stimulus is probably conveyed by this branch of the pneumogastric (called, from its reducing the number of pulsations, "*le nerf depresseur du cœur*") to the spinal canal, and thence to the arteries, which dilate. The heart, feeling the relief to the peripheral circulation, has no need to pulsate so rapidly, but takes on a steady and forcible rhythm, which it maintains for a long time.

(*To be continued.*)

ON

CONSTIPATION SIMULATING DIARRHŒA.(a)

By DAVID NELSON, M.D. Edin.,

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(*Continued from page* 201.)

As examples for practical illustration, I may now cite a few cases briefly, and confining myself to these particular symptoms. For instance:

Case 1.—Some time ago I was called into the country to see a lady who had been suffering for a long time with continual recurrences of this so-called diarrhœa, which had ended in vomiting also. After examination into the matter I came to the conclusion that there was obstruction, and accordingly advised evacuation. Of this the patient herself seemed very doubtful indeed, remarking that she had been purged six times that very morning while dressing. From this state of her mind, and also feeling that the obstruction might be of such a nature that the use of purgatives by the mouth caused pain, I merely prescribed an antacid sedative for the stomach—namely, potassa, calumba, and hydrocyanic acid,—and got her to acquiesce in the employment of injections. On the next visit I found a range of vessels, each containing an extraordinary quantity of hard fæcal matter, intermixed with chalk. After this ocular demonstration she was content to follow up the proposed line of treatment, and got well, taking care afterwards to compare the daily proportions between increment and excrement.

Case 2.—In like manner another elderly lady, after suffering from severe habitual constipation, for which she used from time to time to take strong purgatives, with the effect of irritating the membrane, at length was overtaken with this apparent diarrhœa, ending in a like irritability of the stomach, with rejection of all food, intermittent pulse, and a sense of sinking, as if about to faint and die. In this instance, what appeared like hard tumours were to be felt in the ascending and transverse colon, the latter pressing on the aorta, to judge from the heavy motion and sound. Here, in like manner, there was a difficulty in making the patient agree with the view taken of her case. In fact, she said that she felt convinced nothing of the kind could be in her, from the frequent motions, the food having been taken in such small quantities, and even then rejected. There was also an additional difficulty in the way, from her daughter and granddaughter telling me that she had a long-rooted aversion to such things as injections and the like. However, I persuaded her to submit, though, on the next visit, she rather triumphantly said, "I was right, doctor; nothing but the injections themselves have come away, though the relaxation is better." The sickness had also stopped through the use of the sedative with ice. I could perceive, however, a little advance of the masses, was as positive as she was, especially from this change in their position, and succeeded in getting her to persevere. After four or five days the daughter said, on my entering the house, "They have come." And certainly there they were; a great number of tough, solid masses of very irregular shape, and varying in bulk from the size of a golf-ball to that of a larger or smaller walnut. After that she progressed as well as her age and other ailments would permit, and is now alive.

Case 3.—An elderly innkeeper, very stout, and with a large abdomen, had in like manner been troubled with what he thought was habitual diarrhœa, accompanied with indigestion, flatulence, and frequent pain in the epigastrium and elsewhere. The motions, when these attacks came on, were many in the day, though often no more than a drachm or two—these coming away sometimes when he thought he was merely going to discharge a little flatus. At length the settled vomiting made him seek more help in the matter, and after treatment similar to that already described he got over his ailments, and continues well. Other cases quite like the above need not be entered into.

Case 4.—An old gentleman, who had generally been costive, and afflicted with dyspepsia during the greater part of his life, at last was taken with this sort of diarrhœa, which he stopped by astringents, and by-and-by, being seized with constant retching and vomiting and severe abdominal pain, his daughter, who kept him by keeping a ladies' school there, desired me to see him. I found great distension and flatulence, and a tympanitic ring on superficially tapping the abdomen, but at the same time, on deep pressure and deep percussion, which gave acute pain, the dulness of the colon and a sort of unyielding fulness about it were discernible. He shrunk and pulled a sudden breath at every stroke of the fingers. The vomiting was allayed by the sedative and ice, and blue pill and colocynth, given by the mouth, aided by injections. The result was decisive, and amongst other matters there was the escape of a curious mass of vegetable origin, like broken almonds, walnuts, and the like, intermixed amongst other things with a quantity of grape-seeds. When the old gentleman's attention was directed to this, he remarked, "Now, that shows how long some things may lie in the bowels!" and proceeded to state that several weeks before, while dining with an old schoolfellow, his friend began to joke him over the dessert about the daintiness of his eating and drinking, saying that it was no wonder he was always ailing, as he picked out this and rejected that during his dinner, and now did the same thing at dessert. Referring to some popular book on medicine which declared that people might be too refined in their diet, and so lead to constipation, he added that he ate all things as they came, skins of fruit, walnuts and chestnuts, grapes with their skins, seeds, and all, concluding with—"You know that I am never ill, my bowels are like clockwork for regularity; and I would advise you to do the same." He did so with the above result. He was then about seventy, but lived some years longer.

Case 5.—I was hurriedly called to see a lady, the vehicle coming to the door for me. I found her lying prostrate and cold, and suffering intense agony over the abdomen, particularly at the right side and also at the right collar-bone. She could not cry out, but muttered and breathed hard and fast, shivering the while. She had again and again been troubled with vomiting, and also frequent small ineffectual motions, which she took to be diarrhœa. When these agonies formerly came to a crisis chloroform would be employed, but still they would return. From the features of the case I considered that gall-stones were the cause, and accordingly, obtaining tincture of opium, I myself witnessed and watched the exhibition of repeated doses thereof to the extent of twenty or thirty drops at a time, until 220 were taken, with relief to the one symptom of pain, but without

(a) Read before the Midland Medical Society, Birmingham.

any sleep or stupor, only a sensation of comparative ease, with return of heat to the extremities and surface, and a warm moisture. After this, as she complained of a heavy bearing-down, I examined per vaginam, and found no enlargement of the womb, as she supposed, but a vast mass in the rectum, which I proposed should be forthwith removed. Accordingly, prescribing an aperient, I told the nurse to proceed with injections. After a time the nurse called on me to say that she could not penetrate, and that all came back again without properly entering the gut. I advised that she should first move the ivory pipe backwards and forwards through the mass, and then employ the long tube. This was done with success. A very large and hard, but now broken up, lump was first discharged, almost white, like old ivory, followed by much more of a similar kind, and many gall-stones amongst it. These were white in the centre, but coated with pale yellow on the outside, very like Indian corn, and flattened on the sides. The patient got well, and kept well afterwards, by due attention to diet and exercise, and the use of nitro-muriatic acid baths, along with the daily employment of Spanish soap to the extent of thirty or forty grains or more.

Case 6.—Another female suffered in quite a similar way, and was relieved by similar treatment, followed up by the mineral acid baths and the Spanish soap. The gall-stones in this case were in much greater number, but smaller, and of a greyish-white colour.

Case 7.—An old man of 78 consulted me a short time ago about retchings, violent occasional pains in the abdomen, with disturbance of the bowels, and a settled, heavy, continuous pain to the right of and across the stomach. There was dulness there, and there was a shrinking under pressure or percussion. Suspecting hardened fæces, I proceeded upon the suspicion. Although the milder aperients acted regularly through many days, no masses came away; yet the patient said he felt that something was slowly moving on, and that the settled weight and pain were passing from right to left, as along the track of the colon, while flatus would rattle across there instead of being so often ejected by the gullet. Having old, tender piles, he dreaded any strong action, but ultimately reported it had come at last,—that he had never had such an effort or suffered more pain in his life than in passing the hard mass, but that now he felt well in every respect.

Case 8.—Another elderly lady had had the like symptoms of dyspepsia, with vomitings and alternations of protracted constipation with frequent petty purgings. She lived in one of a terrace of houses which were all her own property, and there she sat and brooded from day to day, scarcely ever going out or taking exercise. On account of her constant dyspepsia she had at length taken to almost nothing but a milk diet, with small additions of brandy. Paroxysms of agonising pain supervened, always relieved for the time being by opium, but only to return. When I expressed an opinion of loaded intestines, the patient herself, like others, urged the very little she had taken for months, and also pointed to the sinking in of the abdomen as a physical proof of non-accumulation. However, the course of treatment was resorted to, and after some perseverance, using aconite and belladonna for the pains instead of opium, there at last came away a great number of large, round, white, and hard masses, more like big balls of putty that had been drying for some time than any fæcal matter. When her husband applied a stick to them, and found them so difficult of penetration, as compared with what he expected, he said, "Well, without having witnessed this I could hardly have believed it, considering her babylike diet and her going so often to the closet." I must here observe that, with all its blandness and apparent innocence, a milk diet, with its tendency to a great accumulation of casein, is very apt to produce a constipation of this kind, and the purer the milk the more likely is it to lead to this result. I have noticed this again and again. One gentleman, who attended a case of scirrhus of the pylorus with me, in which the patient had been taking milk, felt sure one day that the person had violated his rules, and had been swallowing toasted cheese. Now, the vomit, I must admit, did look and smell exactly like some Welsh rabbit, but it was the cheese of the milk turned rancid. Goat's or ass's milk is more fitted for the purpose in view, but I think should always be watered, and the tougher particles prevented from agglomerating by being boiled up with arrowroot or flour, or other material of that kind.

Case 9.—A gentleman, between 60 and 70, who died a few years ago, had been troubled with alternations of constipation and diarrhœa—as usual, not much attended to by himself except under pressure of present symptoms. He was a large, fat, and powerful man, but latterly had a pale lemon-like hue about him. At length the pain, constipation, and vomiting became extreme, and he wished me to see him. On the visit I detected a large, hard, and tender mass to the left of and a little below the navel. From the peculiar hue of the countenance, I suspected a malignant tumour. Sedatives, mild aperients, and injections were in this case vain. The gentleman who attended with me (Mr. Burdett) found, after a few days, fæcal matter in the urine, which I also saw. The body was not examined, but, doubtless, whatever was the chief disease, perforation had occurred, so as to admit of this rather unusual phenomenon.

Case 10.—Another case, the previous progress of which I did not personally observe, because I was called to see it only shortly before death, yet doubtless had been somewhat similar to those just described. The patient herself and family stated that she had long suffered from indigestion and relaxation of the bowels, so that, on journeying by rail with her grandchild to visit its mother in Birmingham, she previously took an astringent and sedative draught to avoid inconvenience while in the train. On arriving at the station, however, she was seized with violent pains and sickness, and was forthwith driven to her daughter's house, near Bath-row. Here, as is the wont, brandy was first tried; but as she got worse, Surgeon-Major Yates was sent for, and afterwards myself. Here the tenderness was near the ileo-cæcal valve. Leeches, I think, were applied, and afterwards a blister, while she took sedative draughts and had mild injections. These injections brought almost nothing away, and she gradually sank and died, with all the symptoms of acute peritonitis. An examination was made, which revealed the usual effusions from the inflammation, and at the lower part of the ascending colon there were found not very large, but very hard and adherent lumps closely impacted, and which there can be little doubt had had much to do with the induction of the peritonitis.

I shall not farther task your patience by any additional cases, but I think they tend to show the importance of a careful and early diagnosis in all such *ordinary* ailments, as they are called. It also becomes evident that, as there may be many complications, it behoves us in adopting the evacuative process to begin and advance with caution and circumspection, and to avoid especially commencing with powerful agents by the mouth lest we might do more harm than good, particularly if scirrhus, induration, or other organic physical obstacle be in the way. But employing at first only mild aperients and mild injections, we thus cautiously and safely feel our way towards the use of calomel, colocynth, or scammony, or the injection of the oil of turpentine. The possible induction of intussusception is an awkward danger staring us in the face, but mild liquid injections are rather a safeguard against that; nor should we here forget that case in which a poor man's life was saved by Mr. Richard Griffin, of Weymouth, if I mistake not, by the simple injection of common air by an ordinary pair of bellows. That gentleman, who had continued to hold a parochial appointment, not from any necessity, but from a resolve to protect the poor against certain so-called guardians, was summoned several years ago by a brother parochial surgeon into the midst of a distant heath in such a case where intussusception had supervened. As there were none of the ordinary appliances at hand, his ingenuity availed itself of this pair of bellows, when he unloosed and distended the intestines with complete success. His liberal patrons considered five guineas a most exorbitant charge for only blowing a pair of bellows, and refused to pay. Under these circumstances he had to appeal to the Poor-law Board, who, of course, ordered immediate payment. Such are the occasional annoyances in medical practice, when, not considering the importance of the result, but only the apparently simple means, such people will begrudge fees earned, as they think, only by looking at a patient, or giving some seemingly commonplace directions, or writing a few words upon a scrap of paper, or using this common pair of bellows. Not that I can personally complain, but at the same time such a case as the above is very far from being at all singular.

TYPHOID fever has appeared among some of the people living in the Chatham Dockyard. Two women have died and three men are in hospital.

A FINE of £5 each and costs was inflicted on Tuesday by the magistrate of the Southwark Police-court on three milkmen for adding water to their milk.

THORACIC ANEURISM: CONSOLIDATION OF THE TUMOUR UNDER TREATMENT.

By FREDERICK IRVING DE LISLE, L.R.C.P.,
Medical Officer of the St. Peter Port Hospital, Guernsey.

So much has been said by many able writers on the treatment of aneurism, and so many apparently excellent theoretical reasons for adopting remedial measnres opposed in many important particulars to that which I am abont to advocate, that it is with some diffidence that I approach the subject. But, as many anthorities are still holding different views as to the manner in which aneurism should be treated—some being so bold as to assert that this disease is incurable, and that reported cases of cure were in the first place errors of diagnosis; others that starving the patient and snbjecting him to small bleedings is indicated; whilst a third party maintain that the consolidation of the tumour by coagulation (the end that all who treat aneurism have in view) is best obtained by placing the patient on a generous diet, and by the administration of large doses of iodide of potassium, both advising rest. Others, again, are in favour, where it is practicable, of surgical operations, as tying the subclavian and carotid arteries for aneurism of the innominate; and surgical appliances, as Liston's clamp, in aneurism of the abdominal aerta.

In the above remarks I have left aneurisms of the extremities out of consideration. I do not think that I can do better than refer those who disbelieve in the cure of aneurism to a very interesting report of an innominate aneurism, the cure of which was proved by post-mortem examination, and reported in your columns by Dr. McNalty, May 31, 1873, p. 569. This report, I may add, I read with much interest, for at the time the case that I shall presently subjoin was nnder treatment.

Low diet seems to me peculiarly objectionable, and the assertion that under its influence less blood is made is, I consider, open to question. For it is chiefly in quality, rather than in quantity, that the blood is altered, and the proportionate amount of fibrine in the blood is lessened, thus making it less coagulable. Starving also increases the number, although it lessens the force, of the heart's contractions.

Frequent bleeding in small quantities has in my opinion more to recommend it than low diet; for, as is well known, venesection increases the proportionate amount of fibrine, but, on the other hand, it has also a tendency to render the heart's action irregular, and this might disturb the clot that was forming, and retard instead of hastening the cure.

Full and generous diet combined with rest, keeping the patient entirely in a recumbent position, avoiding everything, as alcoholic drinks, that will in any way accelerate the heart's action, seems to me the most philosophical, where operative procedure is determined against or impracticable. The administration of iodide of potassium is, I think, generally unnecessary when there is no reason to suspect syphilis, for, except in certain diatheses, the blood coagulates readily if placed under proper conditions.

The galvano-puncture—recommended first, I think, by Ciniselli—although it has much to recommend it, is not unattended with danger, nor is the clot as hard and durable as might be desired.

Samuel L., aged 38, farmer, applied to me on May 22 with the following history and symptoms:—

In August last whilst exerting himself in his fields more than usnal, he felt a "crack" in the upper part and right side of his chest, which was followed by faintness and nausea; for some days after he was unable to work, owing to a feeling of weakness and palpitation of the heart on the slightest exertion, but he did not think it necessary to apply for medical advice. Soon after this, about a fortnight, he noticed that his voice got weaker, and in a short time he was unable to speak above a whisper. About two months ago he commenced to have difficulty in swallowing, and this steadily increased. Patient's father met with an immediately fatal accident three weeks ago: this caused a great shock to his system, and he believes that the difficulty in swallowing has increased more quickly since then. He has several times since the strain felt a numbness in the right arm, extending to the tips of the fingers, rendering them quite "foolish." Last evening the difficulty in swallowing was greater than ever, and he was only able to get small qnantities of liquid food to pass the obstruction. This morning all foed was completely arrested and rejected. Patient points to the depression in the neck at the upper part of the sternum as the spot where the difficulty takes place. He has lost flesh considerably lately.

On examination, patient has a peculiar yellow appearance, conveying an idea of malignant disease. There is a small pulsating tumour projecting above the clavicle on the right side, communicating a peculiar thrill to the touch, and a blowing sound to the ear through the medium of the stethoscope. Heart sounds normal, but the second sound is strikingly loud, having a pecnliar twang like the springing of tant catgut. The right clavicle is raised and more arched than the left, and the fingers of the right hand are slightly clubbed. Pulse on the right side is harder and more wiry than on the left. Patient asserts that he has never suffered from any venereal disease. His mother is alive and healthy, aged 65. He has several brothers younger than himself; has lost two by accident, bnt none from disease. Neither himself nor any of his brothers have ever been very strong men. One brother suffers from palpitation of the heart.(a)

Ordered to remain entirely in bed and in the recumbent position, and to take small quantities of liqnid food from an invalid's cup frequently. ℞. Tinct. digitalis, tinct. hyoscyam. āā ℥v., to be taken every four hours.

May 23.—Has been able to swallow since he has been in the recumbent position. Yesterday evening, being tired of remaining in bed, he got up, dressed, and came downstairs and laid on the green bed;(b) after leaving that and going upstairs to his bedroom, he found that he could not swallow. The power of swallowing returned this morning. To take eggs beaten up, milk, and beef-tea; to remain in the recumbent position and to continue the mixture.

24th.—Patient is able to swallow liquid food without difficulty. The tumour is not now visible, but the pulsation is felt just below the level of the clavicle. Thrill distinctly heard through the medium of the stethoscope. Continue as yesterday.

26th.—Patient has no difficulty now in swallowing. He has taken without inconvenience eggs beaten up, beef-tea, milk, and thin cornflour. The sound transmitted to the ear over the site of the tumour is slightly rougher and not so loud as previously. The second sound of the heart is still abnormally loud, but it has lost the peculiar twang that it had when first examined. The tongue is covered with a thick fur, and the breath is very offensive. The bowels have not been moved for some days. Allowed to eat small pieces of crumb of bread buttered, and eggs very soft boiled. Continue the mixture, and ordered an injection of warm soap and water.

27th.—Was able to eat the food ordered yesterday without difficulty. The injection was not administered, as he had some griping pains, and the friends thought that the bowels were going to be moved spontaneously. Ordered to have the injection to-night. Continue the mixture. Allowed to sit for an hour in an easy chair and to eat meat or fish.

30th.—Tumour still pulsates to the touch, but much less than when first observed, and has a hard crustaceous feel. Has not felt numbness in the right arm or tingling in the fingers since he commenced the treatment. Cough has entirely ceased, and the voice is getting stronger.

June 4.—Pulse on the right side is greatly smaller than on the left. The tumour communicates a scarcely perceptible pulsation to the touch, but there is still a whiz communicated to the ear by the stethoscope, but it is accompanied by a crackling sonnd. Omit the mixture.

8th.—The tumour feels more solid, and pulsation cannot be distinguished, but a slight thrill may be felt. When the stethoscope is applied blood is still heard passing through the tumour, the walls of which appear to be thick and the column of blood passing through it small. Exactly over the tumour the beat of a small vessel can be distinguished, which was not previously demonstrable. Pulse in right wrist considerably smaller than in left.

12th.—Tumour feels quite solid; the beat of the vessel over the tumour is stronger, and the vessel feels larger than previously. A slight thrill is heard when the stethoscope is placed over the tumour, but whether it proceeds from the tumour or the vessel in such close contact with it, I am unable to state with certainty, but my impression is that it proceeds

(a) This man fell down a cliff 100 feet high on June 26, and died three weeks after from the effects of the injuries received. Whilst he was under my care I frequently examined his heart carefully, but was never able to detect a bruit. No post-mortem examination was allowed.

(b) A large square-shaped sort of couch, stuffed with green ferns and usually covered with baize. It is to be found in the kitchens of nearly all our farm-houses.

from the vessel. Right pulse is still smaller than the left, but their beats are more equalised than I have before felt them. Allowed to walk about quietly in his garden twice a day for twenty minutes at a time.

16th.—Tumour feels quite solid. The vessel has increased in size since my last visit, and the force of the pulsatiou is greater. Right and left pulses almost eqnal. Felt considerable palpitation of the heart for the first two days, when he commenced to walk, but did not feel it at all to-day, and very little yesterday. To coutinne as before, but allowed to increase his walks if he does not find it bring on palpitation.

25th.—The vessel over the tumour has increased to the size of a goose-quill. The tumour remains quite hard. Right and left pulses are equal. Patient has had no returu of the palpitation. Allowed to go ont in his fields and superintend the work, but on no account to exert himself.

I have seen this patient several times since that date, and have always taken the opportunity of examining him. The tumour remains quite solid, and he is to all intents cured.

This was what may be termed a desperate case. Here was a patient in danger of starvation, and it was evident that, unless prompt measures were taken to reduce the size of the aneurismal tumour that was pressing on the œsophagus, death would be the result, although life might be prolonged by means of nutritious enemata. As was showu by this case, the patieut may sometimes be relieved, and that quickly, without recourse being had to operations at once difficult and dangerous. When I first saw the case I was on the point of proposing the distal operation to him, but ou reflection I determined to try palliative measures for a day or so, and improvement taking place under their exhibition led me to persevere.

It is well in private practice to avoid operative measures as much as possible, as patients have great dread of the surgeon's knife; and here in the country parishes of Guerusey we have a difficulty to encounter from which I fear practitioners in other country places are not exempt. Our country people always think that a surgeou should be able to perform any operation without the slightest assistance, and on proposing a consultation I have often been met with the following blunt reply, which is much more forcible in the native *patois*:—"Oh, sir! if you are uot clever enough I will fetch another doctor." Not long ago a well-to-do farmer cousulted me for malignant disease of the testicle. I pointed out to him the necessity for au operation, and he acquiesced, but asked if I should require another doctor with me. I told him that I certainly should, aud stated the reason wherefore. We then agreed as to whom the other surgeon should be, and appointed a day for operating; but the following day his wife called on me, and said that unless I was willing to perform the operation aloue her husbaud had decided not to have it done at all.

Now, it strikes me that in many cases of aneurism of the abdominal aorta the effect of rest and good feeding might be noticed previous to the application of Listou's clamp. It is true that the cure would be more tardily effected by the former method, but it would have the recommendation of being safer, for, as has been shown by the sphygmograph, the application of the clamp to the abdominal aorta produces iucreased arterial tension in the upper part of the body—a thing to be avoided with diseased arteries; for when one artery has an aneurism, the probability is that the other vessels are not in a sound condition.

Auscultation of the Chest in Diseases of the Brain.—At a recent meeting of the New York Academy of Medicine, Dr. Brown-Séquard made some remarks on "The Importance of Frequent Anscultation and Percussion of the Chest in Cases of Organic Diseases of the Brain." He cited cases occurring iu animals and man, showing that injuries to the brain will produce emphysema, pneumonia, and diseases of the liver, stomach, and kidney. Pneumonia is oftener produced when the injury is on the right side of the brain. He referred to 188 cases of tubercle, compiled from various sources, in which the origin of the disease was traced to inflammation of the brain, showing it to be not of accidental occurrence. His conclusions were that in animals which have received brain injury inflammation of the lungs may follow. The injury in this manner causes death. In man the same effect is shown by actual experiment. The life of man may be saved, after injury to the brain, by early auscultation and percussion.—*New York Medical Record*, July 1.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

THREE CASES OF OVARIOTOMY.

(Under the care of Mr. HULKE.)

Case 1.—*Large Multilocular Ovarian Tumour—Rupture of Cyst—Ovariotomy—Recovery.*

Ann N., aged 52, admitted in the middle of August with an abdominal tumonr, was transferred on the 27th of that month to the surgical ward. Her belly, globularly distended, measured from the ensiform cartilage to pnbis tweuty-three inches, and its girth at the umbilicus was forty-two inches and a half, being one inch and a half more than it had measured at the same level ten days previously. The whole of the lower part of the front of the belly was dull on percussiou; the upper limit of the dulness was an oblique line, reaching higher on the right than on the left side, and crossing the median line rather nearer to the navel than to the ensiform cartilage. Above and to the right of the navel was a large, hard mass, while below the navel in the raphé was a distinct creaking, when, with the hand placed flat upon the belly, an attempt was made to move the abdominal walls upon the underlying mass. Throughout this dull area, except where the hard, solid masses were felt, a deep, rather indistinct wave across the tnmour could be elicited. Three days later, over the whole frout of the tumour percnssion brought out a snperficial wave, which could not only be felt but was also visible; and when the finger-tip was quickly and firmly pressed ou the belly, a thin overlying stratum of fluid was displaced before reaching the more deeply-placed tumour. This led to the supposition that ascites was now superadded to an ovarian cyst. She had also procidentia uteri, with prolapsus vesicæ and much difficulty in micturition. Her breathing was embarrassed, so that she was unable to lie down in bed. Her appetite had failed. She was very emaciated and feeble, and a fatal termination was evidently near.

Takiug into account the ascertained presence of large solid masses, which would necessitate a relatively long incision, the presumed existence of adhesions suggested by the creaking, and the extreme weakness of the patient, Mr. Hulke did not feel warrauted in urging her to submit to ovariotomy, nor justified in refusing her the chance it alone offered, if, with a full understanding of the attendant risk, she elected to have it done. She chose it, and, with the concurrence and assistance of Dr. Davis, the tumour was removed on the 28th. On opening the peritoneal cavity a large quantity of brownish bloody fluid gushed out, very unlike the usual straw-coloured fluid of ascites, and evidently cystic. When the opening had been enlarged enough to allow the hand to be passed into the belly, a large transverse rent was found in the principal cyst, above the level of the navel. Through this the bloody fluid free in the peritoneal cavity had evidently escaped, and the supervention of the usual physical signs of ascites three days previously marked the time when this rent took place. Notwithstanding this there were not any marks of recent peritonitis present. An adhesion of the great omentum, iucluding several very distended veins, to the spot where the creaking had been felt, was tied with silkworm gut, aud severed; the ends of the thread were cut off close. A large solid tuber filling the pelvis was the cause of the extrusion of the uterus and bladder. The pedicle was sufficiently long to permit the use of a clamp without any drag on the womb. She made an uninterrupted recovery. The only medicine taken was a single half-grain of morphia in a suppository placed in the vagina directly after the operation. During the first twenty-four hours she was nourished entirely with beef-tea aud milk enemata. Ou the second day these were given at longer intervals, and she began to take food by the mouth.

At Christmas she called to show herself, and was then so stout and strong as hardly to be recognised at first sight.

Case 2.—*Proliferous Ovarian Cyst—Ovariotomy—Recovery.*

M. T., aged nearly 50, was transferred, December 27, 1872, from the medical to the surgical wards with an abdominal tumour of rather more than two years' growth. First noticed in the left flank, it now formed a large globular swelling, distending

her whole belly, and pressing the intestines away from the front into the loins. At its most prominent part, around the navel, it distinctly fluctuated; but above the pubes and in the left flank were hard, inelastic solid masses. Manipulation was slightly painful, and for the last three weeks she had felt a soreness in the right inguinal region. The tumour, as a whole, seemed to be movable—it could be swayed about. The uterus was pulled up and to the left. It seemed to be movable independently of the tumour; its cavity was not enlarged. The bladder was irritable. The girth at the navel was forty-three inches and a half. She felt very helpless, and was disabled by the bulk and weight of her belly. She had had eight children. Catamenia had ceased four years, but four months ago she again had a slight bloody flow, which had since occasionally recurred. Her thoracic organs were healthy, and no kidney disease was discoverable.

January 2.—The tumour was removed. It proved to be a compound proliferous cyst. The pedicle was sufficiently long to allow a clamp to be put on without much dragging on the uterus.

During the first thirty-six hours no food was given by the mouth. She occasionally sucked a small bit of ice, and had from time to time an enema of two ounces of strong beef-tea.

On the second evening her pulse had reached 116 beats per minute, and her temperature had risen to 102·6. From this the feverishness declined. During the first week the temperature ranged between 99° and 100°, and then averaged 98·6° F.

On the third day her urine became slightly bloody; she complained of pain in the loins, and her skin was dry and harsh. These symptoms were relieved by sweating her freely with an extra blanket and raising the temperature of the room. The hæmaturia was followed by considerable deposit of lithates, which quickly disappeared after a few five-grain doses of carbonate of lithia.

At the end of the month she was considered convalescent; but the lower angle of the wound containing the pedicle—a very fleshy one—did not quite cicatrise till a fortnight later.

Case 3.—*Compound Ovarian Cyst of Rapid Growth—Ovariotomy—Death.*

—, aged 21, a *petite blonde*, married three years, miscarried at the end of the first year in the fifth month, and was confined at the seventh month in November, 1872, of her second child. Before and during the second pregnancy she had not been aware of any unusual condition of her belly, but after the birth of the child the belly remained full, and on getting up her attention was attracted by a sort of splashing inside her as of water. For this she was admitted, January 7, into the Middlesex Hospital under the care of Dr. Liveing, and the swelling proving ovarian and not ascitic, she was transferred to Mr. Hulke. The navel was flat. On rising without assistance from the bed, the musculi recti abdominales were projected in relief on the front of the tumour as a rod, and not separated as in ascites. Her belly was greatly distended, the girth at the navel being thirty-six inches, and it was everywhere dull on percussion, except for about two inches below the sternum, and in the extreme flanks. This dulness was continuous with that of the liver, and it extended downwards quite to Poupart's ligament and the pubes. Over its whole area fluctuation and thrill were distinct, except on the right side, where, about three inches to the right of the navel, and two inches from the rib-cartilages, was a solid mass about seven inches in diameter. With the exception of slightly prolonged expiratory murmur below the collar-bones, nothing abnormal was found in the chest; it expanded well, and was normally resonant. The urine was free from albumen, and its specific gravity was 1020. Micturition of late frequent. Her hands and feet were usually purplish and cold, and her face always a little flushed. Skin moist and cool. She had latterly lost flesh, and found herself much inconvenienced by the bulk of her belly, occasionally saying her life was a burden.

She was one of seven children, of which two died in childhood, and two sisters and two brothers survived. Her mother and one sister are dropsical—from the patient's account probably anasarcous. At the end of January the girth at the navel was one inch and a half more, and the distance from the pubic symphysis to sternum had increased two inches. Taking into account the patient's constitution, her family history, the quick growth of the tumour, and its concurrence with pregnancy (which has been found to favour the formation of adhesions) ovariotomy could not be regarded without much apprehension of an unfavourable result, but it was her only chance. A menstrual period having ceased on February 23, five days later (on the 28th), at 9 a.m., the tumour was removed. It consisted of three principal cysts, the largest of which contained a dirty straw-coloured viscid fluid, the second a perfectly colourless water-like serum, and the third a colloid mass too thick to pass through the trocar. A strong broad vascular adhesion to the abdominal wall in front of the descending colon was transfixed, and tied in two pieces with fishing gut and severed without bleeding. The pedicle was very broad and thin, long enough to be clamped without dragging. The patient, who took ether, was sick after the abdominal incision, and before the cysts were tapped, which caused a few minutes' delay. As in the other cases, ice only was given by mouth during twenty-four hours, and enemata of beef-tea were administered. She dozed occasionally through the day, after having tr. opii ℥x. in two of the enemata. At 9 o'clock p.m. her pulse was 112, and temperature 101·2°. The belly was flat, not tender when touched, but she had had two or three coughing fits and complained of phlegm, which she could not get up, being unable to cough freely, as this made her belly painful. Slight rhonchus was heard over the front of both lungs, but the lungs expanded freely and plenty of air entered them. Sinapisms and afterwards a large linseed poultice were applied. At half past eleven o'clock she vomited, the first time since the operation, and after this she passed a restless night harassed by thirst, and towards morning by a pain in her left shoulder.

Next morning (March 1), at 8 a.m., her temperature had fallen to 100·8°, but her pulse had risen to 134 beats, Her cheeks, before the operation usually slightly flushed, were pale, and her features expressed great oppression. The belly was quite flat, not at all tender when pressed, except along the line of the incision; she said she had not any pain in it, but only in her chest and shoulder. In the chest nothing more than an occasional rhonchus was heard. At noon the pulse was 134, and the temperature 100·3°; but the sense of oppression, which she referred entirely to the chest, had much increased. At 5 p.m. the resident medical officer detected a loud friction-sound over the heart, which certainly was not previously present. The frequency of the pulse had risen to 148 beats, and the temperature was 101·4° F. Sickness now became troublesome. Eight leeches were put on over the heart, calomel and opium were given by mouth every second hour, and mercurial ointment rubbed into the arms and thighs. The strength now rapidly failed. Small quantities of iced champagne were given from time to time, but the sickness increased. At 8 p.m. the belly was still flat, free from tenderness and pain, but in the course of the night it became swollen.

At 7 a.m. on the 2nd she was pulseless, cold, cyanosed, and she died shortly after, or about forty-eight hours after the operation.

At the post-mortem examination, made next day by the Registrar, the wound was found to be already united. There was a small quantity of turbid serum in the peritoneal cavity. The whole parietal and visceral peritoneum was injected; it had not generally lost its polish, but parts, particularly in the neighbourhood of the incision, had a thin coat of fresh exudation, and near the wound also were many small subserous hæmorrhagic spots. The bronchi were injected, and the bases of the lungs congested and atheromatous. The pericardial sac contained a little serum. In the subserous tissue under the pericardium, on the left side of the heart, were numerous minute grey pearly beads (miliary tubercles?), and the endocardium of the left ventricle exhibited several red injected patches; it was also rough from a coating of soft fresh exudation, particularly on the mitral and aortic valves. The right ventricle contained a tough, fibrinous, adherent clot, which extended into the pulmonary artery.

German Professors and Students during the late War.—In a work published by a German student at Leipzic, biographical notices are given of 248 students and 4 professors who fell in action—the University of Leipzic suffering the greatest loss, 63 members in all. Out of the 13,765 German students matriculating in the summer term of 1870, 4510 went through the campaign, about 3500 of whom were in the ranks, and 1000 attached to the ambulances. Out of 1505 university professors, 15 were under arms, 253 devoted themselves to the care of the sick and wounded, and 120 worked for the national cause by tongue and pen.—*Philadelphia Medical Times*, 1873, No. 81.

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Medical Times and Gazette.

SATURDAY, AUGUST 30, 1873.

THE COMMISSION ON SCIENTIFIC INSTRUCTION AT OXFORD AND CAMBRIDGE.

The subject of the relation of the older English universities to natural science is one of high interest and importance to the profession of medicine. For centuries medicine as a profession has received but a comparatively small share of the advantages which an education at Oxford or Cambridge affords, although these advantages have been lavishly showered on divinity and law. The main reason for this inequality has been that the studies which have been encouraged in the universities have been those which are fundamental for the theologian or jurist, whilst those which lie at the foundation of the art and science of the physician or surgeon have been until lately completely, and are still comparatively, ignored. The neglect of natural science in the Universities of Oxford and Cambridge is only one clause of the indictment which educational reformers bring against the government and management of those venerable seats of learning; but it is perhaps the most important one. We have so recently discussed the subject of university reform that we should not have again recurred to it had it not been for the appearance of the very important report of the Royal Commission on Scientific Instruction and the Advancement of Science in the two Universities, which has just been published.

The Commission which has produced this report is not to be confounded with another Royal Commission which is collect ingevidence as to the financial condition of the universities and colleges and the amount of funds available for enlarged plans of educational usefulness. The Science Commission is presided over by the Duke of Devonshire, the Chancellor of the University of Cambridge, and amongst its members are Stokes, Sharpey, Huxley, Sir John Lubbock, and Mr. B. Samuelson—names which have sufficient weight to insure a careful consideration for the conclusions at which they have arrived. The evidence which the Commissioners have collected they have arranged and considered under six heads:—1. The courses of study and the examinations. 2. The professoriate. 3. The scientific institutions within the universities. 4. The colleges. 5. The relation of the universities to technical education, and to education for scientific professions. 6. The duty of the universities and the colleges with regard to the advancement of science.

Different thinkers will form different estimates as to the proportion which general literature should bear to direct scientific pursuits in the education of a young man who is intended for a scientific profession, or who has determined to devote his life to the cultivation of any branch of natural science. It is a question which we shall not attempt now to discuss. We would only observe that the Commissioners evidently regard the examinations which every student has to pass before obtaining his bachelor's degree—examinations known at Oxford as Responsions and Moderations—as an obstacle in the way of scientific progress which might well be removed. They would not indeed sweep away all tests and proofs of liberal education, but, by placing these outside the threshold, they would leave the student of science free on entering the university to pursue the special objects which he has in view. They recommend that on leaving school each boy should pass an examination in literature and the general branches of learning equivalent to the German *abiturienten examen;* that this should be his passport to the university, where, from the first moment of his entering, he would be free "to devote his whole time and energy to his scientific studies." The "leaving examination" would be arranged, and, we presume, superintended by the universities and the public schools. The idea is really that of the preliminary examinations which stand at the entrance of the legal and medical professions, and of the matriculation examination of the University of London. The Commissioners would indeed permit a boy who fails to pass the leaving examination to enter the University on condition that he passes at some later period of his course an equivalent examination. But they recommend that a leaving examination should become the general rule of all great schools, and they believe it would be as beneficial for boys who are not intended for a university as for those who are to continue their education there. They also recommend that "those parts of science which are suitable to form part of the education of boys should be fully recognised in it. But natural science is not taught at schools, and probably one reason is that the universities hold out no inducements to schools to teach it. Out of 107 scholarships at Oxford six only are for proficiency in natural science. An increase of natural science scholarships would be an incentive to schools to teach and to boys to learn, and such increase the Commissioners hold to be imperative. They recommend that there should be not only College Scholarships but University Scholarships for Science, comparable to those which already exist for classical and mathematical attainments.

Within the universities themselves they recommend a large increase of the scientific professoriate. They compare the list of professors at Oxford and Cambridge with the list of professors at the University of Berlin, and the comparison is certainly not in favour of the former. Whatever be the ultimate arrangement of the Science Faculty in the University of Oxford, they recommend the immediate establishment of two professorships in Physics, two additional in Chemistry, five independent professorships in Biology (exclusive of those assigned to the Faculty of Medicine), and two chairs of Mathematics and Mathematical Physics, and a chair of Applied Mechanics and Engineering. These professorships would be of the first order, with proportionate emolument; but in addition the Commissioners recommend the appointment of a considerable staff of adjoint professors or readers, demonstrators and assistants, and a commensurate increase in accommodation—laboratories, lecture-rooms, with the necessary apparatus and appliances. The whole Faculty of Science

they would place under a single administrative body in each university, in which every department of science should be represented, and which should have large but definite duties imposed upon it—financial and educational. For this body they propose the title "University Council of Science."

With regard to the duties of professors, the Commissioners hold them to be double—first, the duty of teaching; secondly, that of advancing science. They will not allow that the duty of original research should excuse a man from lecturing, nor, on the other hand, that the labour of lecturing should entitle a professor in a great university to spend the remainder of his time in learned leisure. Some of the witnesses examined by the Commission have suggested that the duties of lecturing and teaching required from the professors are so onerous that they leave no time for original research, and they have recommended that the professorial statutes as to the number of lectures should be relaxed. We are glad to notice that the Commissioners refuse to countenance this suggestion. They urge very properly that the university duties of a professor only last six months, and "that he has thus the invaluable privilege of being master of his time for fully one-half of the year. It is therefore only reasonable that during the university terms he should devote a fair proportion of his time to the work of teaching." In this those who know Oxford and Cambridge best will fully concur. If our old universities are not only to maintain their reputation for excellence in classical literature and in mathematics, but are to vie with the German universities as the great scientific centres of the country, giving each year an impulse to experimental philosophy which shall be felt throughout the civilised world, a new spirit of activity and life must take the place of their dignified but somewhat indolent routine. Undoubtedly they are "seats of learning," for learning has been nowhere more sedentary. The idea of progress in sound knowledge, which was the idea which actuated the founders of those grand mediæval cloisters and colleges, has been well-nigh forgotten, and the enormous revenues which the intelligence and piety of former ages have made available for the increase of the sum of all human attainments have been mainly spent in keeping alive a knowledge of a literature which centuries ago yielded all of which it was capable. The Commissioners fully recognise that the functions of a great national university are not merely to teach and to examine, but to advance all parts of human knowledge and culture, and we welcome the appearance of their report as the harbinger of a new era of intellectual progress and activity in the great universities of England.

MEDICAL USES OF ELECTRICITY.—No. I.

But a very few years ago a paper on the employment of electricity in medicine would, in England, have subjected its writer to more than a suspicion of serious flirtation, if not of alliance, with that unholy thing—quackery. On the Continent, indeed, in France and Germany, physicians of the highest standing—such as Duchenne de Boulogne, "the Father of Electro-therapeutics," Du Bois Raymond, Trousseau, Remak, Benedikt Eulenberg, and Ziemssen,—have for many years been working zealously at the subject, and by their numerous and valuable publications have made the medical uses of electricity largely and widely known. But in England the belief in its therapeutical value and powers has been of very slow growth, and it is only very lately that the profession at large has begun to take any real or widely spread interest in the matter. Their attention has, however, at last been fully aroused by the labours of Reynolds, Anstie, Radcliffe, Althaus, Buzzard, Tibbits, and other physicians; and there appears to be not a little danger lest their zeal in the use of the power placed in their hands should outstrip their knowledge of the subject, and lest, therefore, some abuse of electricity in medicine should lead to a depreciation of its value or a dread of its use. Cases could, we fear, already be quoted in which very serious mischief has been produced by the use of faradisation ignorantly and improperly employed. There is, indeed, no lack of works to teach the proper uses and the proper limits of the employment of the various forms of electricity, medically and surgically; but many of these are in a foreign language, and are therefore sealed books to the mass of the profession, and some, while in the English language, are too lengthy to be of much use to busy practitioners, and probably but seldom fall in the way of the majority of them. It is thus not easy for medical men generally to get at all a full or exact knowledge of what electricity can do in medicine, or in what cases and how it may be safely employed; while at the same time the occasional papers on its uses and the cases illustrating its power for good, published in the periodical medical press—especially in the *Practitioner*—are strongly incentive to the employment of it. Perhaps it may be said, also, that the less a man really knows about it the more is he apt (on the *omne ignotum pro magnifico* principle) to expect from it, and the more likely is he to employ it rashly and inopportunely. We may, indeed, hope and expect that the excellent "Lectures on the Clinical Uses of Electricity," by Dr. Russell Reynolds, and Dr. Tibbits' admirable "Handbook of Medical Electricity," will do very much to impart the desired knowledge to the profession at large. But it appears to us that we may do something towards supplying this needed information by the publication of a few short plain papers on the use of electricity in diagnosis and in treatment.

We do not propose to attempt to go fully into our subject; any such attempt would carry us far beyond our intended limits; but we hope to give such an account of what has been thoroughly tried and proved in the employment of electricity, that the practitioner may know well when he may safely use it, what he may expect from it, and how far he may safely and usefully go in the use of it.

We do not intend to give any description of the instruments to be used—we must credit our readers with some knowledge of these; but it is as well to premise that we shall use the word electrisation in its general sense, as including—

Franklinism—i.e., Friction, or Static Electricity: the electricity evolved by the friction of glass or amber. *Voltaism—i.e.*, Voltaic, Galvanic, Dynamic, Contact or Current Electricity, the "Constant Current," the "Battery Current": the electricity evolved by chemical action; and *Faradism*—the Induced Current, Electro-Magnetism, or, as it is so often called, the Interrupted Current: "the currents of momentary duration discovered by Faraday to be generated or induced in a coil of copper-wire by the action upon it, under certain conditions, of a permanent magnet, or of a voltaic current."

We will once for all acknowledge that we are largely indebted for what we have to say to the various English authors already mentioned of works on medical electricity. We shall draw freely on their writings and on the various papers that have appeared on our subject in the *Practitioner*, but we shall not as a rule name again the works or the writers from whom we have gained much of the information contained in these papers.

We will now proceed to give two or three general directions for the employment of electrical treatment.

Be careful not to frighten the patient with the apparatus used or the mode of using it. Children may easily be seriously alarmed by what the operator has by daily use become perfectly familiar with; and even "children of a larger growth" are often extremely nervous at the idea of electrical treatment. The consequences of the alarm so caused may be very serious, and would very probably be placed to the credit of the electricity, and so may bring discredit on the treatment employed.

The operator should always be careful to know exactly the

strength of the current he is about to employ. Dr. Tibbits gives a good rule on this point—"In either diagnostic or therapeutic electrisation the operator should never use electricity upon a patient without first testing it upon his own hand, and, if about to apply to the face, upon his own face." In all our machines the strength of the current, either voltaic or faradic, may vary from day to day, and attention to this rule is the only sure means of testing the current to be used.

When acting on muscles the treatment must not be prolonged so as to tire the muscles or the patient; if the application of the battery-current, "or of any form of electricity, is followed by weariness in the limb, giddiness in the head, pain in the head, a feeling of faintness, of sickness, or a nondescript sense of discomfort about the epigastrium, do not go on with electricity at all; cease altogether for a time." And do not apply to muscles a current of such strength as causes pain: the force of the current should be just enough to excite contraction, but contraction without pain; if it is painful it may do mischief. A muscle pained is a muscle hurt.

RESEARCHES IN THE PHYSIOLOGY AND PATHOLOGY OF THE BRAIN.

Ever since there has been a science there has been a science of mind, and mind has for the most part been relegated to the brain, whilst moral and emotional sensations have been referred to such out-of-the-way organs as the liver, spleen, and stomach. It is only recently that there has been any serious attempt on the part of philosophers—as they used to be called—on the one hand, and of men of science on the other, to deal with the organs whence thought and art are in whatever way evolved—*i.e.*, the brain; and it is still more lately that they have tried to localise in a scientific way either sensory or motor impulses. Nevertheless, in recent days important advances have been made. First we were able to recognise that in some way the cerebral hemispheres had the most important part to play in intellectual function. Gull and Spurzheim, to whom is due a certain credit for having first directed attention to this point, mixed up their truth with all kinds of absurd fallacies. It was not difficult to make out that the cerebellum in some way controlled movement, but how and in what way was by no means easy to prove, nor has it been proved to this day. So, too, it was not difficult to find out the important part played by the medulla oblongata, though even now it is difficult to say what are its exact functions. Enough has, however, been done to show that it exercises most important influences over circulation and respiration directly, and over several of the other functions of the body indirectly. But when we approach the study of the cerebral hemispheres we must not forget that in man the cerebral ganglia—the mass of the hemispheres—so greatly overlap and overcap the other important parts of the brain that these are lost in their substance; whereas in some of the lower animals, especially fishes, we encounter successively, from before backwards, olfactory lobes, cerebral lobes, optic lobes, cerebellum, and medulla oblongata. We have, however, been able to make out that what we call in man the cerebrum has at its base two great ganglionic masses—the corpora striata and the optic thalami,—which are in intimate connexion with the brain proper (cerebral hemispheres), and which again in turn communicate more or less directly with the spinal cord and peripheric distribution of the nerves. Now, if there is anything proved in cerebral physiology it is surely this: that the so-called optic thalami are the centres of reception from without—in other words, of sensation, and that the corpora striata are the centres of motility, whether reflex—directly or indirectly—or coming straight from the cerebrum. At all events, these two great masses of grey matter are interposed between the grey matter of the hemispheres and the conducting rods thereof, the white and grey matter of the cord; and whereas irritation of the one may produce signs of pain, irritation of the other always produces motion, perhaps in the form of convulsion. But the question arose, "How can we manage to irritate (say) the corpus striatum without injuring other parts of the brain to such an extent as seriously to interfere with any exact inference from the result of the experiment?"—and this has been heretofore an insurmountable difficulty. It was discovered that for some reason or other the nerve substance constituting the brain and spinal cord was not capable of irritation by direct stimulation, especially by electricity. However, two German observers—Fritsch and Hitzig—made the attempt to determine function by injecting chromic acid through a fine trocar into the substance of the brain. This of course killed a certain portion of the brain substance, the extent being marked by the change of colour, and the results were noted. In this way they obtained certain facts of great importance, especially as regards the localisation of certain functions. The same line of research was subsequently taken up by Dr. Ferrier, of King's College, who, however, found that by induced electricity he could obtain much better results than by any other method. His researches are published in the current (third) volume of the "West Riding Lunatic Asylum Report,"—for by the kindness of Dr. Crichton Browne, the Superintendent of the Asylum, Dr. Ferrier was able to carry on his experiments there. Moreover they serve notably to confirm the conclusions of Dr. Hughlings-Jackson, whose interesting reports and lectures on cerebral diseases are now appearing in our columns.

The following are Dr. Ferrier's conclusions. Imperfect as he admits they are, nevertheless they are most worthy of examination, and we commend them to the attention of the profession. He says:—

"1. The anterior portions of the cerebral hemispheres are the chief centres of voluntary motion and the active outward manifestation of intelligence.

"2. The individual convolutions are separate and distinct centres; and in certain definite groups of convolutions (to some extent indicated by the researches of Fritsch and Hitzig), and in corresponding regions of non-convoluted brains, are localised the centres for the various movements of the eyelids, the face, the mouth and tongue, the ear, the neck, the hand, foot, and tail. Striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres. Thus the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced.

"3. The action of the hemisphere is in general crossed; but certain movements of the mouth, tongue, and neck are bilaterally co-ordinated from each cerebral hemisphere.

"4. The proximate causes of the different epilepsies are, as Dr. Hughlings-Jackson supposes, 'discharging lesions of the different centres in the cerebral hemispheres.' The affection may be limited artificially to one muscle or group of muscles, or may be made to involve all the muscles presented in the cerebral hemispheres, with foaming at the mouth, biting of the tongue, and loss of consciousness. When induced artificially in animals, the affection as a rule first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings-Jackson.

"5. Chorea is of the same nature as epilepsy, dependent on momentary and successive discharging lesions of the individual cerebral centres. In this respect Dr. Hughlings-Jackson's views are again experimentally confirmed.

"6. The corpora striata have crossed action and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonus, the flexors predominating over the extensors.

"7. The optic thalamus, fornix, hippocampus major, and convolutions grouped around it, have no motor signification, and are probably connected with sensation.

"8. The optic lobes or corpora quadrigemina, besides being concerned with vision and the movements of the iris, are centres for the extensor muscles of the head, trunk, and legs. Irritation of these centres causes rigid opisthotonus and trismus.

"9. The cerebellum is the co-ordinating centre for the muscles of the eyeball. Each separate lobule (in rabbits) is a distinct centre for special alterations of the optic axes.

"10. On the integrity of these centres depends the maintenance of the equilibrium of the body.

"11. Nystagmus, or oscillation of the eyeballs, is an epileptiform affection of the cerebellar oculo-motorial centres.

"12. These results explain many hitherto obscure symptoms of cerebral disease, and enable us to localise with greater certainty many forms of cerebral lesion."

THE WEEK.

TOPICS OF THE DAY.

In a letter from their secretary (Mr. D. Maconochie), which has been published in the *Times* and widely circulated, the Dairy Reform Company, of Orchard-street, Portman-square, acknowledge with some appearance of reservation that a very large number of the cases in the recent typhoid epidemic at the West-end have been due to their milk. It is a pity that a large part of Mr. Maconochie's letter should have been devoted to proving the possibility of the outbreak having been produced by other causes than the Company's milk. He says but little satisfactorily to account for the fact that the Company in the first instance virtually declined to stop their milk supply when warned by the joint letter of Sir William Jenner and Dr. Murchison. A more satisfactory part of the statement is that the Company have determined to institute a weekly medical inspection of the farms whence their milk is obtained, and of the persons employed on them, whilst the cattle are to be also regularly inspected by competent veterinarians.

The sewage and disease controversy is dying out with the typhoid outbreak which gave rise to it. Mr. Hope, who writes to the *Times* in defence of sewage irrigation, recommends a thorough scientific examination by Government of all animal and vegetable produce on sewage farms, to be continued over a sufficiently long period; and he enforces his proposition by the fact that the inquests of last year proved that between ninety and one hundred people died in London from starvation.

At Hammersmith, a gardener, George Hunt, has been committed to take his trial on a charge of murder by administering poisonous mushrooms to a woman, who died from the effects. The papers have lately contained numerous cases of accidental poisoning. A number of children at Blackburn have been made very ill, and one has died, from eating arseniate of soda; and the child of a herb doctor at Plumstead has died from swallowing strong acetic acid, administered by his mother in mistake for a "harmless solution of aconite" which was kept on the kitchen chimney-piece.

The death-rate of London seems to be increasing. During the week ending Saturday, August 23, the deaths exceeded by 23 the average number of the corresponding week in the last ten years; but zymotic diseases are diminishing. There were 482 deaths from the seven principal diseases of the zymotic class, against 585 and 538 in the two preceding weeks. The deaths from these seven diseases exceeded, however, by 28 the corrected average. This was due to excessive fatality from diarrhœa. Deaths from diarrhœa, which had been in the two previous weeks 470 and 405, declined to 362, being 127 in excess of the corrected average. Sixteen deaths were referred to simple cholera—eleven were of children under five years of age. The deaths from fever were thirty-two—one was certified as typhus, twenty-seven as enteric or typhoid, and four as simple continued fever.

SANITARY PRECAUTIONS IN THE PORT OF LONDON.

Meetings are almost daily held by the Port of London Committee of the Corporation for the purpose of taking immediate steps for the prevention of an outbreak of cholera or other epidemic disease in London. The Danish emigrants who have been kept under observation during the last fortnight as "suspected" of cholera were, with three or four exceptions, furnished with a clean bill of health on Thursday week by the port medical officers. The entire party, consisting of seventy-four men, women, and children, were discharged on Saturday last, and were placed on board a steamer for Plymouth, whence they will embark for New Zealand. It is only due to the port sanitary authority to add that in the first few weeks of its existence it has possibly saved the metropolis from an epidemic of cholera.

THE AUTUMN MANŒUVRES.

(*From our Special Correspondent.*)

The man who chose Dartmoor as a site for this year's Manœuvres must be enjoying the satisfaction of having made as complete and disastrous a blunder as a commander can usually achieve in time of peace. A high plateau of bog, dotted with rocky eminences called Tors—"a filthy compound of stones and squish," as some indignant warriors called it,—which takes toll from every cloud that issues from the Atlantic, was not the place which would have occurred to any but a cocked-hatted mind as a fit site for camps of instruction. As everyone knows who has seen much of war, continued wet is the soldier's worst enemy. Heat and cold can be faced with impunity, but everything collapses before long-continued rain. The result of the watery campaign which has just elapsed has not been so damaging to the men as might have been expected, and this is probably due to the moderate temperatures which prevailed, as well as to the careful elimination of all men whose health was doubtful before the skeleton battalions were sent into the field. But the expenditure in horseflesh must have been serious. It was pitiable to see the poor brutes standing in the wind with no covering at all, night after night, drenched to the very last hair on their skins. The amount of sickness among the regulars is indicated by the fact that about 2 per cent. had to be sent away to Plymouth and other places according to the statements of the regular medical officers; probably the number will be found to have exceeded that figure when the totals have been added up. The volunteers have enjoyed good health, and have sent away a few men only for minor ailments. If a man is not likely to be able to march within two or three days, it is not usually worth while to retain him at the camp. The First Provisional Battalion, composed as in former years of the Inns of Court, Oxford, Cambridge, Artists, and other corps, complained bitterly, and with good reason, of being placed on a foul-smelling piece of ground at Ringmoor, on which a battalion (the 49th Middlesex) manifestly uncleanly in its habits had been encamped a fortnight before; and this merely to save some staff officer the trouble of marking out another camp. Fortunately nothing worse than vomiting and diarrhœa was caused by it. There were only three changes of camp, and only two or three field-days; the time and labour expended were mostly thrown away; and everyone went home with a hope that business might never again bring him to Dartmoor.

We have been surprised to see this week, by the report of the *Times* correspondent attached to the forces encamped on Cannock Chase, that there has been a dearth of medicines in one of the field hospitals there. It has hitherto been the custom at these Autumn Manœuvres to appoint a principal medical officer endowed with full powers to demand whatsoever he considered necessary in the shape of medicines, surgical instruments, etc., and who has therefore been held responsible that no complaints of the present description should arise. In this instance it appears that the gentleman who was nominated

principal medical officer became sick just before the troops arrived at their destination, and his duties were taken over by a successor who could scarcely have had time to make himself acquainted with the plans of his predecessor. To this circumstance, we believe, the deficiency in question must be traced; and as the requisite medicines themselves were actually in the camp, if not in the field hospital itself, the want of medical stores could only have been temporary. Moreover, each regiment and battery of artillery carries with it to the Manœuvres a small article of equipment called a "field companion." This is strapped over the shoulders of an orderly, and contains a carefully selected and closely packed store of most things likely to be needed in the emergencies of active service—a few medicines, some pills and powders for diarrhœa, etc., lint, bandages, tourniquets, scissors, and the like. It will thus be seen that, with healthy troops just marched out of their barracks for exercise, everything that could be supposed to be required was available for each corps on the ground. We have no doubt that probably before the account was printed the missing medicine-chests were unearthed and placed in the field hospital ready for all emergencies. Anyway we are inclined to think that this grievance was more imaginary than real.

POISONING BY LUCIFER MATCHES.

An inquiry was held last week by Mr. S. Lowe, the coroner for Lincoln, touching the death of an infant who had been poisoned by sucking lucifer matches. It appeared from the evidence that the deceased on Saturday night with another child got hold of a box of matches and sucked the phosphorus from forty of them. Severe symptoms came on two hours afterwards. Nothing was done, however, until eleven o'clock, when Dr. Harrison was sent for, but all his efforts were unavailing, and the child died on Sunday morning. Dr. Harrison said that on Saturday night, about eleven o'clock, he was requested to see deceased. He found the child cold and pulseless. The mother told him that about four o'clock she found the child playing with a box of lucifer matches, and that it had sucked the ends off some of them. About six o'clock sickness commenced, and continued up to the time he was sent for. He examined the remnants of the matches, and counted forty-two that had been sucked. When he first saw the child it was in a state of collapse, and he thought it would die very soon, but after some time it improved. About five o'clock in the morning a severe pain in the stomach came on, and the child died shortly after. The child was one year and nine months old. A post-mortem examination was made by Dr. Lowe and himself on Sunday night. The stomach was remarkably pale, with the exception of one small patch. The kidneys were congested. There were no other post-mortem appearances of any consequence. The mouth was closed; the lips and gums were pale and blanched. There was no luminosity about the stomach, no odour of phosphorus or garlic, and no vapour. One portion of the vomit smelt like the phosphorus on the ends of the matches. He agreed with Dr. Lowe's written report, which stated that he had examined the stomach after he had dried it, and it burned with a pale phosphorescent light. He had no doubt that death was caused by the phosphorus. One match contained one-fifth part of a grain of pure phosphorus, so that the whole amount taken by the child would be eight grains. One grain was certain to kill, and even less than one-half a grain has been known to be fatal. Dr. Harrison, continuing his remarks said it was very unusual for death to occur so rapidly as in this case—viz., in thirteen hours. Phosphorus was considered an irritant poison, but in this case the blood seemed to have been poisoned. There was no sulphur on the matches, which are called gas matches, and manufactured by Bellerby and Sons, York. There was no disease whatever about the child. The jury returned a verdict that the child was poisoned by phosphorus inadvertently taken by itself.

THE ASHANTEE WAR.

The first batch of invalids resulting from the "little war" forced upon us by the King of Ashantee have just reached this country in the *Himalaya*, and have been transferred to Haslar Hospital. They appear to have suffered severely from the malarious climate of Cape Coast, the small contingent of Marine Artillery and Light Infantry sent from England at the outbreak of the war contributing no less than three officers and eighty-five non-commissioned officers and men to the numbers just arrived. The head-quarters of the 2nd West India Regiment were only disembarked at Cape Coast on July 11 last; but although, from the nature of their constant duties in the tropics, they might have been expected to be somewhat acclimatised, they speedily began to suffer from the prevailing forms of fever and dysentery. Many of the officers were attacked; the colonel of the regiment has come home in the *Himalaya* invalided, and the adjutant died a few days before the news left. No operations of any importance have yet taken place on either side. The Ashantees are still reported to be in close proximity to Cape Coast Castle, and no fears are entertained for the safety of that place or for Elmina. Meanwhile there is a dreary wait, without any other alternative, before our troops, and, it is to be feared, a further melancholy list of deaths and invaliding in perspective. The recent appointment of Colonel Sir Garnet Wolseley (who has for some time held a post on the staff at head-quarters) to the command of the troops on the Coast would argue that the Government were about to send out more reinforcements; but if such be the case it is to be hoped, as the settlement is reported not in danger, that no more men will be sent from this country or elsewhere until such time as they can actually be placed in the field to operate against the enemy. Active duty is in itself a preventive of disease; and in the long run more lives would be saved by a prompt and vigorous setting down of the Ashantees for good and all than by pursuing a policy of dribbling up small detachments to the seat of fighting, and tying the hands of the officer in command by refusing him the means of following up to the end such successes as he may gain. There is little honour and much loss of life to be anticipated from our collision with the King of Ashantee, and we can only pray for an early and lasting deliverance.

UNWHOLESOME FOOD FOR INFANTS.

A medical gentleman drew attention, at an inquest recently held by Dr. Hardwicke, touching the death of two children, to the fact that some of the so-called infant food which was extensively advertised, and in consequence used by young and inexperienced mothers, was adulterated with articles which were not of a glutinous nature, and therefore unfit for children. The coroner remarked that if a person using these prepared foods would send samples to the officials appointed by the parish, they would be analysed, and in cases of adulteration the sellers would be prosecuted, and a great check be given to the sale of such stuffs. This is a matter which should have the attention of our analysts and of the authorities whose duty it is to enforce the provisions of the Adulteration Act. It is to be hoped that the hint given by Dr. Hardwicke will be acted upon. It is impossible that any form of adulteration of any kind of food can be attended with worse results than that of the food of infants.

BISHOPS STORTFORD AGAIN.

Some time since we called attention to a disgraceful custom which prevailed at Bishops Stortford with respect to retaining heaps of manure and other offensive collections for an unjusti-

fiable time in the streets of this town. The Board of Health, fortified, we regret to say, by the opinions of several medical gentlemen, ignored a recommendation for the frequent removal of the dangerous nuisances in question. It is gratifying to state that one of the first orders of the lately appointed Medical Officer of Health is confirmatory of our views on the subject—that the collections of manure and contents of dust-bins, etc., should be removed daily. The inhabitants of Bishops Stortford may congratulate themselves on having obtained the services of a gentleman who has given evidence that he can carry out necessary reforms uninfluenced by local interests or prejudices.

DUTCH MEDICAL SERVICE.

The *Scotsman's* London correspondent states that the Government of the Netherlands has announced its willingness to employ British surgeons on the following conditions:—The applicant must lodge with the chief of the medical staff of the Netherlands army at the Hague his name and address, along with satisfactory certificates as to character. He must be under thirty-five years of age. He must be able to speak either Dutch or French or German well enough to be able to pass a short *vivâ voce* examination. His engagement will be for five years, and may be prolonged. Successful candidates will take rank with first lieutenants on the staff. The pay will be 2250 guilders (about £185) per annum, with prospects of promotion. The Netherlands Government will grant a first-class passage to the seat of war, and a premium of 4000 guilders (about £330). The Batavian Republic has never forfeited the character given to it by Dugald Dalgetty, according to whom "its behaviour on pay-day might be an example to Europe." Besides, the attractions of the Dutch Indies to the scientific surgeon (especially if he be a naturalist) are at once rich and unique.

HEALTH OF SYDNEY.

The rate of mortality here (writes the New South Wales correspondent of the *Times* from Sydney on June 14 last) is highly favourable, being at the rate of 18 deaths annually to every 1000 persons living. Comparing the mortality of Sydney and suburbs with that of towns in the mother country, the result is much in our favour. In Sydney there are 48 persons to the acre and a mean death-rate of 23·8 per 1000; in the suburbs the rate is 14 per 1000. The towns in the United Kingdom having 34 persons per acre show a mean rate of 25 per 1000. There are in London 42·5 persons per acre and a mean mortality of 22·1 per 1000. Liverpool, Manchester, and Glasgow are the only cities more densely peopled than Sydney. The mean summer mortality is 23·8 per 1000 in the city of Sydney and 14 in the suburbs, against 25 in the towns of the United Kingdom. A good deal of attention is now being paid to water-supply, drainage, sewerage, and the removal of garbage, and the provision of city breathing-places, so that the rate of mortality will probably be lower than it is. The population is increasing rapidly.

HEALTH OF SCOTLAND.

The quarterly return ending June 30, 1873, of the deaths registered in Scotland, states that—

"In Scotland 19,931 deaths were registered during the quarter ending June 30, being in the annual proportion of 232 deaths in every ten thousand persons of the estimated population, or 2·32 per cent. The mean death-rate of the quarter during the ten previous years was 223 deaths in every ten thousand persons, or 2·23 per cent., so that the mortality of the past quarter has been high. In the five registration groups of districts into which Scotland is now divided, the death-rate was highest in the crowded town, and lowest in the sparsely inhabited insular-rural districts. Thus, for every ten thousand persons in each of these groups of districts, there occurred 272 deaths in the principal towns, 279 in the large towns, 228 in the small towns, 183 in the mainland-rural, and 164 in the insular-rural districts. Of the eight principal towns, the mortality was lowest in Leith and Edinburgh, highest in Greenock and Glasgow. Thus, for every ten thousand persons in each of these eight towns, there occurred during the quarter in the proportion of 213 deaths in Leith, 229 in Edinburgh, 240 in Dundee, 243 in Aberdeen, 269 in Perth, 293 in Paisley, 308 in Glasgow, and 316 in Greenock; 6762 of the deaths were registered during April, 6959 during May, and 6210 during June—being at the rate of 225 deaths daily during April, 225 daily during May, 207 daily during June. The diseases in the eight principal towns show that the zymotic, or epidemic and contagious, class of diseases has been on the increase, for while only 437 deaths therefrom occurred in April, 474 occurred in May, and 483 in June. The tubercular class of diseases proved most fatal in May—441 deaths having occurred in April, 479 in June, but 499 in May. Diseases of the brain and nervous system also proved most fatal in May, and were least fatal in June. Thus, 261 deaths therefrom occurred in May, 255 deaths in April, but only 248 in June. Diseases of the heart, on the other hand, were least fatal during May, for only 121 deaths therefrom occurred in May, but 133 in June, and 155 in April. The deaths from diseases of the respiratory organs decreased with the advance of the season, numbering 561 in April, 555 in May, and 441 in June. Kidney and urinary diseases were most fatal in May; but diseases of the uterus and childbirth were least fatal during that month; 124 deaths from debility and premature birth occurred in April, 123 deaths in May, and 132 in June. The deaths from old age, without marked disease, were 122 in April, 129 in May, and 94 in June. Of the individual diseases, small-pox seems to be on the decrease, 23 deaths therefrom having occurred in April, 17 in May, and only 13 in June. Measles, on the other hand, has been on the increase from January till the end of May, for 118 deaths therefrom occurred in April, 160 in May, and 150 in June. Scarlatina has been on the increase, the deaths therefrom having increased from 24 in April to 45 in June. Hooping-cough, on the other hand, has declined from 76 deaths in April to 55 in June. Typhus fever has rather increased, rising from 25 deaths in April to 30 in June. Enteric fever was most fatal in May, 36 deaths having occurred during that month, but only 33 in April, and 30 in June. Consumption was most fatal in May, when 351 died from it, 311 in April, and 322 in June. The deaths from bronchitis diminished with the advance of the season, 389 deaths therefrom having occurred in April, 366 in May, and 299 in June."

FROM ABROAD.—DR. HAMMOND ON ATHETOSIS—EFFECTS OF SENNA ON THE URINE—INFANT MORTALITY IN FRANCE.

In a paper recently read at the "Medical Library and Journal Association of New York," Dr. Hammond gave an account of the affection which he terms "athetosis." He observes (*Medical Record*, July 1) that there are several diseases one of the chief characteristics of which is involuntary movement while consciousness remains intact; but the present form had never been discriminated prior to the publication of his "Treatise on Diseases of the Nervous System," wherein two cases of athetosis are given. Since then various cases have been recorded, and it is now generally regarded as entitled to its separate pathological status. The name is derived from *αθετος* (without fixed position), and is specially applied to designate the chief phenomenon of the disease—the inability to keep the fingers and toes from continued motion. The movements are not disorderly as in hysteria and chorea, nor so tremulous as in paralysis agitans and the various forms of sclerosis hitherto described. They are regular, and are to some extent under the control of the will—that is, by a strong effort of volition the patient can for a short time prevent them; but they soon reassert themselves, notwithstanding the most strenuous endeavours to keep the muscles quiet; even during sleep the movements continue. The movements are not simple oscillations such as are present in paralysis agitans and sclerosis, but are slow as if performed with deliberation. The thumb

and little finger are more affected than the other fingers; and owing to the constant exercise, the muscles of the forearm become greatly enlarged, like those of an athlete. Pain is very generally complained of in the contracting muscles, and in one case caused very great distress. The sensibility of the skin over the affected parts is lessened, and a feeling of numbness prevails more or less extensively over the side of the body corresponding to the disordered motility. In all other parts it is normal. In two of the cases observed the athetosis was preceded by epileptiform paroxysms.

Of the six cases known to Dr. Hammond, two have occurred in women, and three of the subjects were intemperate. In none of the cases has treatment been of material benefit, but death has not as yet ensued in any case. In each of the cases there has been a steady advance in the severity of the peculiar symptoms, but the general strength of the patient has not been materially impaired.

If attention be paid to the situation and character of the movements, there can be no difficulty ordinarily in making a correct diagnosis, but Dr. Hammond recapitulates the main features of the affections likely to be confounded with athetosis. Thus, in *diffused cerebral sclerosis*, the muscular contractions are tonic and permanent, the affection, too, almost invariably beginning in infancy, and leading to atrophy or arrest of development of some part of the brain. In *multiple cerebral sclerosis*, tremor is a principal symptom, but this differs essentially from the apparently deliberate and obviously regular movements of athetosis. Besides, the hypertrophy of muscle, so characteristic of this, is never a consequence of tremor. Another marked phenomenon of sclerosis, festination, is absent in athetosis. In *multiple cerebro-spinal sclerosis*, the involuntary movements which appear after paralysis are only manifested when voluntary movements are made, and there is usually festination. *Chorea* is generally a disease of childhood. The involuntary movements are irregular, and cease during sleep, while those of athetosis continue. There is neither pain nor disturbed sensation, and the disease is generally curable. In *paralysis agitans* there is tremor, and not entire muscular contraction, unaccompanied by pain or anæsthesia. There are often intermissions in the day, and usually during sleep. There is no tendency to the tonic contractions which seem to ensue later in the course of athetosis.

Of the pathology of the affection nothing yet is known, as no post-mortem has yet been made. Physiology would seem to indicate the corpus striatum and perhaps the optic thalamus as the seat of the morbid process, which probably consists in sclerosis, the result of slow inflammation. No treatment has arrested the onward march of the disease, though galvanism has perhaps exerted a slight controlling power.

At the last meeting of the Paris Therapeutical Society, Professor Gubler drew attention to a curious property in senna of colouring the urine in a peculiar manner. The urine of persons who have taken senna becomes of an intense yellow colour with a green reflection, just like the urine in jaundice; but nitric acid shows that bile has nothing to do with this colouring. If a fragment of caustic potass be let fall to the bottom of a tube containing urine charged with senna, a magnificent purple colour is produced; but nothing of the sort takes place under the influence of potass in icteric urine. This colouring has been observed in all the patients who have taken senna whose urine has been examined—even where only half an ounce of the infusion or a black draught of the Codex has been administered. Urine loaded with senna is incapable of assuming the variable rose colour under the influence of nitric acid which normal urine always assumes. Infusion of senna itself treated with caustic potass assumes to a certain extent the purple colour. But the phenomenon is here far less marked, and M. Gubler believes that in this case a process goes on similar to that which occurs in relation to asparagus, turpentine, copaiba, etc.—a certain amount of oxidation taking place in the economy for the production of the peculiar odour of asparagus or the violet odour. With rhubarb M. Gubler produced a much less intense colour than with senna; but he suspects that the phenomenon in both cases is due to the chrysophanic acid, which is common to both the substances. After the absorption of the senna, the colouring of the urine may persist even to the next day. M. Gubler observed that for the detection of bile in the urine he always employs nitric acid, which he thinks is far preferable to iodine. He referred also to a peculiar colour of the urine often met with in severe disease, furnishing a *feuilles mortes* colour which may be easily mistaken for biliary colouring. The colour is really due to the superposition of a blue colour on the yellow; and at his clinic M. Gubler has often shown this blue colouring, which he has named provisionally "urinary *indigose*." On isolating it by ether, he renders the liquid clear by bringing to its upper part a ring of a beautiful blue colour.

In relation to the Bill brought into the French National Assembly by Dr. Theophile Roussel, having for its object the diminution of infantile mortality, M. Lagneau publishes (*Gaz. Hebd.*, August 8) an interesting analysis of the population returns, showing that the mortality of infants is considerably greater in the department of the Seine, and probably in other large centres of population, than is generally supposed.

In estimating this mortality, we can not only compare the number of living and dead, but also the number of children born alive who survive at given ages—the difference between the births and survivals showing the mortality at such ages. While for entire France the loss of children below the age of five during the eleven years 1855-65 amounted to from 29·65 to 31·07 per cent., in the department of the Seine it attained far higher proportions. Thus, of 54,520 children born in 1856 there only survived 26,798 at the census of 1861, furnishing a deficit of 27,722, or 50·84 per cent. of deaths during the first five years of existence. Of the 66,016 children born in 1867, there survived at the census of 1872 only 31,670, being a deficit of 34,346, or 52·02 per cent. of deaths during the first five years. After some calculations for which we have not space, showing the proportions of the children who died in the department, and of those who died in other departments to which they had been sent to be nursed, M. Lagneau terminates with the following conclusion :—

"The preceding deductions appear sufficient to show that death, which in France in general takes off about a third (30·29 per cent.) of the children below five years of age, removes more than one-half (51·43 per cent.) of those who are natives of the department of the Seine, these dying in this department or in other departments to which they are sent to nurse in a number approximating to that of those who are kept at home with their parents."

STATE OF HINDU MEDICINE.

The almost neglected (and daily apparently becoming more so) state of Hindu medicine has raised the advocacy in its behalf of the *Grant College Students' Journal*, a monthly paper of medical news published at Bombay. Its last issue for the month of July contains an article entitled "A Word in behalf of Hindu Medicine." The subject is one of importance. It is highly probable beneficial results to the science of medicine would follow an energetic attempt to develope the resources and the indigenous materials of the medical art of that vast country. We therefore lay before our readers the following remarks of the writer of the article in question, as they are well worthy being reproduced in our pages. He says :—

"We know not of any systematic attempt ever being made in the discovery of the medical department of Oriental know-

ledge. A few persons have attempted to give the outlines of Hindu medicine, comprising therein the surgical and anatomical portions of the art, and some few have made original researches as regards the diseases, and the botanical, zoological, and geological resources of India, in order to the enrichment of science in general. But we again repeat that no systematic attempt has yet been made in developing the resources and the indigenous materials of the medical art of this vast country. We say indigenous materials of medical art, because there are still extant many original works of great note on the art in this land; and, moreover, there may be found (although we are not sure) ample materials already ready worked to hand in the transactions of the several branches of the R. A. Society established in the Presidency towns. But the real want is not of works or materials, but of men eager to engage themselves in the undertaking. Our present educational system, although it breeds up generations of men able to take part in social, moral, and political concerns of this country yet has almost failed, up to the present time, in giving a sufficiently scientific turn to the thoughts of the people. Under such a state of things, however, it is a matter of great consolation to find that our University has encouraged the study of ancient languages such as Sanscrit, Latin, and others. We think more than a dozen Sanscrit scholars can now, if they choose, take themselves to the translating of the several indigenous scientific works either into English or into one of the widely spoken vernaculars of the country. For our part, however, we would never like to see any fact, howsoever consecrated by its antiquity, and which would not stand the test of experiment, enter into the system of the really useful and tried principles of medicine. But the current of opinion regarding the value of Hindu medicine runs, at present, in a direction which augurs anything but favourably for its future development. It is much to be regretted that the attainments of the people of this country in Western science and literature, instead of making them eager to verify and test the results so laboriously arrived at by their ancestors, have made them to impugn all the ancient doctrines without distinction as trash and unworthy of the trouble of experimentation. But it would be well for these off-hand critics to pause for awhile before they can take such a bold step and 'to stand on the old road until they find a better one.' In behalf of Hindu medicine we must put in our voice, and advise the people to issue a writ of *habeas corpus* in favour of the good old Sushruta, Charak, and Vãgbhat, and to give them a fair trial before consigning them to eternal banishment and filling up their places by new and untried friends. Now, to effect a complete regeneration of the whole of Hindu medicine, and to effect its thorough amalgamation with its brother of the West, are works which will require a great deal of time, men, and money. In the first instance a collection should be made of the native medical books that may be extant; secondly, they should be collated and re-edited. This part of the work would be far easier to accomplish now than it would be after a lapse of a score of years, when the few good teachers and practitioners of native medicine that now exist would be defunct, and the technicalities of the art would remain unexpounded. It should also be remembered that no new followers elect nowadays to enlist themselves in the Hindu medical corps, as the art is falling day by day into undeserved disrepute, and threatens in the course of time to become altogether obsolete. It is better, therefore, that the people, and the graduates of medicine in particular, should make the best of this time of harvest.

"We should also propose that chairs for readers in Hindu medicine should be established in the several Presidency colleges. We do not see why this should not be so. In many civilised countries of Europe chairs have been established for teaching oriental languages, and in the Presidency College, Calcutta, a new professorship has been created for agricultural chemistry with a grant of 5000r. to secure the necessary materials and implements of the art. At St. Petersburg a chair has been devoted (we hear) to demonology. These several instances will show the reasonableness and utility of our request for a Hindu medicine chair. We are quite sure that if the people and government do set about the work in good earnest, their labours will be amply rewarded. Apart from the additions which the medical science in general would receive to its several departments, we are certain innumerable new and specific drugs and preparations would come into our possession, which will induce men to put more faith in the medical art, and make the present mode of treatment more certain, practical, and useful. At all events, a grain of gold in a bushel of chaff is worth the trouble of finding it out. We propose to take an early opportunity of laying before our readers a faithful translation of Sushrutam and other Hindu authors on medicine."

CLINICAL REMINISCENCES.—No. II.

By PEYTON BLAKISTON, M.A., M.D., F.R.C.P., F.R.S.

Intestinal Obstruction.

Obstructions taking place in different parts of the intestinal canal are of frequent occurrence; and, arising as they do from various causes, they occasionally assume a peculiar form and excite great interest.

There is generally a marked difference in the symptoms arising from obstruction in the small and in the large intestines; although when it takes place near their union at the ileo-cæcal valve it is difficult to diagnosticate its exact position. Usually, however, the urgency of the vomiting and the rapidity with which exhaustion is produced sufficiently separate obstruction of the small from that of the large intestines, which latter is sometimes prolonged to a period of thirty or even thirty-three days, during the greater part of which time little or no vomiting takes place.

Small Intestines.

When obstruction takes place at the origin of the intestinal canal—the pyloric orifice of the stomach,—it is usually, but not always, occasioned by carcinoma.

Two remarkable cases have fallen under my notice in which it arose from a different cause—one that of a gentleman, the other that of a lady, both middle-aged, and both previously in fair health. The symptoms and progress of the affection were so exactly similar in both cases that a description of one will suffice for both. About an ounce of Burnett's disinfecting fluid (chloride of zinc) had been swallowed in mistake for fluid magnesia. The urgency of the symptoms arising from a destruction of a portion of the mucous membrane of the stomach had been mitigated and relieved by suitable soothing treatment during some three or four weeks, and the patients were progressing favourably, and complaining of little or no pain or discomfort after taking food, when periodical vomiting came on, the stomach becoming much distended before each act of vomiting—the symptoms thus gradually assuming the same character as those which occur in carcinomatous narrowing of the pyloric orifice of the stomach, and the patients eventually dying seven or eight weeks after the accident from inanition.

A post-mortem examination revealed the same appearances in both cases. The effects of the irritating poison on the mucous membrane of the stomach were chiefly seen on the great curvature, but the ulcers may be said to have in a great measure healed over. The pyloric orifice, however, was nearly blocked up by thickening of the sub-mucous tissue, thus presenting somewhat of the same appearance as in carcinoma.

A case of carcinoma pylori once came under my notice in which the progress and termination of the case were most unusual. A man about 42 years of age had been suffering for some time with all the symptoms of a carcinomatous affection of the stomach, including frequent and copious vomiting of fluid containing dark brown shreds resembling tobacco, when the vomiting gradually ceased, the action of the bowels became regular, and the patient regained so much strength that he was able to walk four or five miles daily. One day he was suddenly seized with vomiting of semi-solid stercoraceous matter, and speedily sank.

On examination of the body, extensive carcinomatous disease was discovered in the stomach, involving not only the pyloric orifice, but a large portion of the great curvature. The pyloric opening had been enlarged by ulceration, which had destroyed much of the morbid growth around it, so that it had a diameter of an inch or more. The great curvature adhered to the transverse colon, and communicated with it by a large opening, through which the contents of the colon had passed into the stomach.

I know not whether the pyloric orifice was enlarged in a similar manner in two other cases wherein an amendment took place, and life was prolonged for six or seven years afterwards. As there was not a post-mortem examination in either case, the matter must remain in doubt.

Whilst on this subject I may mention that I have found great relief afforded, when there have been sharp lancinating pains, by the subcutaneous injection of a few drops of a strong solution of morphia in the left hypochondriac region—a remedy which is perfectly heroic in cases of genuine sciatica, as shown in a paper of mine published some years ago in this journal.

Two or three cases of carcinoma of the duodenum occurred in my practice, but they did not present any feature requiring notice. In one case, however, obstruction of the duodenum was produced from without. A middle-aged man was affected with medullary sarcoma of the testicle, which, as is often the case, crept along the chain of glands skirting the abdominal veins, and expanded into a large tumour at the upper part of the abdomen. This tumour pressed the duodenum upwards, and became adherent to it for some inches, thus producing intestinal obstruction, attended with much the same symptoms as in carcinoma pylori, except that there was no evidence of ulceration. After death it was found that the intestines were free from all disease.

As is well known, obstruction of the small intestine more frequently arises from hernia than from any other cause, but such cases have only accidentally come under my notice, as in the following instance:—About thirty-five years ago an old man came under my care, as a patient of the Birmingham Dispensary, suffering from bronchitis. Suddenly there appeared symptoms of obstruction of the small intestine. He was therefore carefully examined to ascertain whether there was a hernia. None, however, could be discovered, but a small hard knob of the size of a pea was found close to the right side of the arch of the pubis. Now, it happened that some years before, when dissecting in the Ecole de Mars at Paris, I had seen a curious specimen of hernia, which was caused by a portion of the small intestine having passed through a slit in Gimbernat's ligament, and having been retained there, formed a tumour about the size of a pea. This specimen being in pickle, I had examined it repeatedly whilst Mr. Thompson, an English medical student, was making a drawing of it. It struck me as possible that the same occurrence might have taken place in this case, as no other source of obstruction could be discovered. I therefore sought the assistance of my surgical colleague, Mr. George Elkington, and subsequently that of the senior surgeon, Mr. Baynham. Both of them thought the small lump was a gland, but at my urgent solicitation they agreed to cut down upon it. They did so, and it proved to be a hernia caused by a portion of the small intestine having passed through a slit in Gimbernat's ligament, exactly similar to the one I had seen in Paris. The patient made a complete recovery.

In the following case, too, an unusual state of things was revealed. A schoolboy, aged 15, feeling unwell, was placed under the care of the medical attendant of the school, who gave him some medicine which purged him violently. Soon afterwards he complained of severe pain in his right flank, urgent vomiting set in, and there was no action of the bowels. Seen in consultation he was found to be in a state of extreme prostration. His countenance was hippocratic and covered with a profuse cold sweat; his pulse 140, small, wiry, and feeble. On examining him I found a scrotal hernia on the right side, which he said had been there for a long time. A consulting surgeon was then called in. He thought the hernia was omental, and was not the cause of the obstruction in the bowels. Still we thought it right to tell the parents of the lad that it was possible that the hernia might be the cause of the obstruction, and to put it to them whether it should be cut down upon to ascertain whether such was the case or not. They wished it, and accordingly the hernia was explored, and found to be omental, as the surgeon had surmised, and in no way connected with the intestine. Consequently no relief was obtained, and the patient died about six hours afterwards. A lump of excessively indurated fæcal matter, about the size of a pea, was found impacted in the appendix vermiformis, which, as well as some portion of the neighbouring ileum, was highly inflamed and embedded in pus.

I take this opportunity of stating that I have witnessed several instances in which great injury has been induced by the administration of strong drastic purges in cases of intestinal irritation and obstruction.

Years ago I often heard obstruction attributed to intussusception, but I myself never saw a case of this kind which was not accompanied by inflammation of the ileum at its juncture with the cæcum, unless, indeed, the following case might be considered one:—An aged female was suffering from obstruction, and the symptoms were sufficiently urgent to render it probable that it lay somewhere in the small intestines, but not high up. No traces of hernia were discoverable. Small doses of opium were administered, and salt and water thrown up per anum. I am afraid to state the quantity injected before she complained of inability to retain more; but it was enormous. On its being allowed to escape it brought with it a large quantity of fæces without any scybala, and relief, followed by speedy restoration to good health, resulted.

Large Intestines.

Many cases of obstruction of the large intestines have come under my notice arising from various causes, amongst which the most frequent have been an accumulation of foreign bodies, as fruit-stones, etc., carcinomatous narrowing, chiefly at the commencement of the descending colon or the sigmoid flexure, and once in the rectum. Some cases, however, occurred in which none of these causes of obstruction were present.

A lady, aged 34, after her confinement, suffered from obscure pains in the abdomen, and the bowels ceased to act, the abdomen being at the same considerably distended. There were, however, no symptoms of peritonitis or effusion within the abdominal cavity. Enemata passed up a considerable distance and in large quantity came back slightly tinged with fæcal matter; but no relief was obtained, and she gradually sank in a typhoid state. On examination, the ascending and transverse colon was found greatly distended and perfectly flaccid, the injected state of its vessels giving traces of inflammatory action, but no pus was found. The obstruction seemed to have been caused by the loss of muscular power in the coats of the intestine.

The following curious case was that of a policeman, aged 32, whose bowels had been confined for some days, and who, on suffering from severe griping pains, applied for admission to the Birmingham General Hospital. He derived comfort from small doses of gum opii; but copious enemata failed to bring down any fæcal matter. After a few days a round swelling was seen to come up from behind the pubis, looking like a distended bladder. My colleague Mr. Hodgson being called in, passed a catheter into the bladder; but only a small quantity of urine was drawn off, and the size of the tumour was in no degree diminished. It was therefore evident that the swelling was caused by distension of some portion of the colon, probably the cæcum. But where was the obstruction that caused the distension, and what was its nature, we knew not. It continued to increase till it reached the size of a small child's head, and fluctuation was perceived by the finger passed up the rectum. I proposed to Mr. Hodgson to puncture the swelling with a trocar; and to prevent effusion into the abdominal cavity I had a curved grooved needle made with a movable handle, which, after being threaded, could have been passed into the swelling, and having by its groove revealed the nature of the contents of the sac, could have been pushed on, and its point having been turned backwards towards the outer surface of the abdomen near where it had entered, could have been brought out, by which means the sac could have been fastened to the abdominal wall; it could then have been pierced, and its contents evacuated by means of a large trocar. Mr. Hodgson thought the operation would have been attended with too much risk, and declined to perform it. The patient died after about thirty days of obstruction. On examination of the body it was found that a mass of small intestine had passed over into the right flank, and had bound down the ascending colon over the internal psoas muscle. Had the operation been performed, it is probable that, after the evacuation of the sac, the intestine would have righted itself and the patient would have recovered, as there were no strong adhesions.

Another case occurred, in which I think recovery might have resulted from the performance of an operation. A girl, aged 16, became a patient of the Birmingham Dispensary, suffering from obstinate constipation evidently resulting from obstruction in the large intestines. On introducing the finger per anum a stricture was discovered just within reach. I could myself see no reason why a blunt-pointed bistoury should not have been introduced and the stricture cut through—as the sphincter is divided in cases of fissure of the anus,—but my colleagues declined to perform the operation, and the patient died. The stricture was found to be of a simple fibrous character.

The late Mr. Jukes published the case of a woman who was under my care suffering from obstruction of the large

intestine, and on whom he performed Amussat's operation, opening the colon in the loin, and forming an artificial anus. The patient survived the operation sixteen days, I think, dying of peritoneal inflammation of a low character extending from the wound. The obstruction was found at the sigmoid flexure, and was caused by a carcinomatous growth.

For some time previous to this occurrence, Amussat's operation had been much discussed, and we were in constant habit of injecting bodies per anum in the hospital dead-house, and performing the operation on them. Subsequently two of our pupils, when engaged in practice, I believe performed the operation successfully; but I do not remember their names, nor the particulars of the operations.

About twenty-three years ago, a case occurred which interested me very much. The wife of a medical man, about 38 years of age, had symptoms of obstruction of the large intestine. She was in rather a delicate state of health, and her countenance had a leaden, earthy appearance, particularly under the eyes. It was found that she had a largish hard tumour attached to the back of the uterus, if not incorporated with it. As the case progressed the convolutions of the intestines were strongly marked, and the course of the distended transverse colon could be distinctly traced, the distention terminating abruptly at its left extremity, where the descending portion commenced. After a time, however, these markings were obliterated by more general distension of the abdomen. The seat of the obstruction was considered to be at the commencement of the descending colon, and its character as well as that of the uterine tumour to be carcinomatous. The late Dr. E. and Mr. C. H. J. being friends of her husband, came down and met us in consultation. Dr. E. was of opinion that the obstruction was caused by pressure of the uterine tumour on the rectum, on which I requested Mr. J. to pass the colon tube if possible, and to inject warm water. He passed it with ease, and more than a quart of water was thrown up. It was thus proved that the obstruction lay above the rectum. Dr. E. then proposed that a drop of croton oil should be given every hour, and was of opinion that the stricture and tumour were both of a fibrinous nature. To this I strongly objected, as being calculated to give much pain, and to cause irritation, if not inflammation, of the intestine, and thereby greatly increase the discomfort of the patient, without offering the slightest chance of the obstruction being removed by it. I only agreed to one dose being given, under the distinct understanding that should it produce serious discomfort it should not be repeated, but that I should revert to my previous treatment by opium and warm enemata. The patient gradually sank, having lived about twenty-eight days from the time when the bowels first ceased to act.

The whole of the back of the uterus was found to have become converted into a large carcinomatous mass projecting backwards. A tumour of similar character, about the size of a pullet's egg, was found in the left ovary, and there was carcinomatous stricture of the colon at the commencement of its descending portion, an opening being left through which a crow-quill could hardly pass.

Five or six cases of obstruction of the large intestines terminated in complete recovery, the obstruction having been caused in some cases by a collection of fruit stones, and in others by that of numerous large and hard scybala impacted in the caput coli, and even in the rectum. In all cases the line of treatment was the same. At the onset a purgative was sometimes given; but, failing to act, was never repeated. When vomiting was urgent ice was given when it could be obtained, and throughout the illness small doses of gum opii were administered with such frequency as the symptoms called for. At the same time enemata of warm water or gruel were thrown up in such quantities as the bowel could receive. When it was found practicable to introduce the colon tube it was always employed, but sometimes it was found impossible to pass the promontory of the sacrum. The tube was larger and less flexible than those in general use some years ago, in order to prevent its doubling up in the rectum when its progress was opposed by the projection of the sacrum. Its extremity also was made large and rounded in order that it might not hitch in the folds of the mucous membrane of the bowel. It was slightly curved to assist the operator in his endeavour to pass it into the sigmoid flexure by a semicircular sweep, such as is employed in passing a catheter. But it was often a matter of no small difficulty, and required great dexterity, to pass it well into the colon. I would strongly advise all young practitioners to take every opportunity of practising its introduction, in order to be ready in time of need.

Here I may perhaps be allowed to say a word about the treatment of certain forms of constipation which sometimes terminate in obstruction—such, for instance, as arise from want of tone in the muscular coats of the intestines, occurring in persons of sedentary habits or suffering from debility arising from various causes. In such cases I have seen great improvement produced by the employment of pills containing one grain each of quinine and capsicum, and two grains of the myrrh and aloes pill, the latter ingredient being gradually diminished as the bowels regained their tone. Combined with this treatment, enemata of *cold* salt and water were thrown up when the pills failed to produce the desired effect, but no stronger aperient was ever given. When the patient was subject to piles, myrrh and the watery extract of aloes were substituted for the myrrh and aloes pill.

By this line of treatment the *vis medicatrix naturæ* was allowed fair play. The patients may have died from the effects of an incurable disease, but their end was never hastened by ill-advised attempts of the medical attendant to arrest the progress of the disease.

ON A FORM OF

PARALYSIS AFFECTING THE FOREARM

COMMONLY SUPPOSED TO BE RHEUMATIC.

THE June number of the *Archives Générales de Médecine* for this year contains a paper by Dr. F. Panas, one of the Surgeons of the Lariboisière Hospital, originally read by him to the Academy of Medicine at Paris as long ago as November 21, 1871. With the exception of a few scattered cases, chiefly of paresis of the ocular and facial muscles, English medical literature contains very little on the subject of local paralyses. In our own columns, in the number for March 26, 1864, there is a clinical lecture by Mr. (now Sir) James Paget, giving a number of interesting cases, chiefly traumatic. We therefore gladly abstract the following article from our French contemporary:—

Dr. Panas states that for nearly six years he has been led to doubt the rheumatic origin of the paralysis which generally receives the name of "rheumatic paralysis of the radial nerve." He uses the word "radial" in such a way as to show that he means, not only the branch we usually term "radial," but also the trunk of the musculo-spiral. Facts have forced him at last to conclude that, so far from being allied to or caused by rheumatism, this lesion is due to temporary compression of the nerve. One constant fact is the limitation of the paralysis to one invariable point of the nerve-trunk, between the place where the filaments of the triceps and those of the long supinator muscle emerge. Thus the former muscle always escapes being paralysed, whilst the latter is always attacked simultaneously with the other muscles of the forearm supplied by the radial nerve. Surely the effect of cold cannot explain this. Is it not far more probable that we have here, so to speak, a physiological experiment which results in a mechanical lesion in one invariable part of the nerve, between the bend of the elbow and the point where the nerve curves from behind, in front of the outer border of the humerus? The second fact which excites attention is that this paralysis almost always follows decubitus. This also would make us suspect pressure, and leads us to examine the relations of the nerve in the dead subject. The first portion of the nerve (musculo-spiral) is in the axilla, and lower down it is deeply placed beneath the triceps muscle in the musculo-spiral groove of the humerus, and thus escapes all compression from without. And the same may be said of its internal cutaneous branch. But at the outer border of the humerus it winds round the outer border of the bone, in order to come forward and to descend in the interspace between the supinator longus and the brachialis anticus. From its point of reflection to the bend of the elbow the nerve measures some nine or ten centimètres long (three and a half to four inches nearly), and is actually contained in a fibrous sheath, which is inelastic and does not admit of extension, formed by the aponeuroses of the two muscles respectively. This sheath and its superficial position expose it in this situation to more compression than anywhere else.

The external (musculo-) cutaneous nerve is also equally exposed to compression in this situation, and does not escape it.

On questioning the patients the mechanism of the paralysis is found to be essentially uniform, though it presents the trifling difference that in some cases the pressure is partly effected by the resistance of the plane on which the patient has slept—it may be a bed, a table, a bench, the ground, or the back of a chair; whilst in other cases he uses his arm as a pillow, in which case the head effects the pressure. In the former case the arm is between the trunk and the plane of resistance; in the second case between this and the head of the patient. Therefore, anatomically, all the fibres ought to be affected, except those supplied to the triceps and those of its internal cutaneous branch. And so they are. All the extensor muscles of the hand and fingers—the long and short supinators, the two radial extensors (extensor carpi radialis longior and brevior), the long abductor of the thumb (extensor ossis metacarpi pollicis), and the anconeus—are deprived of voluntary motion, whilst electric contractility and mechanical action remain intact, and both muscular and cutaneous sensibility are also retained or only feebly blunted. They are, however, not infrequently perverted. Thus sensibility to electric currents is often greatly intensified, and the patients complain of feelings "like ants stinging them," or of "pins and needles." But the triceps muscle invariably escapes, whilst the supinator longus is always paralysed. M. Duchenne, of Boulogne, founds on this a differential diagnosis between lead-palsy and the radial paralysis of which we speak, for in lead-paralysis the long supinator escapes. As regards electric contractility, we know that this (as regards faradisation) may be lost from cold, and preserved in traumatic cases—*e.g.*, Bell's or spontaneous facial paralysis,—where, Dr. Duchenne says, the fascial muscles do not respond when faradised. They do respond to a continuous current, but so do muscles in many other kinds of paralysis. But it is quite possible that facial paralysis may be traumatic in many cases.

The following instances of the preservation of electric contractility (as tested by faradisation) deserve mention in this respect. 1. An adult who had symptoms of fractured base of the skull, followed by left facial paralysis—the muscles of the paralysed side responded well to the currents. 2. A patient, aged 45, had a woman fall from a height on to his shoulder—this was followed by paralysis of the deltoid, and of the supinator longus. In this case also the faradised muscles acted well. 3. A lad, aged 17, was obliged to rest the weight of his body on his two arms whilst his hands held on to a rail at a theatre. In this constrained position he was forced to remain for some time. His left arm was completely paralysed, but Dr. Duchenne found the electric contractility intact. 4. A carter, aged 22, had a bite on the arm from a horse at the level of the depression for the head of the radius. After the inflammation thus set up had subsided, there was paralysis of all the muscles supplied by the radial nerve, except the supinator longus and the extensor carpi radialis longior, but electric contractility was not lost. 5. A man, aged 30, broke his leg and sustained other injuries. All the radial muscles as well as the triceps were paralysed, but acted when faradised. 6. A cook's assistant, aged 44, had paresis of all the muscles of the left arm supplied by the radial nerve, from the pressure of the pad of a crutch with only one stem, on which he was forced to lean very heavily when his foot slipped. The reason he used crutches was that he suffered from arthritis of the knee. In all these cases, which are, as will be seen, traumatic, electric contractility was unimpaired. And so it is in the class of cases to which M. Panas now invites our attention. He says that an explanation of the preservation of this contractility may perhaps be found in the fact that the actual time of pressure is not very prolonged. But the paralysis itself always comes on after a very heavy sleep (either from drunkenness or great fatigue). It comes on whilst they are warm in bed. He gives the following amongst other cases illustrative of his views:—A carpenter, aged 41, who had had neither rheumatism nor syphilis, got drunk at Fontainebleau, and lay down on the grass with his head on his hand; he worked at his trade in Paris till 4 p.m. next day, when he found the radial muscles paralysed. He was not seen by the author till eight days after. Cured by galvanism. A convict, aged 29; a founder, aged 35, much given to drink; another male patient, aged 28, also after drinking heavily. These and other cases all got well comparatively quickly after galvanism.

M. Panas draws the following conclusions:—1. This radial paralysis is due to slight and temporary compression. 2. This compression is on the superficial portion of the nerve, where it rests on the plane of the humerus. 3. The weight of the body or of the head is the compressing force or agent. 4. There is always a prolonged decubitus; and 5th, profound sleep. 6. There is either drunkenness or very great fatigue before the sleep. 7. The onset of the paralysis is sometimes gradual. 8. Out of more than thirty cases collected by him only one seemed referable to cold. 9. The anatomy, pathology, and etiology all concur to make this a mechanical or traumatic paralysis. 10. Cold and rheumatism fail to explain it. This form of paralysis is pretty well known to both physicians and surgeons in England, as it is not very uncommon in the out-patient rooms of our large hospitals. We do not know that anyone except M. Panas has made so large a collection of cases or has examined them so carefully, but we believe the affection has long been considered as due to pressure, and that the remark is often made that it chiefly occurs in the intemperate or in those who sleep very heavily. The cases given by this distinguished French surgeon are for the most part in somewhat younger patients than those which have been seen by ourselves.

REVIEWS.

The Microscopic Structure and Mode of Formation of Urinary Calculi. By H. Vandyke Carter, M.D. London: J. and A. Churchill. 1873. Pp. 51.

Dr. Carter has in this work commenced the investigation of a subject but little known to pathologists, and has arrived, we think, at some very important and valuable conclusions respecting it. During a prolonged stay in India he has availed himself of the opportunities which surgical practice in that country affords for investigating microscopically a large number of calculi. Eighty specimens have been submitted to examination; 6 per cent. of these were from the female bladder, 15 per cent. were urethral or renal from the male, and 79 per cent. were extracted from the male bladder by lithotomy. One-half of the latter group were taken from children under ten years of age, and only nine were from patients over forty. From Dr. Carter's observations he regards it as evident that urinary calculi are not mere precipitates or aggregations of ordinary crystalline and amorphous deposits, held together by means of mucus: an animal basis is an essential component of urinary calculi. Both the crystalline and submorphous ingredients possess a substratum, evident on removal of the mineral parts, which is of firm consistence, more or less translucent, colourless, structureless, and obviously of organic origin. This material underlies "the compact layers of uric acid, the more brittle ones of both kinds of phosphates, as well as all urate formations beyond the granular, and some of those of the calcic oxalate." This animal matter has not been found to exist alone; it is probably not always identically the same. Its fullest development seems to attend urate globules and laminæ whose structure is exactly retained in their organic basis until destroyed by reagents. This organic matter presents a finely granular striated or fibrillated appearance. One of Dr. Carter's main results is that some of the more characteristic ingredients of calculi are present in forms "peculiar to a group of structures which, though immediately of physical origin, yet seem to hold a position intermediate between the pure mineral and the organic. For these he proposes the name "submorphous," in contradistinction to "amorphous." Such are globules, dumb-bells, spheroids, laminæ, etc. He also finds that the nuclei or first-formed ingredients of calculi are often due to accumulation or unusual formation of globular urates; not seldom is the oxalate in submorphous forms the first material laid down; but that comparatively seldom do crystals of uric acid compose the nucleus of a calculus. A mere aggregation of ordinary urinary deposits is not sufficient to account for the appearance or the growth of a stone. Neither is a stone of spontaneous origin the result of accident, for the nucleus was always found to be solid, and not composed of inspissated mucus.

Our space will not permit us to notice the author's discussion of the mode of formation of calculi. But it is to be regretted that his acquaintance with the intimate structure of calculi has not increased his confidence in the various modes proposed for their dispersion. "A portion of compact laminar structure from a stone composed of uric acid

or urates, when treated under the microscope with potassic solution, is certainly seen to clear after a time more or less completely; but there remains behind a membranous matrix, often firm in consistence, which resists solution, and in the mass would not only impede the action of the alkali, but, unless removed, would, it is probable, become a nidus for subsequent deposit." Neither does the electric current, short of producing electrolysis, seem more promising, for, according to Bridgman and Ord, a weak galvanic current favours the production of submorphous forms, and the magnetic current causes the crystals of calcium oxalate formed in a colloid to assume a much larger size than common. We strongly recommend this very interesting volume to our readers. It is beautifully illustrated with plates of the microscopic appearances of calculi. Dr. Carter has added one more to the list of valuable books which our medical brethren have found energy and time to write under the suns of India.

The Spectroscope and its Application. By J. Norman Lockyer, F.R.S. London: Macmillan. 1873. Pp. 117.

This little work is a reproduction of three lectures delivered by the author at the Society of Arts in 1869. The first lecture gives an account of the means and method of spectroscopic research. The prism and its effect on light, the use of the slit, Fraunhofer lines, combination of prisms, and the construction of spectroscopes, with the method of measuring spectra, are amongst the subjects of this lecture. In the second lecture the spectra of different substances, the detective power of spectrum analysis, the use of the spectroscope in arts and manufactures, and its application to the heavenly bodies are passed under review. In the third the author treats of the absorption of light, the practical application of the phenomena of absorption, the absorption spectra of various substances, the lines of the solar spectrum, the absorbing power of gases and vapours, and the nature of the sun's atmosphere and spots, solar prominences, the spectra of other stars, and the future of the spectroscope. One of the most interesting matters in the book is the account given of solar cyclones. By careful observation of the shifting of the hydrogen line a storm has been watched moving across the sun at something like the rate of 100 miles a second. The indications which the spectroscope gives us of the enormous forces at work in the sun and the stars, the light it has thrown upon the composition of the sun's atmosphere, the nature of variable stars, the constitution of nebulæ, are undoubtedly the greatest marvels of modern science. Mr. Lockyer's book is admirably adapted as an introduction to spectroscopic study.

GENERAL CORRESPONDENCE.

PURPURA HÆMORRHAGICA.

Letter from Dr. Lavies.

[To the Editor of the Medical Times and Gazette.]

Sir,—You may possibly consider the following case worth publication:—M. S., aged 60, committed to prison for felony in January last, was in good health up to the beginning of the present month, when she complained of languor and asked for and obtained a change of diet. On the 16th inst. my attention was called to a bruised appearance of her eyes and nose. I asked to see her arms and legs, and found them covered with purple spots, with bruises about the joints. She was at once placed in our invalid ward, and at ten o'clock in the evening, on being visited by a warder, she expressed herself very comfortable—quite well—and in no pain. In the morning at seven she was found dead—a small quantity of vomited blood by her side. The post-mortem examination revealed a purpuric condition throughout the alimentary canal, with considerable blood-extravasation about the stomach, spleen, kidneys, etc., the peritoneal surface of the intestines being covered with marks similar to those on the skin; the heart containing a small quantity of fluid blood in each ventricle. A good deal of blood had escaped into the stomach, some of which was vomited, and there can be little doubt she died of syncope.

Two interesting questions appear to me to arise out of this case, bearing on the history and pathology of purpura, about which I do not think very much is known—first, may strong mental impressions be concerned in producing such blood-changes as had evidently taken place in this case? and secondly, had prison diet anything to do with it? In answer to the latter question, the diet is certainly not luxurious—it consists of bread, gruel, Indian meal pudding, meat, soup, potatoes, onions, carrots, rice, cheese; but there is no limitation set on my instructions for necessary change, and I have never seen a case of purpura since I have been in the habit of visiting the prison, now more than thirty years. To assist in answering the former question I would observe that the prisoner appears to have been a woman of deep feeling and impressionable mind, and that about a week before her attack she had received some very touching letters from her relatives, which seemed, observers report, to have affected her very acutely.

I apologise for troubling you. I am not in the habit of publishing, and I only do so in this case in the hope of contributing some facts in reference to a disease the etiology of which is confessedly somewhat obscure.

I am, &c., J. S. Lavies, M.D.

11, Warwick-square, Belgravia, S.W., August 25.

WHAT IS THE ACTUAL CAUTERY?

Letter from Mr. G. J. S. Camden.

[To the Editor of the Medical Times and Gazette.]

Sir,—I see in Dr. Fayrer's work on the "Thanatophidia of India" that the actual cautery was used unsuccessfully (which in another place he calls a *red-hot* iron). This is not what I was always taught and had seen as actual cautery. I consulted "Cooper's Surgical Dictionary," edited by Lane. There it is called an iron in a state of incandescence, which is, according to Maunder, incipient white heat. Professor Symes in his lectures calls it a red-hot iron. I also made many inquiries of medical friends, and all spoke of it as a red-hot iron. Having twice assisted in using and once used actual cautery, I hope I know something on the subject. When actual cautery is to be used the iron must be heated till it is really of a white heat, and looks almost as white as white paper. If then applied it destroys the part instantaneously, giving no pain; but it must be removed quickly on the heat decreasing, and then another iron applied. Several irons are required for use, and a fierce fire kept up by bellows, till your object is attained; but if a red-hot iron only is used, the agony is intense, as we all know who have touched it. The first time I saw it used on a girl of fourteen years no pain was given, to my great astonishment; the second time on an elderly person (both for fungus in the upper maxillary bone), her screeching was fearful, till I told the operator his irons were not half hot enough. He then requested me to heat them properly, which being done, not a murmur was heard. The irons were being used only red-hot. The last time was opening four or five sinuses in a favourite horse's shoulder. He never flinched, and scarcely seemed aware of what was being done. The only thing he noticed—for he never moved—was the hissing made by the destruction of the skin. Actual cautery is painless.

I am, &c., G. J. S. Camden, M.R.C.S.

London, August 22.

P.S.—For India I would suggest using—to obtain the white heat for actual cautery—a large spirit blow-pipe similar to those made many years since to boil water on your table in a minute; the iron to be held on a piece of pumice-stone.

OBITUARY.

EDWARD VAUGHAN AUSTIN, M.R.C.S.,

Of Oakfield, Reigate, was found dead on the 14th inst. in Reigate-park. The deceased left his house on the Saturday previous, and attended a patient in Southpark. He left there to return home, but was never seen alive afterwards. On the following Thursday evening his body was found lying in the fern-brakes within forty yards of the pathway. A valuable gold watch and other property were found upon him. Mr. Steele, jun., who examined the body, was of opinion that death resulted from a fit. Mr. Austin had been subject to fits of late. He was 63 years old, and was secretary to the Surrey Archæological Society, and a member of several learned societies.

CHARLES A. HEMINGWAY, M.R.C.S.,

Has just died, rather suddenly, at his residence in Leeds-road, Dewsbury. The deceased was engaged in his duties until a

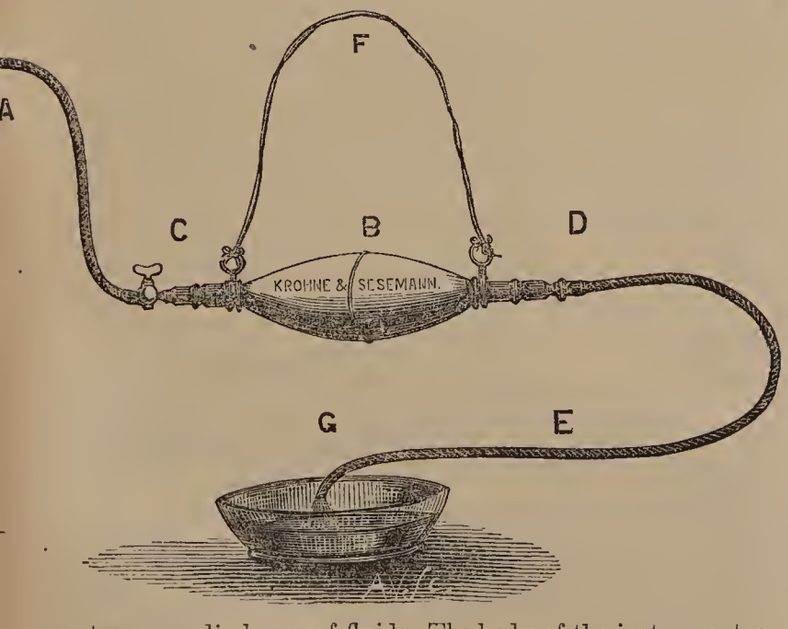
few hours before his death. He had been unwell and in a low state of mind for some weeks. Mr. Hemingway was the certifying surgeon under the Factories Act for the district. He took much interest in the Mechanics' Institute, of which he was president. He was the author of the following works:—"On the Reduction of Compound Fracture with Protrusion of Bone by the Use of the Lever"; "A Popular Lecture upon the Brain, Heart, and Lungs." He was also the inventor of cased splints for the treatment of fractures.

NEW INVENTIONS.

NEW INSTRUMENTS FOR THE TREATMENT OF EMPYEMA IN CHILDREN.

At the January meeting of the Obstetrical Society, Dr. Bathurst Woodman showed two instruments for the treatment of empyema in children, intended to be worn after paracentesis thoracis (suggested to him by Dr. Playfair's apparatus,—see *Obstetrical Transactions*, vol. xiv., p. 4). The first was a glass tube bent into a form resembling a double U. To this two elastic tubes were adapted, one at each end, furnished with clips such as chemists use in volumetric analysis. One elastic tube is to be introduced into the pleural cavity, the glass tube to be filled with disinfecting fluid, and the whole suspended by a tape from the child's neck. The second elastic tube holds sufficient fluid to render it unnecessary to empty the apparatus more than once in twenty-four hours. The whole can be made for three or four shillings.

The second apparatus, which is also made by Messrs. Krohne and Sesemann, 8, Duke-street, Manchester-square, and 241, Whitechapel-road, is very light. It can be used to exhaust the pleural cavity of pus or other fluids present there; or, by reversing the syringe, to inject disinfectants or pure water at a temperature of 98° to 100° Fahr. into the pleural cavity. The apparatus is air-tight, can be made to hold enough disinfecting fluid to prevent unpleasant smell, and need not be emptied more than once a day. It consists of an elastic tube A, furnished with a stopcock C, which is turned so as to shut off air when the syringe is reversed or removed to cleanse it. This is the tube introduced into the chest after paracentesis. A few holes may be made in the sides of the chest-end for an inch or so of its length to facilitate the



entrance or discharge of fluids. The body of the instrument, B, consists of a Higginson's syringe, which is reversible, so as to admit of being used as a force-pump for the injection of fluids, as above mentioned; or as a suction-pump for their withdrawal. To this by means of an adapter a second elastic tube, E, can be attached, so as to let the fluids run into, or to draw disinfectants out of, the basin G.

The figure does not show clearly the adapters at each end, and the letter D, which denotes one of them, is misplaced. A tape, F, is attached, to suspend the whole from the child's neck (in a little bag if preferred), so as to be always ready for use. A little disinfecting fluid can be kept in B; on the body of the syringe there is an arrow to show the direction of the current. If suitable nozzles are adapted, it is a good instrument for transfusion of blood.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Aug. 21:

Day, Edmund Overman, Hemel Hempstead.
Rodwell, Thomas Henry Bate, Loddon, Norwich.
Smith, Thomas William Toone, Austrey, Warwick.
Watson, Charles Russell, Sydney, N.S.W.

The following gentlemen also on the same day passed their primary professional examination:—

Crétin, Eugène, St. Bartholomew's Hospital.
Mason, Samuel Butler, London Hospital.

BIRTHS.

ADAMS.—On August 18, at Barnes, Surrey, the wife of James Adams, M.D., of a daughter.

CLARKE.—On August 17, the wife of W. Fairlie Clarke, M.A., M.B., F.R.C.S., of Mansfield-street, Cavendish-square, of a son.

DALY.—On August 26, at 101, Queen's-road, Dalston, the wife of Frederick H. Daly, M.D., of a daughter.

SELOUS.—On July 19, at Unao, the wife of Major E. Selous, of a son.

TAYLOR.—On August 23, at Bocking, the wife of Thomas Taylor, M.R.C.S., of a daughter.

WISE.—On August 23, at Haddon Lodge, Shooter's-hill, S.E. (the residence of her father, Wm. Jackson, Esq.), the wife of Wm. C. Wise, M.D., of a daughter.

MARRIAGES.

BARLOW—FROOM.—On August 23, at St. Mary's (Bolton's), West Brompton, Stephen Babington, second son of the late George Hilars Barlow, M.D., Senior Physician to Guy's Hospital, to Lolo Undine Anne Teevan, only child of William Froom, Esq., late of Charlwood-park, Surrey, and grandniece of the late Rear Admiral (of the Red) Anselm John Griffiths.

EDWARDS—PAYNE.—On August 21, at Birdbrook, Essex, Frank Edwards, L.R.C.P., L.S.A., of Furneaux Pelham, Herts, eldest son of Thomas Edwards, Esq., of Wixoe Park, Suffolk, to Alice, eldest daughter of Henry Payne, Esq., of The Moat, Birdbrook.

LAW—BELL.—On August 20, at St. John's Episcopal Church, Edinburgh, Alfred Robert Law, M.D., M.R.C.S., of Richmond, Surrey, to Charlotte Elizabeth, elder daughter of William Bell, Esq., of 6, Melville-street, Edinburgh.

STAYNER—MCCULLOCH.—On August 7, at St. John's Episcopal Church, Dumfries, Frederic Henry Stayner, Esq., son of the late Thomas Allen Stayner, Postmaster-General of British North America, to Harriet, daughter of James Murray McCulloch, M.D., of Dumfries.

WRIGHT—HODGSON.—On August 20, at Brathay Church, Ambleside, Strethill Harry Wright, M.D., F.R.C.P., Superintendent of the Barony Parish Hospital and Asylum, Barnhill, Glasgow, eldest son of Thomas Strethill Wright, M.D., F.R.C.P., to Elizabeth, youngest daughter of the late Rev. William Hodgson, M.A., Rector of Clifton, Westmoreland, and formerly Principal of Moore College, Liverpool, New South Wales.

DEATHS.

BUCHANAN, WILLIE, son of George Buchanan, M.D., at 24, Nottingham-place, W., on August 24, aged 4 months.

DIGBY, FREDERICK, M.R.C.S. Eng., L.S.A., at Cheltenham, on August 20, aged 37.

HAYLES, GEORGE, M.R.C.S. Eng., L.S.A., at Alresford, Hants, on August 23, aged 72.

JAMESON, WILLIAM, M.D., native of Edinburgh, Caballero of Spain, late Professor of Botany and Chemistry in the University of Quito, and Director of the Mint of Ecuador, at Quito, Ecuador, on June 23.

STEVENSON, HELEN EMSLIE, wife of James Stevenson, M.D., at 411, Edgware-road, on August 22.

TRAILL, ROWLAND JOHN, M.D., at Collaroy, New South Wales, from paralysis, on August 16, aged 58.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

ARDWICK AND ANCOATS NEW DISPENSARY AND HOSPITAL, MANCHESTER.—Senior House-Surgeon. Applications, with testimonials, to the Rev. W. Hutton, Honorary Secretary, 57, Higher Ardwick, Manchester, on or before August 30.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Candidates must be M.R.C.S. of Great Britain or Ireland, and L.R.C.P. or L.S.A. Lond. Applications, with testimonials, to the Chairman of the Committee of Management, 76, West-street, Brighton, on or before September 3.

BRISTOL DISPENSARY.—Medical Officer. Candidates must possess a diploma in Surgery from the Royal College of Surgeons of London, Edinburgh, or Dublin, or from the Faculty of Physicians and Surgeons of Glasgow. Applications, with testimonials, to the Secretary, on or before September 6.

BURTON INFIRMARY AND DISPENSARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, J. C. Grinling, Esq., Burton-on-Trent, on or before September 1.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to John Binks, Esq., Honorary Secretary, Wakefield.

East Suffolk Hospital, Ipswich.—House-Surgeon and Secretary. Candidates must be unmarried, and M.R.C.S.England L.S.A., or L.R.C.P. Applications, with testimonials, to the Secretary, on or before September 2.

Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.—Registrar. Particulars may be obtained from the Hospital.

General Hospital, Birmingham.—Resident Registrar and Pathologist. Candidates must be duly qualified. Applications, with testimonials, to the House-Governor and Secretary, on or before September 6.

Inverary (Parish of).—Medical Officer. Applications, with testimouials, to A. Henderson, Esq., Town Clerk, Town Clerk's Office, Inverary, on or before August 30.

Inverness District Asylum.—Assistant Medical Officer. Candidates must be duly qualified aud registered. Applications, with testimonials, to Dr. Aitken, Medical Superintendent, on or before September 15.

Liverpool Northern Hospital.—House-Surgeon. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to the Chairman of the Committee, on or before Sept. 8.

Manchester Royal Infirmary.—Physician's Assistant. Candidates must possess medical and surgical qualifications. Applications, with testimonials, to the Chairman of the Weekly Board, on or before Sept. 6.

Manchester Royal Infirmary, Dispensary, and Lunatic Hospital.—Honorary Assistant-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Board, on or before August 30.

Metropolitan Free Hospital, Devonshire-square, City.—Honorary Assistant-Physician. Applications, with testimonials, to the Committee of Management, on or before September 2.

Newcastle-upon-Tyne Borough Lunatic Asylum.—Assistaut Medical Officer. Candidates must be registered. Applications, with testimonials, to John Atkinson, Clerk to the Committee of Visitors, on or before August 30.

Provident Surgical Appliance Society, 25, Bartholomew-close.—Assistant-Surgeon. Applications, with testimonials, to the Secretary, on or before September 10.

Royal Free Hospital, Gray's-inn-road.—Junior House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before September 10.

St. Mary's Hospital and Dispensary for Women and Children, Quay-street, Manchester.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Joseph Barber, 14, John Dalton-street, Manchester, on or before September 12.

St. Thomas's Hospital.—Resident Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Treasurer.

Skipton and Settle Union, Yorkshire.—Medical Officer of Health. Candidates must be legally qualified medical practitioners, and registered. Applications, with testimonials (three copies of each), to Thomas Brown, Esq , solicitor, Skipton, on or before September 5.

Ripon Dispensary and House of Recovery.—Resident House-Surgeon and Dispenser. Candidates must be unmarried, and duly qualified Applications, with testimonials, to the Honorary Secretaries, on or before August 30.

Wantage Union.—Medical Officer. Candidates must be duly qualified, Applications, with testimonials, to Edward Ormond, Clerk of the Union. Wantage, on or before September 8.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Belford Union.—Mr. Aylmer E. Hayes has resigned the East District; area 12,704; population 2869; salary £25 per annum.

Caiston Union.—Mr. Joseph Aston has resigned the Waddingham District; area 11,178; population 2073; salary £35 per annum.

Cheltenham Union.—The Third District is vacant; salary £30 per annum.

APPOINTMENTS.

Bideford Union.—John Thompson, M.D., M.R.C.S. Eng., L.S.A., to the Workhouse. Edgar Cox, M.R.C.S. Eng., L.S.A., to the Bideford District.

Bramley Union.—John Sloan, B.M. and M.C. Univ. Glas., to the Bramley District.

Doncaster Union.—Charles H. Lister, M.R.C.S. Eng., L.S.A., to the Doncaster East District.

St. Thomas's Union.—Wm. J. Williams, M.D., M.R.C.S. Eng., L.S.A., to the Heavitree District.

Sussex.—Francis V. Paxton, M.D., as Analyst for the Western Division of the County.

Wareham and Purbeck Union.—Joseph Fall, M.R.C.S. Eng., to the Winfrith District.

The library of the Obstetrical Society will be closed from September 1 to September 13, both days inclusive.

St. Bartholomew's Hospital and College.—Prizes, etc., awarded, Session 1872-73.—Senior Scholarships in Medicine, Surgery, Materia Medica, and Therapeutics: 1 (£50), A. F. Stevens; 2 (£25), C. S. W. Cobbold. Senior Scholarships in Anatomy, Physiology, and Chemistry: 1 (£50), E. Crétin; 2 (£25), G. H. Hames and F. H. Spooner-Jeaffreson. Exhibition: £20 yearly for two years, H. F. Chapman. Junior Scholarship: 1 (£50), W. A. Shoolbred; 2 (£30), F. S. Eve; 3 (£20), C. W. M. Moullin. Kirkes Medal: H. J. Ilott, C. S. W. Cobbold, equal. Wix Prize: J. C. Verco; 2nd Prize, H. M. Barker. Hichens Prize: C. S. W. Cobbold. Practical Anatomy—Foster Prize: G. H. Hames and J. Ranking; 3. F. H. Spooner; 4. W. H. Briggs; 5. H. G. Cumming; 6. F. Watts; 7. W. Kebbell; 8. F. H. Carter; 9. J. Spark; 10. J. K. Barton. Treasurer's Prize: F. S. Edwards. Examiners' Prize: F. S. Eve; 3. T. J. Verrall; 4. A. Upton; 5. F. E. Woodward; 6. A. G. Williams; 7. J. H. Simpson; 8. W. A. Shoolbred; 9. W. R. Pearless; 19. L. B. Calcott.

Army Medical Service.—The following is a list of gentlemen who competed successfully for appointments as Surgeons in H.M.'s Army Medical Service, at the examination held at the London University on August 11 :—

Order of Merit.	Names.	Marks.	Order of Merit.	Names.	Marks.
1.	Langridge, G. J.	2318	7.	Thomsett, R. G.	1900
2.	Fowler, B. W.	2219	8.	McQuaid, P. J.	1868
3.	Webb, W. E.	2145	9.	Tobin, J. J.	1685
4.	Gubbins, W. L.	2090	11.	Spencer, F. H.	1660
5.	Wood, O. G.	2005	10.	Ring, J.	1640
6.	Mapleton, R. W.	1905			

Indian Medical Service.—The following is a list of the candidates for her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on August 11, 1873. Fourteen candidates competed for eleven appointments; thirteen were reported qualified.

Order of Merit.	Name.	Marks.	Order of Merit.	Name.	Marks.
1.	A. J. Willcocks	2195	7.	H. K. McKay	1825
2.	J. Moloney	2076	8.	J. J. H. Wilkins	1715
3.	F. R. Swaine	1980	9.	M.L.Bartholomensz	1390
4.	C. W. S. Deakin	1922	10.	P. Thompson	1310
5.	H. Allison	1920	11.	R. C. Ross	1245
6.	J. G. Collis	1891			

Mr. Charles Johnson, grocer, of 141, Kent-street, Southwark, has been fined £5 and costs for selling adulterated mustard. Dr. Muter, the analyst, examined the mustard and found it to contain flour and turmeric. The defendant urged the magistrate to reduce the fine, inasmuch as the mustard was bought by him in the condition in which he sold it; but the magistrate declined, stating there was little justice shown to the public if such cases were lightly passed over.

Composition and Quality of the Metropolitan Waters in July, 1873.—The following are the returns (by Dr. Letheby) of the Association of Medical Officers of Health :—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	18·33	0·068	0·147	0·002	14·6	3·2
West Middlesex	18·20	0·016	0·147	0·000	14·3	3·2
Southwark & Vauxhall	18·53	0·056	0·166	0·001	14·8	3·2
Chelsea	18·52	0·069	0·145	0·001	15·0	3·3
Lambeth	18·80	0·072	0·147	0·002	15·0	3·3
Other Companies.						
Kent	28·04	0·008	0·243	0·000	20·8	6·0
New River	17·83	0·024	0·147	0·000	14·0	3·0
East London	18·39	0·028	0·154	0·001	14·3	3·5

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was more or less turbid—namely, in those of the Grand Junction and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 120,204,176 gallons; and the number of houses supplied was 503,832. This is at the rate of 33·8 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 30·5 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Amicus.—Received, with thanks.

Gus.—June 17, 1858.

Cray.—Dr. Bell Pettigrew, F.R.S., has been appointed Lecturer on Physiology at the School of Medicine, Surgeons' Hall, Edinburgh.

Veto.—Sir Isaac Newton was elected President of the Royal Society on the retirement of Lord Somers from that office in 1703.

Credulous.—The kings of England had from very ancient times pretended to a power of curing scrofula by touching those who were afflicted by that malady. It is well known that Dr. Samuel Johnson was, when a child, touched for the scrofula by Queen Anne. The princes of the House of Brunswick relinquished the practice.

Cirus.— "Death his dart
Shook, but delayed to strike."—*Milton.*

A Doctor's Log.—No. I.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As we lay all the day in the bay of Biscay oh! the black angry billows rolling mountains high, washing over the decks; not a sail visible, the dreary monotony of water, water everywhere, somewhat broken by the flitting seagulls—Where do they live? Are they never tired? Do they sleep on these white-crested waves, possibly our beds also this stormy night? Poor ladies, women, and children lie prostrate, especially one golden-haired bride. Most of the passengers are sea-sick; a few appearing at dinner notice the anxious face of the courteous captain, hear the howling wind, feel the terrible tossing, vibration, rolling, and apparently shuddering quiver of the *Serapis* buffeted by the cruel treacherous ocean, and naturally every thought turns wistfully to those at home, to parents, relations, wives, or children. Useless to go to bed; the swinging lights in the saloon, where the water bursts in occasionally, are dismally cheerful. An old sheet of paper and a stumpy pencil handy, the old inclination to scribble comes on as a resource, trusting to the indulgence of your readers for jerky incoherence. Before leaving England for India, gratuitous advisers gave all sorts of hints, not a few being miserable Job's comforters: "Smith, we give you six months; the next cholera season will be brisk, specially attacking old fat new-comers." Others suggested—"Live well; keep a good house; go in for sport; don't drink beer or spirits, stick to claret. Take out lots of flannel clothes, boots, harness, saddlery, a good helmet, the best filter, an express rifle, books, microscope, surgical instruments, specially an aspirator; see that your luggage is strongly packed and corded, the best of bullock-trunks lined with tin." The bachelor advises a wife, to be supplied by return of post by the *Matrimonial News!* The married man says—"Keep your wife and children at home. If this, that, and the other cannot stand climate, what chance has a fragile woman or a delicate boy?" Amidst all the worries of settling accounts, paying long-forgotten bills, ordering uniform white clothing, many little things were never thought of. An assistant-surgeon is allowed 18 cwt., or 90 cubic feet, enabling him to take out chest of drawers (if in strong cases), bed, valise, portmanteaus, tub, books, box; or if married, packages containing table linen, glass, crockery, and cutlery. In the cabin two small bullock-trunks only are allowed, but there is a baggage-room accessible during the voyage; the remainder goes down into the hold. You must keep your eye if possible on every article until on board; the labels should be printed and spread in all directions, besides each box should have some particular mark, say a white zigzag or a red bull's eye, to distinguish readily amidst heaps of others. Your heavy baggage being down the hold, only to be got at on reaching final destination 1000 miles up country of India, it is a matter of considerable personal consequence to have the necessaries packed in small available compass. Many readers of the *Medical Times and Gazette* have to travel, and these hints may be of service therefor. In the cabin, in the two portmanteaus have pajamas, shirts (specially flannel), socks, under-clothing, towels, soap, a good travelling-bag, old uniform, one suit of old plain clothes, strong seasoned boots, Scotch cap, slippers, goloshes, dressing-gown, stationery, string; a number of small leather bags to hang from pegs in the cabin, or else a good hold-all; also certain books—"Tanner's Index of Diseases," a small surgical manual, "Meadows's Midwifery," and the "Prescriber's Companion." Bottles containing toilet vinegar, *eau-de-Cologne*, or lime-juice and glycerine, are simple luxuries, but very valuable during sea-sickness, especially to help unfortunate ladies whose stock soon runs out. Chlorodyne is a necessary not supplied in the ship. Take rugs, pea-coat, field-glasses, and a waterproof sheet, all easily rolled and strapped. Excepting a watch, which need not be wound up, or at all events corrected, pack up all rings, pins, jewellery, and knick-knacks in the heavy baggage. Even then bear in mind the numerous thefts in India; and, if there is a chance of returning to England, leave your valuables there. In the way of money, about £20 in gold at the very least should be carefully secreted or carried about with you; also about the same amount in notes if tolerably flush of cash, which very few assistant-surgeons are. Do not forget to take out a good lamp, one or two suits of thin flannel serge, besides a small quantity of white clothing.

We are three in a cabin under the saloon—very dark; no water comes in; the rolling bearable; one man over another in a kind of dinner-waggon, the third in a hunk at right angles. (How fat ladies clamber up and down, in and out of the top shelf appears a mystery.) Very cold; the rugs handy just now. Uniform worn all day, including mess dress at dinner, excepting in the Red Sea, when white clothing. All these vessels magnificent, ours the best—6211 tons, 3945 horse power, a crew of 250, about 1600 souls on board, including shoals of women and children. A neat commodious hospital for the troops, plenty of light and space, twenty comfortable swinging cots; also eight similar cots in the women's hospital, and a small place for the crew. The women's quarters are satisfactory, the nursery convenient. Women and children truly are *impedimenta*, either ill, in the way, wanting food or something, or a light at irregular hours, else transgressing the rules. On some trips they smuggle in children with eruptive fevers, get off vaccination, or, concealing pregnancy, are delivered before the ship is in blue water, causing endless inconvenience. Still, these things are unavoidable, and one cannot help noticing how much happier married people are, in spite of discomfort. Respecting men, syphilis, bubocs, gonorrhœa, contusions, eruptions, rapidly develope, the greatest care being taken to exclude the embarkation of weeds, useless soldiers, or epileptics. For sea-sickness, brandy, lime-juice, chloral, bromides, chloroform, chlorodyne, bismuth, charcoal, coffee, tea, champagne, opium, carbolic acid, do no good—indeed, chewing a hard navy biscuit is as good a prescription as any. Ladies suffer frightfully, yet seldom about. Men are miserable creatures, requiring any amount of force to get them out of their stuffy cabins on deck. So far, beyond contusions and prostration of sea-sickness, nothing of professional interest to record; but we have not shaken down yet. What with recent embarkation, the storm, and general cheap condition of the passengers, all are on the same level—even the sheep, horses, and dogs look miserable. A library, cards, the prospect of living like fighting-cocks, of visiting Malta and hearing some opera, of theatricals on board, when "Richard will be himself again," afford comfort, and we hope for a calm sea and a prosperous voyage. A considerable amount of scuffling about baths in the morning appears the only tangible grievance so far. The soldiers and sailors are very chummy; the former, intensely nautical, easily strain themselves hauling ropes. The sea air induces considerable iodism amongst the children—old eruptions reindnced. On the other hand, acute cases become very tractable. Although mothers lose milk and are generally wretched, the infants rally wonderfully—one or two cases of tabes rather troublesome, the constipation obstinate, vomiting incessant, and a tendency to convulsions induced by debility—roughing it, as well as the fright of the storm. For children who refuse all nourishment, the old remedy of bottled stout in teaspoonful doses settles the stomach, induces appetite, and restores vitality far better than brandy and port. In the way of food for infants, concentrated milk and ship biscuit very valuable even in severe illness. The reader will please understand that after severe trial during the hurricane, the good ship *Serapis* now "ploughs azure furrows in a sapphire sea" at the rate of eleven knots an hour, having passed from cold, rain, and fogs into the realms of glorious summer. At one time we notice the rugged Spanish coast on the left hand, and the dark African shore on the right, and observing occasional towers, sometimes red and white houses, unrelieved by trees or gardens. The lapis lazuli look of the sea and sky, the languid, soft, sensuous atmosphere, the patches of emerald green contrasting with yellow sand, the bold rocks, and the velvety appearance of lofty mountains, as, emerging from Trafalgar Bay, we pass grand old Gib., all worthy of observation. Algiers from a distance of ten miles has the appearance of a thriving watering place—any number of houses and villas dotted about, even on the highest hills. Next, the snow-capped mountains become more perpendicular, apparently sloping down to the water, with deep valleys here and there. For amusement the soldiers play all-fours, Don Pedro, "25," or cribbage on deck, and of an evening do Christy Minstrels. Then do the six brides take a wonderful interest in astronomy, plunging porpoises, also the phosphorescent waves as explained by sentimental husbands, several of whom, unshaven, resemble broken-down burglars. It was a pleasant change one fine day to sail close to several rose-tinted rocky islands, one called Galata visible for thirty miles, apparently uninhabited even by birds. On Sunday evening, the chaplain being sick, the captain performed service, reading a sermon on "storms" admirably and impressively, each listener fully conscious of the terrible weight of responsibility both of life and property the preacher bravely undertook. Lately dancing on the deck by the light of lanterns has been instituted, the Flick-Flock galop, Babil and Bijou waltzes are admirably played by our amateur quadrille band; the air so mild that neither hats nor opera cloaks are required; and the carriages are ordered at ten o'clock. All this is pleasant excepting that the Mediterranean air appears very treacherous—for instance, this morning the sick-list of women and children affected with diarrhœa, bronchitis, neuralgia, dyspepsia, erythema, boils, catarrhal ophthalmia, febricula, malarial complications, contradicted the poetical twaddle about the renewal of life in the sunny south. Two women are suffering from chronic rheumatism, one inclines to erysipelas, and a creole, with a history of brain fever, entertains delusions of suffering from syphilis, induced by demoniac or else magnetic influence. Beef-tea, wine, scruple doses of bromide of potassium, followed by a scruple of chloral at night tried, the chances being that a crop of boils unavoidably will be induced. Before reaching final destination near the Himalayas, I hope to be able to record interesting cases, notes, and observations whilst passing through the Suez Canal, the Red Sea, the Bay of Bengal, and on the road up country. This evening we hope to reach Malta, about 2200 miles from

Charing-cross.

The Army Medical Deparment.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The new Warrant for the Army Medical Department seems to have caused about as much dissatisfaction in India as at home, and perhaps you may find room some day for the following remarks if you consider them worth printing. The loss of 2s. 6d. a day after fifteen years' service if not promoted, the question of forage, etc., etc., I shall not in this paper again touch on: they have been so fully discussed by nearly everyone who has written upon the subject. I should like to make a few remarks on such points as have not been written on much or at all hitherto during the period which has elapsed since the publication of the Warrant. It seems to me that in the general scope of the Warrant it either goes a deal too far or not far enough. The real regimental system has been destroyed, but in its place we do not find that a regular corps completely distinct from regiments has been established. There is no such thing as putting hospitals entirely under medical officers, making them, in fact, as separate from regiments as one regiment is from another. We don't find that a man, in future, who is sick will be removed to a hospital where he will be as much severed from his regiment and as completely removed from all regimental control as if he were transferred to a distinct department. Not a bit of it—whether such a change would be for good or evil. As far as I can make out, the authorities, or whoever the framers of the Warrant are, have simply abolished the real regimental system of medical men being gazetted to regiments, and have in its stead substituted a bastard regimental system of attached men. This plan may simplify and equalise the roster for home and foreign service; but in other respects will in all probability, I suspect, be found to combine most of the evils of both a staff and a regimental medical service. In what way can the position, social and otherwise, of an attached differ from a gazetted regimental man except for the worse? It may be slightly cheaper; the saving will be hardly earned to him. You have only to consider for a moment that this system of attached men has been applied for years to a large portion of the army medical officers—constituting the Army Medical Staff, Assistant and Staff Surgeons, and Staff Surgeons-Major,—and so little did they appreciate it that regimental gazetted appointments commanded a money value in the market. Supposing that the regimental system is at an end, might I solicit your influence to obtain for us in future some security against constant shifting from station to station in the shape of fixed appointments to stations for definite periods of years, in lieu of that security of tenure which the regimental system gave us. One hears, certainly, of regiments being moved pretty frequently nowadays from station to station, but still I don't believe that regiments, as a rule, have been moved so frequently as many staff medical men, particularly in India. These moves fall very heavily, especially on married men. A staff medical man is sent to a station—say he takes a house and furnishes it, and buys a horse to enable him to perform his duties; or perhaps he combines the due performance of his duties with enabling his wife to go out in the evening—when perhaps she, poor woman, is far too wearied and oppressed with the heat to walk,—he buys a trap. Well! he has just made a few friends, his wife is just getting

into a little society, when down comes a telegraphic or other message: medical officer wanted at some place—say 500 miles off; a brigade order quickly follows that our staff friend is to proceed at once. Furniture, horse, trap, etc., have all to be sold for what they will bring, and off he and his wife start for their new station. He has to pay his wife's railway expenses himself, as Government only allow his (and some servants, I think). And at their new station they have no certainty of remaining. They may remain a month or six months, or any time of their Indian service. No one knows how long or how short their stay may be. They may move at any time, and any furniture, horses, etc., may have at a few hours' notice to be sold as before. You may imagine how this tells on the income of an Assistant-Surgeon! And now to contrast the combatant and medical service of the future. I should be inclined to give the advice of *Punch* to those about to marry—"Don't"—to all parents thinking of educating a son for medicine with the view of his entering the army. They had far better send him in as a combatant. Say the boy is eighteen. Nothing has now to be paid on the purchase of commissions, and by going into the combatant ranks he will be gaining pay and counting promotion and service at once; while if the same boy be sent to a medical school or college, four or five years (during which he gains no money) will have to be spent in obtaining an expensive education, simply to enable him to enter a service where he will probably be thought less of than his combatant brother, and who will in addition have a home in a regiment, and have counted four or five or even more years of service. No, I don't think that the medical service as it is can compete against the combatant.

And now, Sir, if I have not trespassed too much on your space, might I suggest, as a plan of obtaining medical men for the army, that Government should offer inducements to young men to enter for short service, and let them go on its completion with a bonus. A great many first-rate young medical men just after they pass cannot get into practice on account of youth, etc., and they are hampered very likely by the want of money. A thousand pounds, or even say five hundred, after five or six years' service would enable them to start, or at least be of great use to them. They might buy with it a share in a practice, perhaps. The army is too poor a calling ultimately for many with sanguine dispositions – they must enter it as a profession for life; and after twenty years' service it is too late to begin private practice generally. But let Government offer a bonus of say £500 to £1000 to all likely to leave the army after five, six, or even ten years' service, and I believe many first-rate young medical men would be induced to enter it.

I am, &c.,

An Army Medical Officer.

COMMUNICATIONS have been received from—

Dr. Cohen, Hamburg; Mr. F. Alcock; Dr. Blanc; Mr. Maconochie; Mr. B. D. H. Russell; Mr. Walter Verdon; Dr. Tibbits; Dr. Wiltshire; Mr. Camden; Mr. J. Chatto; Mr. Jessop; Dr. Peyton Blakiston; Mr. H. Morris; Mr. F. A. Mahomed; Dr. Bathurst Woodman; Mr. G. H. Evans.

BOOKS RECEIVED—

Essays on Diseases of Children, by W. H. Day, M.D.—Ueber das Verhältniss der Menstruation zur Ovulation, von Dr. Hermann Beigel—Der Antagonismus der Nervencentren in seiner Wirkung auf dem Uterus, von Dr. H. M. Cohen.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Pharmaceutical Journal—Lincolnshire Chronicle—Lincoln Gazette–Gazette Hebdomadaire—Tribune Médicale—Le Mouvement Médical—Le Progrès Médical—Gazette Médicale—France Médical—L'Union Médicale–Gazette des Hôpitaux—Bordeaux Médical—Canada Medical and Surgical Journal—Monthly Review of Dental Surgery—The Students' Journal and Hospital Gazette—The Western Lancet—The Micrographic Dictionary, parts 11 and 12–The London Medical Record—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

August 30. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

September 1. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

2. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

3. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

4. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

5. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Meeting of Council.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 23, 1873.

BIRTHS.

Births of Boys, 1136; Girls, 1053; Total, 2189.
Average of 10 corresponding years 1863-72, 2022·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	820	726	1546
Average of the ten years 1863-72	710·2	674·7	1384·9
Average corrected to increased population	...	...	1523
Deaths of people aged 80 and upwards	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	1	1	3	...	6	2	60
North ...	751729	...	3	1	3	13	...	11	...	67
Central ...	334369	...	1	...	...	3	...	4	...	38
East	639111	...	14	9	...	9	...	1	1	77
South	967692	...	10	3	1	11	1	5	1	120
Total	3254260	...	30	14	5	39	1	27	4	362

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·681 in.
Mean temperature	60·0°
Highest point of thermometer	74·7°
Lowest point of thermometer	49·3°
Mean dew-point temperature	52·4°
General direction of wind	S.S.W., S.W., & W.S.W.
Whole amount of rain in the week	0·65 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 23, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre, (1873.)	Births Registered during the week ending Aug. 23.	Deaths Registered during the week ending Aug. 23.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2189	1546	74·7	49·1	60·0	15·56	0·65	1·65
Portsmouth ...	118280	12·4	63	48	78·2	49·4	60·9	16·06	0·39	0·99
Norwich	81677	10·9	43	31	76·0	46·5	57·6	14·22	0·52	1·32
Bristol	189648	40·4	128	68	70·1	52·1	58·7	14·83	0·79	2·01
Wolverhampton ...	70084	20·7	44	47	72·7	47·2	57·4	14·11	0·71	1·80
Birmingham ...	355540	45·4	261	189	71·0	49·4	57·1	13·94	0·85	2·16
Leicester	102694	32·0	111	67	...	...	...	...	...	...
Nottingham ...	89557	44·9	59	49	74·6	46·1	57·2	14·00	1·17	2·97
Liverpool	505274	98·9	357	329	68·1	51·1	56·6	13·66	0·78	1·98
Manchester ...	354057	78·9	261	215	72·5	48·2	57·4	14·11	1·00	2·54
Salford	130463	25·2	97	93	72·5	46·4	56·2	13·44	1·15	2·92
Oldham	85141	20·4	74	28	66·0	...	...	...	0·72	1·83
Bradford	156609	23·8	120	75	73·2	50·6	57·1	13·94	0·75	1·90
Leeds	272619	12·6	201	157	71·0	50·0	56·8	13·78	0·69	1·75
Sheffield	254352	11·1	214	131	73·0	48·5	57·2	14·00	0·88	2·24
Hull	128125	35·9	100	72	70·0	49·0	56·7	13·72	0·95	2·41
Sunderland ...	102450	31·0	89	51	...	...	....	...	...	...
Newcastle-on-Tyne	133246	24·9	109	97	...	...	..	...	...	...
Edinburgh	208553	47·1	125	90	68·9	43·8	56·3	13·50	...	...
Glasgow	498462	98·5	346	240	65·7	41·2	54·6	12·55	0·29	0·74
Dublin	314666	31·3	161	128	71·9	46·3	58·6	14·78	0·59	1·50
Total of 21 Towns in United Kingd'm	7507575	34·5	5152	3751	78·2	41·2	57·4	14·11	0·76	1·93

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·68 in. The highest was 30·04 in. on Sunday morning, and the lowest 29·45 in. on Tuesday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURES

DELIVERED IN THE ROYAL INFIRMARY, EDINBURGH,

By T. GRAINGER STEWART, M.D., F.R.C.P., F.R.S.E.,
Physician to the Royal Infirmary.

III.—ON A CASE OF CIRRHOSIS OF THE KIDNEY.

Gentlemen,—The case to which I propose to direct your attention to-day is one with which those of you who have attended in my wards during the past eight months are well acquainted.

Samuel A., aged 50, a shoemaker, married, resident in Edinburgh, was first admitted to Ward VII., November 25, 1872, and examined the following day. He complained of general debility, from which he had suffered for four weeks. The only illness which he remembered having was subacute rheumatism, which lasted only a short time and did not recur. In the beginning of November he had severe epistaxis, and from that time was anæmic and feeble. Habits as to food stated to be favourable, but it was ascertained that he had been so intemperate that neither his wife nor children could live with him.

On admission he was pale, pasty-looking; his temperature was normal; the alimentary system was normal. The patient was obliged to get up three or four times in the night to make water. His urine was of normal quantity, pale straw colour, specific gravity 1017, reaction acid; it contained no albumen, sugar, nor bile.

On February 15 of the present year he was readmitted, complaining of dyspnœa, dropsy, and general weakness. After leaving the hospital he returned to work, but on account of increasing debility had to give it up. He was obliged to rise five or six times every night to make water. On February 8 he had noticed that his legs and feet were beginning to swell.

On admission, his face was somewhat swollen, his alimentary system was natural, there was no pain nor uneasiness in the heart or great vessels, form and appearance of præcordia were natural. The cardiac impulse was feeble; the superficial dulness was extended to the left side, and measured two inches and three-quarters, deep dulness seven inches; auscultation, first sound sharper than natural, second sound accentuated at the base; pulse 96, regular, but feeble. There was some dulness towards the bases posteriorly, and in the dull parts the expiration was prolonged, character vesicular but faint, the accompaniments crepitation, vocal resonance not increased; breathing 30 per minute, cough frequent, attended by copious glairy mucous sputum. There was some œdema, specially of the legs. Urine about forty ounces daily, of pale straw colour, acid reaction, specific gravity 1015; contained a considerable amount of albumen, and a few hyaline and finely granular tube-casts. The diagnosis established was cirrhosis of the kidney with an intercurrent inflammatory attack, and œdema of the lungs. Under treatment, by means of chloric ether, carbonate of ammonia, and digitalis, with poultices to the chest, the patient gradually improved, the dropsy disappeared, the albumen diminished, and the quantity of urine rose on some occasions to seventy ounces, the specific gravity being about 1013.

On March 14 the patient had so far recovered that he was able to leave the house.

On May 3 he was again admitted, complaining of dyspnœa, dropsy, and general weakness. Since leaving the Infirmary he had not been able to work. The cardiac impulse was faintly felt in the mamillary line between the sixth and seventh ribs; the superficial dulness was three inches, the deep eight. There was no cardiac murmur; the pulse 108, regular and full; the arteries tortuous. There was a relative increase of the white corpuscles of the blood, thirty to forty being seen in the field at once. There was no enlargement of spleen or lymphatic glands. Towards the bases of both lungs posteriorly there was some dulness on percussion, and crepitation with inspiration. The respirations thirty-two per minute; cough troublesome, sputum mummulated, frothy, muco-purulent. There was slight œdema of the feet. He had to rise four or five times during the night to micturate; the daily quantity was about fifteen ounces, sp. gr. 1015, colour pale amber, reaction acid, deposit hyaline and finely granular tube-casts; it contained distinct trace of albumen.

The diagnosis of cirrhosis of the kidney established during his previous illness was now confirmed, but it was evident there was less of the inflammatory affection and of the pulmonary œdema than previously, while the heart had become decidedly more hypertrophied. He was ordered iron with digitalis, and a cough mixture containing chloric ether, tincture of henbane, syrup of squills, and infusion of senega. On May 11, the symptoms continuing the same as on admission, the urine was 20 ozs., and contained 139 grs. of urea. On the 12th the urine was 18 ozs., the urea 129·6 grs. On the 14th the urine was 20 ozs., the urea 124·8 grs. On the 15th, 30 ozs., the urea 207·8 grs. On the 16th, 30 ozs., the urea 245·76 grs. On the 17th the urine was 30 ozs., the urea 273·6 grs. Up to the 14th the bowels were loose; but afterwards, when this symptom had improved, the urea was more abundant.

On the 24th the patient appeared seriously worse; his face was flushed, particularly in the middle of each cheek; there was an irregularity and feebleness of pulse, and the superficial dulness of heart had increased to four inches, while the patient had ceased to be anxious about his condition, and declared himself considerably better. I remarked at the time how grave I considered these symptoms, and suggested as an explanation of the rapid increase of cardiac dulness that effusion might be taking place into the pericardium.

On the 26th it seemed as if a fatal result were impending; but in this we were agreeably disappointed, for a distinct rally took place, the breathing became easier, and the superficial dulness of heart diminished; but dropsy soon recurred both in the subcutaneous tissues and the lungs, the superficial cardiac dulness increased to five inches, the pulmonary symptoms became more severe, and the patient died on June 9.

Autopsy.—The body was slightly œdematous; the pericardium contained about an ounce of fluid; the heart was enlarged, particularly the left ventricle (it weighed 1 lb. 7 oz.), the valves were competent, there were small patches of atheroma on different parts of the endocardium, the musculi papillares, and still more the columnæ carneæ, were somewhat atrophied, but the walls, as a whole, were greatly thickened. The aorta was atheromatous, as were also many of the smaller arteries. The left lung was very œdematous; the right was in a state of solid œdema, and throughout its substance there were limited pneumonic patches. The liver was of natural size, its connective tissue slightly increased. The stroma of the spleen was firmer than natural, and its capsule thickened and adherent to neighbouring viscera. The kidneys were somewhat below the natural size; their capsules did not strip off easily, their surface was slightly granular, the cortical was relatively diminished and dense in structure, the cones were natural, the pelves and ureters somewhat dilated, and the bladder hypertrophied (in connexion with old stricture). On microscopic examination many of the small arteries were found hypertrophied and their walls considerably thickened—the thickening being almost entirely due to increase of the middle coat; the Malpighian bodies presented no waxy reaction, and the capsules of some were thickened. The tubules of the cones were for the most part natural—some of those in the cortical substance contained traces of inflammatory exudation, but many were healthy; towards the surface, however, they were more scanty, and in some parts quite obliterated; but there was nowhere to any extent the appearance with which you are familiar—of tubules blocked up with exudation and in process of atrophy. The stroma was very much increased towards the surface, and to a less extent in more internal parts. The brain was natural; there was some atheroma of the branches of the middle cerebral artery. On microscopic examination of the small vessels and capillaries it was found that the internal coat appeared natural, while the middle was greatly thickened with undoubted increase of the muscular elements. The external coat was in many of the vessels more distinct than natural; in some it presented a fine fibrillary wavy appearance, but there was no evidence of any material having been effused around the vessels. There were in connexion with the vessels numerous minute aneurisms.

The diagnosis which we established in this case was cirrhosis of the kidney, with hypertrophy of heart, degeneration of vessels, and œdema of lungs. It was confirmed at the post-mortem in every particular. Let me now explain the grounds for the diagnosis.

The presence of albumen and tube-casts in the urine showed that Bright's disease existed. The degree of dropsy during

his second and third periods of residence in the Infirmary showed that some degree of inflammation of the tubules was present. But it was evident throughout that this was not all, but that behind this trivial affection there was important chronic disease. The circumstances which proved this were—1st. The obvious chronic ill-health of the patient. 2nd. The anæmia of a kind frequently seen in Bright's disease. Doubtless it was in part due to the severe epistaxis; but, apart from this, it was obvious that there was some cause of a more chronic kind in operation. Be sure in practice to test the urine of every patient who presents the peculiar anæmic appearance which you saw in this case. 3rd. The epistaxis itself was a symptom often attending upon cirrhosis. It was, prior to the first admission, very severe in this case, but it and other hæmorrhages are not uncommon in the more advanced stages of cirrhosis. The hæmorrhage may be from the uterus, the kidneys, or the mouth, but is most frequently from the nose, and it also should lead to examination of the urine. 4th. The condition of the conjunctiva, the brightness due to œdema, was well marked, and constitutes in many cases a very suggestive symptom. 5th. The state of the heart, the distinct hypertrophy of the left ventricle, without apparent cause either in orifices, in valves, or in vessels, is in itself an important symptom. 6th. The œdema of the lungs on two occasions nearly proving fatal, and ultimately killing the patient. 7th. The most conclusive proof of all was the diminution of urea.

Now, it must be remembered that this group of symptoms may be associated with other forms of renal disease, or rather with one other form—viz., the very chronic inflammatory,—for in this too there are chronic ill-health, anæmia, sometimes hæmorrhages, the bright eye, the hypertrophied heart, the œdema of the lungs, and the diminution of the urea. But the history suffices to distinguish such cases. If the disease be inflammatory and originate in the tubules it is always attended by marked dropsy, at least in every case which is severe enough to become chronic, and it never has that singularly insidious commencement which we observe in cirrhosis. Those of you who were attending in my wards during the past winter session may remember that during the first residence of this patient in the Infirmary I expressed the opinion that he was probably suffering from cirrhosis, even when no albumen was present. I did so on account of his general condition, the urinary trouble, and in particular of the state of his heart.

Had the case been inflammatory there could have been no doubt about the matter, for the albumen would have been distinct and constantly present; besides, there would have been either dropsy present or a history of it.

If anyone were inclined to inquire why, on the other hand, we excluded a diagnosis of waxy degeneration, I would reply that there never was here the early polyuria so characteristic of waxy, and that the peculiar group of symptoms just described rarely, or I may say never, occurs in that disease.

I wish you to notice also certain other features of our patient's case. He suffered from dyspepsia, frequently was sick after eating, and had alternately attacks of constipation and diarrhœa. These symptoms complicate all the forms of Bright's disease in the more advanced stages, and their management is of great importance to the patient. It must therefore be your care by regulation of diet and attention to the state of the alimentary tract to ward off attacks of the kind. You will often find the condition when once established very difficult of cure. There seems good ground to believe that, as in our patient the amount of urea passed by the kidneys waxed and waned according to the severity of the diarrhœa, the intestine afforded a channel for its removal. I mention this to impress upon you the advantage which must accrue if free purgation be established in cases in which the kidneys cannot be roused to action. Notice, again, the condition of the eyes. In many cases there is well-marked albuminuric retinitis; in our patient there was no such change. Had it existed it would have constituted an important evidence; but I think you will find that when it attends upon cirrhosis the renal disease is usually in an advanced stage. It is no uncommon thing for patients to have kidney disease diagnosed by the oculist when no prominent symptom of Bright's disease had existed. It does not follow, however, that the disease is not far advanced, for the advance of the disease is often very insidious. With regard to nervous symptoms, you will observe that there was nothing characteristic in this case; there was neither the acute uræmia nor the chronic uræmia terminating fatally, nor the suddenly occurring and again disappearing convulsions which we occasionally meet with in this form; neither was there the headache so often complained of, nor the mania, nor the acute delirium from which some patients suffer, but there was on one or two occasions during the night some delirium. You remember the case of a cabman who has this disease, and who has latterly gone to his home in the Highlands, and you have not forgotten how often I directed your attention to the peculiar delirium from which he suffered during the night, and which appeared to depend simply on Bright's disease.

What was the sequence of events in this case? The death was undoubtedly due to the affection of the lungs; what was its cause? The impurity of the blood increases the tendency to stasis and dropsy, so that very slight causes, such as exposure to cold, may suffice to induce congestive or even inflammatory changes. In our patient there were some patches of the lungs actually pneumonic, although these were too deeply seated to be diagnosed during life. Why was the heart hypertrophied? There was no disease of orifices, or of valves, or of larger vessels which could account for it; we very carefully examined the minute arteries: the internal coat was natural, the middle was thickened with well-marked increase of the muscular elements, while the external was certainly more distinct than natural, although there was nowhere evidence of a distinct hyaline fibroid material such as Sir William Gull and Dr. Sutton have described. In the absence of such a change no one would, I think, maintain that the state of the small vessels accounted for the hypertrophy, unless one who held Dr. Johnson's theory—that the heart grows in order to overcome the stopcock action of the small arteries. We are profoundly indebted to Dr. Johnson for the observation that the middle coats of the arteries do become hypertrophied, whether the theory he has advanced be correct or not. But while I ascribe these changes to the renal lesion, I beg you to notice that I do not consider that simply a local disease. It is a special local manifestation of that tendency to increased growth of connective tissue with atrophy of essential elements of parts which constitutes one of the most important morbid processes occurring in the body.

The treatment in this case was directed mainly to the relief of symptoms, and on the first two periods of his residence in the Infirmary was very successful; but against the combination which was present at the end we could accomplish nothing.

ORIGINAL COMMUNICATIONS.

CASE OF HYDROA.

VOMITING AFTER FOOD—VOMITING OF BLOOD—LEFT-SIDE PAIN—ERUPTION ON LEFT SIDE OF CHEST PRESENTING THE CHARACTERS OF HYDROA—SAME IN LEFT AXILLA—ADMINISTRATION OF ARSENIC—CESSATION OF ERUPTION—IMPROVEMENT IN GENERAL CONDITION.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

T. G., FEMALE, aged 22, admitted November 11, 1872. Has been ailing two years. Frequently has vomited blood, sometimes two or three times a week. Once there was an interval of two months. Thinks she may have brought up a teacupfull at once; the blood was sometimes clotted. If she eats the least bit of meat she is sick directly; if she takes anything but fluid she feels pain in the epigastrium. Had jaundice twice four or five years ago. Bowels regular. Tongue moist. No catamenia last two months; the flow was scanty previously. Has pain in left side, not worse after food. On left side of chest there is a pretty copious eruption of scattered red papules; a few have become scabbed and quasi-pustular. This eruption has come and gone, off and on, for last two years. Lower dorsal spines are tender. She is able to walk now, but has been unable after a long confinement to bed. Spoon diet, milk; extract. cannibis indica, gr. ss., tannini gr. ij. in pil. ter die.

November 13.—No sickness at all since admission. Pulse 87; temperature 96·8°. Ung. hydr. ammon. chlor. dil. ad eruptionem.

28th.—Has tried fish, but it caused sickness, and she has had to return to pudding and liquids. Has had much left-side pain, but is pretty cheerful; gets about. The eruption on left

side has increased; there are many red papules tending to become pustular, and the dark-red quasi-pustules before present have become larger. They show a blackish scabbed central depression, a considerable thickening of the cutis, and a margin which seems to be formed by a ring of small vesicles.

Ordered on 30th—Hyd. cum cretâ, pulv. Doveri, āā gr. ijss. in pil. ter die.

December 5.—Eruption attended with much burning. There are four large patches from size of a threepenny to size of a sixpenny-piece, circular, with considerably indurated bases, and marginal rings of whitish vesicles on a red area more or less marked and extensive. The other spots are much smaller, but show a like tendency to spread and become depressed and scabbed in centre.

7th.—In left axilla there are six or eight papular elevations looking much as if they would form vesicles; the rest of the eruption is in much the same state. Much pain in the eruption at night. Liq. potassæ arsenitis ℥iij., aq. ʒij., ter die. Poultice.

9th.—The eruption in the axilla has increased; several of the vesicles have become confluent, and the skin in the patch they form is notably thickened.

11th.—Eruption increasing in axilla; one elevation has now got a central dark scab, and a complete white ring around, formed by epidermis raised by effusion of sero-purulent fluid. Another spot has also a similar whity spreading raised margin with a central depression. Other spots are commencing as red dots or papules. Several of the old spots are drying up, and the scab can be detached, leaving a pretty healthy surface below covered with a very thin epidermis. Eyelids are rather sore (? from arsenic). Poultice is comfortable.

16th.—Eruption is very much better; on the side most of the spots have lost their scabs, and present a depressed whity centre, and a slightly raised red margin; those in the axilla also are drying up. Pt. cum mist. ʒj. ter die.

23rd.—Doing well; no sickness; the eruption has ceased, and almost all the scabs have come off. She remained in the hospital until January 15, having no recurrence of the eruption, and no sickness as long as she kept to pudding, eggs, and the like. She was very active and helpful in the wards.

Remarks.—The stomach disorder in this case is suggestive of ulcer, yet I hardly think that one of the ordinary lesions of this kind existed. The hæmorrhage was unlike that of ulcer, in occurring too frequently and in too small quantities, and in being, as I suspect, rather blood-stained mucous fluid than true blood. Probably there occurred on the gastric mucous surface some process analogous to that which we witnessed on the cutaneous surface; and this may have given rise to the occasional hæmorrhage, of which, however, there was very little while she was in the hospital. The stomach symptoms appeared to be rather referable to neurotic disorder than to ordinary inflammation. Some inflammation no doubt there was, but determined by nerve disorder. The eruption was very peculiar. I had never seen the like before, and had no name to give it till Dr. Cheadle pronounced it hydroa. It passed through the following phases:—(1) Red papular spots; (2) the same, with vesiculo-pustules developed at their apices; (3) the elevation and induration of the spot increasing, the central part became depressed and covered with a more or less dark scab, while the vesicle-forming process spread excentrically, producing a distinct whitish ring, enclosing the scabbed area, and itself surrounded by a zone of redness; (4) the vesicle-forming process ceased, the scab became detached, and the affected spot was left with only a whitish centre and a slightly raised red margin. These characters of the eruption closely correspond with those given in M. Bazin's case, quoted in the excellent report given in the *British Medical Journal*, 1870, vol. i., p. 491. The reporter remarks that hydroa is a vesicating form of erythema papulatum *seu* multiforme, the latter term including a variety of appearances which have moved dermatologists to bestow on them the names of E. circinnatum, E. iris, E. tuberculatum, E. gyratum, E. annulose, E. papulatum. In one particular my case conforms not to the rule laid down by Hebra with regard to specific erythema—viz., that it shall occur symmetrically, and shall never exempt the dorsal surface of the hands or feet. It was one-sided, and did not affect the hands or feet. Nevertheless, being guided by Bazin, I must reckon it a genuine instance of hydroa, which it resembles further in its recurring tendency and in its spontaneous disappearance. Certainly it was not eczema, or pemphigus, or lichen, or psoriasis. Ecthyma it somewhat resembled in the inflammatory tumefaction of the spots, but differed from it in the scantiness and superficiality of the exudation and in its peculiar annular arrangement. Herpes seems to me the form of skin eruption to which it has most affinity, and I should propose to apply to it the term herpes centrifugus, which is much more descriptive of the phenomena than hydroa, as the latter leads one necessarily to think of a profuse watery discharge. But whatever name we apply to it, the main point for us to try to seize is its true pathological significance. What was its cause—of what kind of disorder in the system was it the result and evidence? Not, I believe, of syphilis, though I inclined to regard it so at one time. It was not in the least benefited by mercurial treatment, and it was not associated with any other syphilitic symptom. In two of the cases given in the report above quoted there was some question of the syphilitic character of the eruption. Neither can I look upon it as having any connexion with scrofula, such as lupus is usually thought to hold. I should ascribe it to the existence of what our French *confrères* call a "*diathèse herpétique*," by which I understand a tendency to various skin disorders and to various neuroses, the former having their *raison d'être* in vaso-motor nerve paralysis. Asthma and bronchial irritation are sometimes associated with eczema, as in a case I saw recently. In the one we have been discussing the internal disorder had its seat in the gastric mucous membrane, and not in the bronchial.

SNAKE-POISONING IN INDIA.

Communicated by J. FAYRER, C.S.I., M.D., F.R.C.P.

The following experiments with snake poison were recently performed in India by Mr. Richards,(a) and by the Committee (appointed by Government), of which Dr. Ewart is president and Mr. Richards and Dr. Mackenzie are members, in compliance with suggestions made by Dr. Brunton and myself.

The result is so far encouraging, for life was prolonged for many hours; and with improved apparatus for carrying on artificial respiration it is possible that even more satisfactory results may be anticipated. But it is still to be feared that in severe cases of cobra poisoning, when the quantity of virus inoculated has been large, the injury done to the nerve apparatus may prove so severe that resumption of its functions, even after elimination of the poison has taken place, is improbable. Meanwhile, to have prolonged life for many hours is of the utmost importance; for if there be a hope of recovery by elimination of the virus, life being thus supported, time is given for that process to go on. That it does so appears to be shown by the experiments.

In less severe cases, artificial respiration may, when aided by therapeutic agents, administered on general principles, be able to save life in bites that otherwise would have proved fatal. It is satisfactory to know that the subject will receive full and careful consideration from the present Committee, and that the real value of some of the various modes of treatment that have been proposed will be again tested.

Mr. Richards, who is a most indefatigable labourer, and to whom I am indebted for valuable aid as well as original observations, records some interesting facts in reference to the action of the virus in certain quantities, and also his own experience of artificial respiration, the use of strychnine, and the intravenous injection of liquor ammoniæ. One of his experiments shows that not only may life be supported for many hours—more than twenty-four in that case—but that the poison is eliminated by the kidneys.

The investigation of the subject in all its aspects is now being carefully continued in India by the Committee appointed by Government at my suggestion, whilst in London the nature of the physiological action of the virus is under investigation by Dr. Brunton and myself; and there is reason to hope that at all events some facts of importance will be noted and added to those already recorded.

The experiments recorded by Mr. Richards confirm what has been often observed, that very severe symptoms caused by snake-poison may be recovered from without any aid at all, and afford additional proof of the necessity for caution in accepting recoveries generally as the result of the action of

(a) The date of Mr. Richards' experiments is not noted, but they were performed during the first half of 1873, and previous to those by the Committee of which he is a member.

remedies. Such recoveries, which are frequent, account for the reputed success of the new antidotes that are continually being advocated, no doubt with as good faith as with little reason.

Though animals to all appearance dead from intense cobra poisoning, whose respiration had ceased, after passing into a state of complete unconsciousness, have been kept alive for many hours by artificial respiration, the result of the investigations on the physiological action of the virus do not perhaps so far offer very hopeful prospect of complete recovery in such cases. But, as in the case of other active poisons, however deadly, there must be a quantity which, though dangerous in the extreme, is not of necessity absolutely fatal, so it is in snake-poison; and in such cases, which must be numerous, and in which without aid death would most probably occur, we may hope that rational measures may be the means of saving life that would otherwise be lost.

Meanwhile, let the search for antidotes be prosecuted by those who see reason for hoping that such exist—agents that may have the power not only of neutralising the virus when in the blood, but of restoring the normal condition of the nerve apparatus which there is too much reason to fear has been seriously injured.

The result of artificial respiration has been so far satisfactory that it has kept up organic life for many hours and thus given time for elimination of the poison. It remains to be seen yet whether, if such elimination occur, the nerve apparatus is still capable of resuming its functions. If it be so, we may expect the best results from artificial respiration; if not, at least we may anticipate useful aid (when combined with other remedies) in the treatment of those who have not received the poison in its most intense form.

Artificial respiration is a remedy so easily practised that it has at all events the advantage of simplicity and general applicability, for there could be no difficulty, if it really prove efficacious, in teaching even the Indian peasant to practise the Sylvester mode.

With reference to the physiological action of the cobra virus it would be premature to say more at present, while the subject is under investigation, than that it apparently produces its lethal effects by acting on the cerebro-spinal system generally. The nerve-centres and nerve distribution both are liable to suffer, and arrest of the respiration by paralysis of its muscular apparatus is the most frequent mode in which death is caused. The cerebral ganglia are also sooner or later affected, and in some cases the virus appears to act directly on the heart, arresting its action tetanically in systole. This it would appear is most likely to occur when the poison is carried directly to the heart by injection into a vein. The muscular fibre is also, beyond doubt, in some instances affected.

The first part of a paper on this subject by Dr. Lauder Brunton and myself, published in the *Proceedings of the Royal Society*, discusses this subject in detail; it is therefore unnecessary to repeat it here.

First Instalment of a Report of the Committee appointed by the Government of India to investigate the Treatment of Snake-poisoning by Artificial Respiration or other measures, suggested by Drs. Fayrer and Dr. Lauder Brunton. President: Dr. J. Ewart, Professor of Physiology at, and Surgeon to, the General Hospital, Calcutta. Members: Dr. Mackenzie, B.M.S.; Vincent Richards, Esq., Civil Surgeon, Balasore.

Experiment No. 1.—A middling-sized dog was bitten on the abdomen by a cobra at 7.30 a.m. (July 1, 1873); as the bite was considered a doubtful one, the dog was again bitten by another cobra. 7.59 a.m.: Extremely restless, and passed urine. 8.10 a.m.: The breathing is hurried, and there are twitchings at the corners of the mouth. 8.12 a.m.: Universal convulsions. 8.15 a.m.: Commenced artificial respiration. The dog to all appearance was dead; the heart was beating irregularly, but soon began to beat regularly. 9.15 a.m.: The heart is beating rapidly, but without force; lachrymation. No response to the galvanic current. 9.40 a.m.: Heart beating well; temperature 101·2°. 11.15 a.m.: Ditto. The bellows slipped out of the trachea through the carelessness of the man blowing it. 1 p.m.: Heart beating well. Passed fæces after giving two enemas of hot water. Pupils dilate on the application of the galvanic current. 2.30 p.m.: Heart beating well. Pupils dilate, and the animal passes urine on the application of the galvanic current. 6.30 p.m.: Heart beating well. 8.10 p.m.: Ditto. 10 p.m.: Heart at first beating feebly, but afterwards more vigorously. The lungs were not being properly inflated, and the nozzle of the bellows was found to be partially closed by mucus. 11.30 p.m.: Heart beating vigorously. Midnight: Heart beating feebly; lungs imperfectly inflated; cleared the nozzle of the bellows. July 2nd, 12.30 a.m.: Heart beating feebly. Body cold. 1.5 a.m.: Heart ceased to beat; sixteen hours and fifty minutes since artificial respiration was commenced. The blood was found coagulated.

Remarks.—This experiment is by no means a fair test, as not only was the dog bitten twice by two fresh cobras (though there was some doubt about the bite of the first one) but the appliances, at once commenced, at present are of the roughest kind. We had also little assistance. Dr. O'Brien very kindly rendered us considerable assistance in making observations. Mr. Assistant Apothecary Wilson also assisted. The trachea was opened very late in the above case, there being at first no intention on our part of performing artificial respiration.

Experiment No. 2.—July 9th.—A large dog was bitten in the abdomen by a cobra at 8.55 a.m. 9.20 a.m.: Staggering about. 9.25 a.m.: Convulsions. 9.27 a.m.: Commenced artificial respiration. There was some difficulty at first, the apparatus being new and imperfect. 9.35 a.m.: Heart beating slowly; animal is apparently sensible. 9.40 a.m.: The artificial respiration is 44 to a minute; pulse also 44. 10.3 a.m.: There had been considerable contractility of the muscles, but there is now little response to the galvanic current, except of the iris, which alternately expands and contracts. 10.30 a.m.: The same. Irides scarcely so active. Temperature 101·3°; heart beating 112, forcibly but irregularly; respirations 40. Lachrymation has gone on continuously. 11.10 a.m.: The femoral pulse is going on very steadily and well. 11.15 a.m.: Temperature 100·8°; respirations 36; heart beating 100, strong but very irregular. It was beating much more regularly when I first felt it. Irides still act by galvanism. 11.40 a.m.: Changed the bellows, as the air escapes from the one we were using. 12 noon: Irides still act. Respirations 44; heart 160, strong; temperature 100·6°. Applied heat under the dog. 12.30 p.m.: Heart beating very strongly and regularly, 140; temperature 100·7°; respirations 44; irides still act. 1.15 p.m.: Respirations 32; heart 184, pretty strongly; temperature 102·3°. Only one iris (the right one) acts on the application of galvanism. 1.40 p.m.: Both irides act. 2.30 p.m.: Transfused about three ounces of blood, with warm water, ammonia, and chlorate of potash, into the left femoral vein. There was a marked improvement in the action of the heart, which had been beating feebly and irregularly. We now opened the thorax, and observed the beating of the heart and inflation of the lungs. The arteries bled freely when cut, the blood spurting out in regular jets. 3.30 p.m.: The heart began to fail considerably. Injected about three ounces of warm water and fifteen grains of chlorate of potash into the right femoral vein. The animal passed fæces and urine, and the heart almost immediately ceased to beat.

Remarks.—Artificial respiration was faulty; death occurred six hours and three minutes after artificial respiration was commenced. The blood coagulated, but there was also a good deal of fluid blood. This would be expected after the injection of the ammonia and chlorate of potash. We were kindly assisted in the above experiment by Dr. Laurie.

Experiment No. 3.—July 10.—A large dog was bitten on the abdomen by a cobra at 8 a.m. 8.14 a.m.: Restless. 8.20 a.m.: Is whining, and is greatly distressed. 8.40 a.m.: Convulsed. 8.45 a.m.: Commenced artificial respiration. The pupils, which were fully dilated, contracted, and convulsions ceased. The animal appears sensible. 9 a.m.: Heart beating sixty-eight per minute. Occasional slight convulsions; there has been universal convulsion; lachrymation and blinking of the lids. 9.30 a.m.: Heart beating forcibly, 136; respirations 40; temperature 101·1°. Universal convulsion; irides contract; lachrymation; applied heat. 10.15 a.m.: Respirations 40; heart beating so rapidly as to render it impossible to count the beats; tremor of the hind quarters; irides act on the application of the galvanic current; temperature 101·8°. Salivation has been going on since the commencement of artificial respiration. 11.5 a.m.: Respirations 44; heart 180, not very strongly; temperature 102°. No response whatever to the galvanic current. 12.5 p.m.: Respirations 40; heart 160, not very strongly; temperature 103·1°. The only response to the galvanic current is the passage of urine. This occurred again at 12.30 p.m. The pupils have been dilated since the irides ceased to act. 12.50 p.m.: Respirations 46. Pupils are

now contracted, and the irides respond to galvanism. Heart beating regularly and pretty strongly, 168; temperature 103·1°. The mucous membrane of the mouth and the tongue have both recovered their natural colour to a great extent. 1.30 p.m.: Irides act by galvanism. Passed water in a pretty good stream. Respirations 44; heart beating extremely rapidly; temperature 140·5°. 2.15 p.m.: Respirations 44; temperature 105·15°; heart beating very rapidly. The only response to the galvanic current was micturition. 3.15 p.m.: Respirations 44; heart acting too rapidly to count the beats. Pupils contracted, but they dilated on the application of galvanism. Temperature 106·4°. The tube had become twisted, and so interfered with the inflation of the lungs. Changed the bellows at 4 p.m., as the air was escaping, but the air escapes from the one we are now using. 4.15 p.m.: Heart beating feebly and rapidly; irides act, but very slightly; respirations 36; temperature 106·3°. 5.12 p.m.: Heart ceased to beat, seven hours and twenty-seven minutes after the artificial respiration was commenced. Temperature when the heart ceased to beat 107·8°.

Experiment No. 4.—July 12: A large dog was bitten on the left hind leg by a cobra at 7.15 a.m. 7.30: Respiration much hurried—100, and sometimes more; pulse slow, 80; temperature normal, 103°. 7.45 a.m.: Respiration not so hurried, 180; pulse slower, 60; temperature falling, 102·3°. 7.50 a.m.: Appears much distressed, and is salivated. 7.58 a.m.: Convulsed. 7.59 a.m.: Commenced artificial respiration. Convulsions at once ceased, but returned on the interruption of the respiration. The pupils, from being widely dilated, became contracted. The animal appears sensible. 8.7 a.m.: Pulse 160, respirations 40, pupils natural, temperature 102°; blinking of the lids; applied heat. 8.24 a.m.: Convulsive movements of the hind quarters. 8.47 a.m.: The same. 8.50 a.m.: Ditto. 9 a.m: Pulse beating rapidly, 176; respirations 32; pupils natural; temperature 101·4° (has been gradually falling from the commencement); dilatation of the pupils only in response to the galvanic current. 10 a.m.: Heart beating 140, respirations 40; temperature now rising 102·6°. The pupils dilated, and urine was passed on the application of the galvanic current. Lachrymation and salivation going on continually. 10.30 a.m.: Respirations 32, pulse (femoral) 176, temperature normal, 103°. Passed urine, and the pupils dilated on the application of galvanism. 11 a.m.: Respirations 32, temperature 103·2°, pulse very rapid, about 200. Pupils dilate on applying the galvanic current. 12 noon: Pulse 160, respirations 32. Passed urine, and the pupils dilate on the application of galvanism. Temperature 103·4°. 1 p.m.: Pulse 160, good; respirations 44; temperature 103·2°. The same effect on the application of galvanism. 2 p.m.: Pulse 176, pretty strong and regular; respirations 40; temperature the same, 103·2°. The same effects on the application of galvanism. 4 p.m.: Pulse 160, regular, but weaker; very slight action of the iris on the application of galvanism; urine is passed; temperature 105°. 5 p.m.: Pulse 176, very weak; respirations 36; temperature 104·2°. 6 p.m.: Pulse 166, very weak; respirations 42; temperature 104°. 7 p.m.: Pulse 160, stronger; respirations 42; temperature, 103·5°. 8 p.m.: Pulse 176, pretty strong; respirations 42; temperature 103·7°. 9 p.m.: Respirations 32, temperature 103·7°, pulse too quick to count; irides dilate by galvanism. 10.10 p.m.: Pulse good, 128; respirations 32; temperature 104·5°. Micturition and dilatation of the pupils on the application of galvanism. 11 p.m.: Pulse pretty good, 160; respirations 36; temperature 104°. Pupils dilate on the application of galvanism. Midnight: Pulse 160, pretty good; respirations 36; temperature 105°. Micturition only on the application of galvanism. July 13th, 1.5 a.m.: Heart ceased to beat; temperature 105·2°. The heart had gradually become weaker, and suddenly ceased to beat seventeen hours and six minutes after the commencement of artificial respiration. Inflation of the lungs was not complete, as we found them much congested. The blood was fluid, but very soon coagulated. We are indebted to Dr. O'Brien for assistance in this case.

Experiment No. 5.—A large dog was bitten on the thigh by a cobra at 6.50 a.m. Temperature was then 103°. 7 a.m.: Passed a stool. Temperature now 103·8°. 7.10 a.m.: Temperature 103·6°. 7.55 a.m.: Convulsed. Temperature 105°. 8 a.m.: Commenced artificial respiration. 8.3 a.m.: Temperature 100·1° (!). 8.5 a.m.: Slight convulsive movements. 8.12 a.m.: Respirations 36; pulse over 200, pretty regular; temperature 103°. 8.42 a.m.: Universal convulsions in response to the galvanic current. 9.12 a.m.: Temperature 103·8°; respirations 36. Heart beating very quickly but not very strongly. 10 a.m.: Temperature 101·8°; respirations 40; pulse 160, not very strong. Action of the iris and micturition in response to the galvanic current. 11 a.m.: Temperature 102·8°; respirations 36; pulse 176, pretty strong. Slight action of the iris and micturition in response to the galvanic current. Noon: temperature 104·4°; respirations 40; pulse 180, weak. The irides do not act, but there is micturition on applying galvanism. 1 p.m.: Temperature 103·6°; respirations 36; pulse 140, weak. Pupils dilate, and water is passed on the application of galvanism. 2 p.m.: Had passed fæces. Temperature 105·2°; respirations 36; heart beating too rapidly to count—no reflex action whatever. 3 p.m.: Had passed a stool. Temperature 105·4°. The femoral could not be felt, and the heart was scarcely beating. 3.20 p.m.: Heart ceased to beat seven hours and twenty minutes after the commencement of artificial respiration.

Remarks.—The lungs were found congested, showing that artificial respiration was not complete. This is the fault of the men blowing the bellows. The blood coagulated after death.

(*To be continued.*)

GLEANINGS IN WAR SANITATION

FROM N. PIROGOFF'S "BESICHTIGUNG DER MILITAIR-SANITÄTS-ANSTALTEN IN DEUTSCHLAND, LOTHRINGEN, UND ELSASS."

By NATHANIEL ALCOCK, L.K.Q.C.P., A.M.D.

(*Continued from page* 174.)

THE fourth and most practical question proposed by Dr. Pirogoff to himself is, "What success attended during the past war the so-called conservative and expectant treatment in general, and especially of those wounds which according to former belief demanded an immediate removal of the injured limb?"

Taking the parts of the body *seriatim*, Dr. Pirogoff considers the results of wounds of each compared with those of the same wounds when treated according to former notions.

Antiphlogistic treatment, as understood heretofore—bloodletting, leeching, etc.—has been by common consent abandoned, and is not employed even in those penetrating head wounds with injury of the skull, which seem most to demand it; trepanning, too, is but seldom resorted to—nevertheless, the fate of the head wounded cannot be said to be much improved. In penetrating chest wounds, however, when treated on the expectant plan, a remarkable proportion of recoveries ensued, and the successful result was noticeably affected by the escape or implication of the ribs. In the majority of instances the bullet, probably by reason of its form, its rapid revolution, and its narrow circumference, passed through an intercostal space, leaving the bones uninjured, and the healing of the lung fistula which subsequently formed was doubtless much facilitated by the comparatively pure air of the German hospitals; on the other hand, when the wound was accompanied by a broken rib the result was mostly fatal.

In penetrating wounds of the abdomen no improvement has been attained; therefore, while in chest wounds only has any advance been made, penetration of the chest or abdomen continues to be as hopeless as before.

In a wound from a mitrailleuse projectile the sole peculiarity seemed to be a greater similarity between the opening of entrance and that of exit than is the case when an ordinary bullet has passed through.

The number of instances in which Chassepot wounds healed without suppuration was very remarkable, being in a great measure attributable to the wholesome condition of the hospitals, but also to the abandonment of surgical interference. In simple gunshot wounds the conservative and expectant treatment was adopted, to the exclusion of all incisions, and even of cold or warm applications, and was thus carried to almost an extreme of simplicity. Sponges have been happily replaced by irrigation, and salves and cerates have given way to solutions of carbolic acid. It is well to remember that decomposing coagula and serum in a wound contribute to its infection, either by the independent formation of microzymes or by their introduction from without, and that, consequently, gunshot wounds, unsuited as they are for being hermetically sealed, present still a difficult problem to be solved. With this view, two methods recently proposed deserve attention—

Guérin's apparatus and Lister's carbolised lime bandage. The former consists of an indiarubber bag tied round the limb above the wound, and terminating below in a tube which leads to a vacuum globe; into this all pus is conducted without contact with the air. But the appliance is far too elaborate for use in time of war. The English method attempts the occlusion of the wound by a mixture of oil, carbolic acid, and chalk, but runs the risk of pus-collections forming underneath, and does not seem to have merited the praises bestowed upon it by the journals.

It was proposed by Professor Burow that wounds should be left completely stripped, but this deprives them of the benefits of equable pressure and support, and would be but a retrograde mode of surgery, while its sole advantage would be the prevention of pus-accumulations in the part.

There is, then, at present no more practical means than the laying of a drainage-tube along the bottom of the wound and keeping up constant irrigation; for this purpose one end of the tube is attached to the irrigation syphon, and the other leads into a utensil, the lotion-stream being composed of one part of carbolic acid in eighty parts of water. All pus is thus continually drawn off and the cavity is disinfected. Further, the edges may be united by wire sutures, and the whole enclosed in a fenestrated plaster-of-Paris bandage.

Some of the dressings used by the Germans demand attention, and of these machine-made charpie, a light and permeable description of gauze, and the oil-paper substitute for oil-silk are the most efficacious; also the parchment water-bags, which could retain water for a week, and by constant evaporation cool the surface with which they came in contact.

English machine-combed tow, derived from the worn-out ropes of ships, was found to be, in consequence of being imbued with tar, advantageously disinfectant.

Dr. Pirogoff now passes to the consideration of the very important subject of conservative surgery, and says that to appreciate the progress made in this direction one must revert to the teachings of Bouchet, Larrey, and Dupuytren, by whom amputations were divided into primary, intermediary, and secondary, and by whom, also, it was inculcated that lapse of time before operating cost more lives than it saved limbs. These doctrines, however, though held by some authorities to this day, have been for the most part dissipated by the three following causes:—The introduction of statistics into surgery; the use of the immovable bandage (plaster of Paris) in compound fractures; and by the adoption of operations which supersede removal of the limb. In 1841-42, Malgaigne showed by figures that the mortality in the Paris hospitals after primary and after secondary amputations of the lower extremity was about equal, being in either case between 65 and 78 per cent. It appeared, however, from these calculations, that the removal of limbs for organic disease in bones and joints, as caries, etc., was less fatal than primary and secondary amputations for external injuries. In the year previous attention had been drawn to Seutin's immovable paste bandage, and some few surgeons accordingly determined on trying it in such compound fractures as would have, in conformity with previous notions, demanded immediate removal of the limb. At the same time excision of injured bones and joints began to gain acceptance. Yet the tenets of 100 years, which had been put in practice during the bloodiest wars, could not be easily subverted; and therefore did Dr. Pirogoff, even in 1847, follow without hesitation the doctrines which he had inherited, and carried them with him when sent to the Caucasian war for the purpose of investigating the value of anæsthesia on the battle-field.

He amputated as heretofore in compound fractures, and obtained a consequent death-rate of 20 per cent. in the upper extremity, and 72 per cent. in thigh amputations. Owing to the novelty of ether vapour, he suspected that it exercised some toxic influence on the wounded, and this surmise was also supported by the occurrence of eight deaths from septicæmia, but further observation of 600 different operations under ether and chloroform proved that the mortality was not thereby affected.

Seeing, then, the fatality of thigh amputations, Dr. Pirogoff after the Caucasian expedition, 1849, wrote as follows:—"The conservative method of treatment might be attempted with some hope of success, even on the battle-field." And to these timid utterances against established practice he was still further prompted by having found in the Caucasian hospitals ten cases of bad compound thigh fracture which had done well, not only without operation, but without treatment of any kind. He was also convinced that the application of a permanent paste bandage would render the transport of such wounded possible. Later on, in the first Holstein wars, Stromeyer and Langenbeck carried out the conservative method of resection on a very large scale. Nevertheless, had not Dr. Pirogoff brought the plaster-of-Paris bandage into notice in 1850, this conservative method would never have reached its present utility. From experience of the value of this bandage, Dr. Pirogoff was, when the Crimean war began, prepared with its assistance boldly to have recourse to the conservative method of resection on the field, and would have derived a fuller measure of success had it not been for the unsanitary condition of the hospitals, the scantiness of materials for preparing the bandages, and ignorance of the efficacy of drainage-irrigation as a means of preventing retention of matter in the interior of wounds. As an evidence of how indispensable the plaster-of-Paris bandage is in conservative surgery, it may be mentioned that from being unacquainted therewith neither did the allies in the Crimea, the French in the Italian campaign, 1859, nor the French in Strasburg perform many successful resections; whereas the Germans, on the other hand, though not applying it on the battle-field, used the plaster-of-Paris bandage very generally throughout their hospitals; and for this reason in the Holstein, the Austrian, and more especially in the last war, this conservative method was put in practice by them to an unequalled extent. The hindrance to the application of this method lay in excessive contusion and laceration of the soft parts surrounding the broken bone, with or without injury of the main vessels and nerves, in comminution or extensive fissuring of the bone, with opening of the canal and laceration of the marrow, and in the impossibility of transporting those so wounded.

During the late war, Dr. Pirogoff neither saw nor heard of any of those injuries which were heretofore ascribed to the windage of large projectiles, and in which without the skin being broken the deeper structures of the limb were reduced to a complete pulp. Such cases, when they occurred, were clearly the result of contact with spent shot; nor were any instances of contusions with immense ecchymosis, also formerly attributed to spent shot, anywhere to be met with.

As to the effects of present bullets on bones, there was no positive evidence that they fissured or comminuted the large bones more often than their predecessors. It was even observable that compound fractures were not usually enlarged by incision for the removal of splinters; and this is well, since the measures taken in the Crimean war for their extraction secured but little success.

Finally, the transport of the wounded was not so difficult as was hitherto supposed; not only were very many with compound fracture conveyed to great distances in fixed bandages, but some also who travelled without any bandage whatever received no harm. From which it appears, either that the three circumstances which used to prevent the saving of limbs—torn bloodvessels, comminuted bones, and inability for removal—have been less frequent in the late war, or have lost much of their previous significance.

Most surprising, however, was the result of conservative treatment in compound thigh fractures, and this was made still more apparent by comparison with the statistics of thigh amputation, corroborating what Dr. Pirogoff had written years before—"that all military surgeons would agree in this to apply in a more extended degree the conservative mode of treatment to gunshot wounds of the thigh, since they would have before their eyes the 90 to 95 per cent. death-rate in primary thigh amputations as well with us (Russians) as with the French in the Crimea." Again, in the German hospitals more than thirty cases of recovery from gunshot fractures of the upper and middle thigh were met with, whereas of thigh amputation only twenty-one survivors were found, and in none of these had the operation been performed in the upper third.

No one could have anticipated the extraordinary success which attended the treatment of knee-joint wounds. About forty cases were counted which had not only healed satisfactorily, but even retained some mobility, and that notwithstanding the permanent impaction of the bullet in the joint and the transport of the patient without dressing. As in breast wounds, so in these, the size, shape, and action of the Chassepot bullet seem to exercise some influence, since in most instances the bones were not fractured, "whereas with us in Sebastopol the reverse was generally the case, and almost all our knee-wounded died, whether amputation was performed or not." Another circumstance lately remarked in connexion

with these wounds was, that when a happy result followed the direction of the entrance of the bullet was from before backwards, and not from side to side. Considerable inflammatory swelling ensued in some, in others union without suppuration; but in no case were antiphlogistic remedies employed.

To return to thigh fractures, there is one circumstance which deserves especial notice, and may in some measure account for the absence of bone-splintering—viz., that in many cases the bullet track had no direct connexion with the seat of fracture: in no other way can the frequent healing of these wounds without the extrusion of splinters and sequestra be explained. In the treatment of these fractures the three means which play a chief part are—first, the immovable bandage; second, the inclined plane, or a special bed; and third, the continuous extension of the injured limb.

Claiming the priority of invention of the plaster-of-Paris or immovable bandage, Dr. Pirogoff lays down the fundamental advantages of the appliances as follows:—That it exercises a uniform circular pressure throughout the entire length of the limb, thereby paralysing the attached muscles; that it secures immobility to the broken fragments; and that it keeps up continuous extension to a certain extent when put on and allowed to harden while the limb is being extended. The firm unyielding capsule formed by this bandage when it embraces the joints above and below the wound prevents the further approximation or riding of the broken ends, and keeps the limb on a constant stretch. Finally, the fenestra in the bandage must be so arranged that the fixity of the bandage will not be lessened. If it be too small or too far removed from the site of the wound, pus will collect beneath; if too large the bandage loses strength, and the limb ceases to be immovable. This fenestra may be made either during the application of the bandage or later. The former method requires most skill, and seems to have been quite unknown to the German surgeons, who, after resection of the elbow-joint, are in the habit of placing the arm in an Esmarch splint and fixing it therein with a plaster-of-Paris bandage; but this is not the true immovable bandage, nor does it admit of the patient getting up or going about, whereas when applied according to Dr. Pirogoff's directions, it allows him during convalescence to walk about in the open air. The process is as follows:—A drainage-tube is drawn through the wound, which is either covered with charpie or united by sutures, a roller of flannel, cotton, or other rough texture is applied over the entire limb, and on this plaster-of-Paris paste is smeared; a large piece of wire-gauze is then taken, an aperture corresponding to the size and position of the wound cut out, and with the remainder the limb is closely enveloped; plaster-of-Paris paste is again laid on; and finally the whole is fixed by one or more layers of "pasted" bandage, additional turns being given in the vicinity of the fenestra if extra strength be required. When the material has fully hardened, the fenestra is opened through the "pasted" bandage by means of a strong scalpel. The flexible wire-gauze accommodates itself to all inequalities of the surface, and so a perfectly equable case is formed, which allows neither spring nor breakage in the bandage. Should still greater substance be desired, the further introduction between the wire-gauze and outer bandage of splints of lime-tree bark soaked in the paste will attain the object. In the application of the bandage to thigh or hip-joint fractures the wire-gauze renders most important service, making a girder for the pelvis or a trouser for the injured limb, as far, if necessary, as the sole of the foot. When the fenestra has been opened it is indispensable that the pus should have free exit by suitable drainage, and that none be allowed to insinuate itself between the wound and the bandage. Should such interspace exist, it must be effectually closed with cement, and for this purpose a solution of resin in sulphuric ether is most satisfactory.

The plaster-of-Paris bandage may be put on either at the bandage places preparatory to transport, or subsequently in the hospitals for the purpose of treatment—in the former case without a fenestra, providing the distance to be accomplished is not too great, and that the appliance can be removed on arrival. In the latter case the question arises, How soon ought the bandage to be applied? and this is not easy to answer.

For one unaccustomed to its use, it is in general better, when the inflammatory swelling has come on, to wait a little. Dr. Pirogoff, however, does not delay under any circumstances; but if there be much swelling he slits the bandage, when set, in its whole length, and so converts it into a case, out of which the limb can be taken to be cleansed or to be treated in any way required; and should suppuration or abscesses occur, the inner surface of this splint can be from time to time brushed with carbolised plaster-of-Paris paste, while the necessary drainage-irrigation system can also be arranged in connexion with the wound; but when the swelling has subsided, and fixity of the limb becomes the chief indication, the ordinary plaster-of-Paris bandage must be substituted. As a lighter kind of bandage for use at the conclusion of the treatment, when suppuration has ceased and the wound healed, a flannel roller is to be applied, its outside smeared with a mixture of one pound boiled starch, and one and a half to two beer-glasses of plaster of Paris,—pasteboard splints saturated with the same are laid along the limb, and the whole covered with several layers of linen bandage also soaked in this. When dry it is split up, separated from the limb, varnished, its edges bound and strings attached at intervals. This forms a durable and elastic support which will last for months.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

FOUR CASES OF TYPHOID FEVER IN ST. THOMAS'S HOSPITAL, APPARENTLY DUE TO MILK.

[Reported by George H. Evans, Resident Assistant-Physician.]

Case 1.—Frances S., aged 19, under-nurse, from Henrietta-street, Cavendish-square, admitted June 16, 1873. She is servant in a family where there are five children and two nurses. Three of the children and the other nurse have been taken ill at intervals during the last two months, the first case having occurred in the week after Easter, and have been said to have been suffering from typhoid fever. She has been ill about two weeks with headache, pain in the back, loss of appetite, thirst, occasional delirium at night; no diarrhœa till day of admission, on which morning she has had a dose of castor oil, and diarrhœa since. The nurses and children have been supplied with special "nursery milk" from the same company which supplies the rest of the family. None of the rest of the family have partaken of the nursery milk; none have been ill. She has passed through a typical attack of typhoid fever, followed by a distinct relapse when convalescent, from which she has now recovered.

Case 2.—Jane W., aged 26, nurse, from Marylebone-road, admitted August 4, 1873. The whole family were supplied with milk from the company. The eldest daughter, aged 18, a son aged 5, and a child aged 2 have all had slight attacks of what has been said to be typhoid fever. This patient was taken ill about July 25 with pain in the head and abdomen; has slept badly; took to bed on July 29; has had diarrhœa during the last week. She is now convalescent from a mild but definite attack of typhoid fever.

Case 3.—Sarah K., aged 20, kitchen-maid, from Grosvenor-street, admitted August 13, 1873. The family in which she is in service are supplied with milk by the company. There are no children; no one else has been ill in the house. She was taken ill about the end of July with giddiness, headache, pain in the back and abdomen, and occasional diarrhœa. She has had up to the last few days distinct rose-coloured spots, and is now convalescing from a mild attack of typhoid fever.

Case 4.—Rebecca L., aged 26, kitchen-maid, from Great Cumberland-place, admitted August 15, 1873. The circumstances of this case are very similar to those of Case 3—viz., family without children supplied with milk by the company, the kitchen-maid alone being attacked. Her illness commenced early in August. On the 6th she first applied to the doctor, complaining of headache, sickness, aching in limbs, and feeling generally ill. She did no work from that time, but did not take to bed till sent to the Hospital. She has had a copious eruption of rose-coloured spots, but the attack has been a mild one. It appears that both this patient and the previous one were the only persons in their respective houses who were in the habit of drinking milk by itself in any quantity.

LEEDS GENERAL INFIRMARY.

AN OUTBREAK OF SEPTICÆMIA.

The history of isolated epidemics is always interesting, and we have come across few more so than that of the terrible pyæmic, or rather septicæmic, outbreak which occurred in the General Infirmary at Leeds in the year 1864, and for the details of which we are indebted to Mr. Jessop. Every case, or nearly so, operated on during a certain three weeks died from a low form of purulent peritonitis, so insidious that in many cases it was only discovered after death. The surgeons ceased operating as far as possible; a committee of medical officers investigated the sanitary condition of the Hospital, and found, amongst other defects, that many patients were using straw mattresses ten or more years old, some of which were rotten—converted into a kind of manure by the percolation of discharges and moisture. All sanitary improvements that could be devised were made, and we believe they have not had another case of this form of septicæmia. Such facts with regard to pyæmia, erysipelas, and phagedæna of hospitals are instructive, and suggest the question—"How far in well-arranged, well-cared-for wards are such diseases communicated to patients by the beds or mattresses on which they lie?"

In his communication Mr. Jessop says—The old terms purulent and "putrid" infection are well adapted to convey the meaning which I have been accustomed to attach to pyæmia and septicæmia respectively—the former characterised by collections of pus in the substance of internal organs, the latter by diffuse inflammations of surfaces, serous, synovial, venous, lymphatic, cutaneous. The two are not, I believe, wholly distinct pathological conditions. I have found them occasionally associated in the same individual, and have not unfrequently observed their simultaneous appearance in the wards.

Rigors, followed by profuse sweating, repeated more or less frequently, and accompanied each time by a rapid rise of four or five degrees of heat, not to be accounted for by any local inflammation, are the most reliable amongst the early symptoms of pyæmia. In septicæmia the rigors are less marked, sometimes entirely absent; there are no profuse sweatings, and the rise in temperature, though always sufficient to give a dry, pungent feel to the touch, is not invariably so high when measured by the thermometer. In many of the worst cases mentioned in the accompanying table, the patients, having been apparently well previously, suddenly began to vomit, the skin became hot, the secretions stopped, the tongue quickly dried, and the pulse was characterised by rapidity and feebleness. The local signs were often trivial, sometimes, even in cases where subsequent post-mortem inspection revealed the most advanced serous inflammations, altogether wanting. Then came what I can only describe as "rapid sinking."

I have an impression—it is only an impression—that the dark, lanky-haired, long eyelashed, thick muddy-complexioned, strumous subject is more liable to pyæmia after an accident or operation than others.

Severe injuries of the lower limbs, amputations, primary and for disease, have furnished an overwhelming proportion of the cases of pyæmia which have fallen under my observation. Exceptions to this rule have, for the most part, occurred during epidemics, and several will be found on reference to the table.

Once I have seen pyæmia kill after an operation for fistula in ano. I remember an old man dying of pyæmia after Chopart's amputation for disease, in whose urine an abundance of sugar was found to be a constant element; but as no examination had been made until after the pyæmic symptoms had manifested themselves, I am unable to say whether or no sugar had existed before amputation. If an operation be performed on a person whose kidneys are much damaged, as in calculous diseases, old urethral strictures, prostatic enlargements, in the various forms of Bright's disease, or even in an advanced fatty degeneration, pyæmia or septicæmia are almost certain to follow in one or other of their varieties. The habitual sot frequently succumbs after an operation to septicæmia. On the other hand, I have frequently observed men who have been reputed heavy drinkers to make rapid recoveries after even severe operations, but these have generally proved to be the occasional drinkers, not the regular soakers.

As I have already said, severe injuries of the lower limbs and amputations have furnished a considerable number of the examples of pyæmia which I have met with. I have not, however, seen any reason to attribute a greater share in its production to the bones than to any other tissue. I have seen a death from pyæmia consequent upon a primary Chopart, and also after a primary amputation at the shoulder-joint, in neither of which was there any section through bone.

Tabular Statement of Thirty-five Cases of Erysipelatous Diseases which occurred in the Leeds General Infirmary during the latter months of 1864.

No.	Sex.	Age.	Nature of case; when admitted.	Nature of pyæmic attack.	Date of seizure.	Result.	Post-mortem appearances.	Duration of attack.
1..	F (ward nurse)	35	Chronic ulcer of leg	Erysipelas of foot, leg, and thigh; formation of abscesses	Sept. 6, 1864	Recovered	—	—
2..	M	30	Strumous hernia, testis; protrusion shaved off, and edges of skin brought together. Sept. 22, 1864	Phagedæna of wound; erysipelas of scrotum, abdomen, head, and face	Sept. 26, 1864	Recovered	—	—
3..	M	40	Crushed foot	Hospital gangrene; lymphatics of leg and thigh acutely inflamed	Sept. 29, 1864	Recovered with secondary amputation	—	—
4..	F (ward nurse)	42	None	Erysipelas of head, face, chest, and upper extremities	Oct. 5, 1864	Died Oct. 13	—	9 days
5..	F	17	Bronchocele; tracheotomy	Erysipelas of trunk, head, face, upper extremities; pleurisy, with effusion	Oct. 6, 1864	Recovered Nov. 13	—	39 days
6..	M	50	Tumour in orbit; removal of entire contents. Oct. 6	Pyæmic inflammation of joints; pneumonia	Oct. 10, 1864	Died Dec. 13	Both knees, one elbow, and one wrist contained purulent synovia, and showed signs of commencing disintegration; right lung grey hepatisation; and pleura contained turbid serum	65 days
7..	F	Middle aged	Hygroma of bursa patellæ; removal on Oct. 20	Diffuse peritonitis	Oct. 24, 1864	Died Oct. 27	The peritoneum was universally inflamed, and coated with a layer of creamy lymph	3 days

No.	Sex.	Age.	Nature of case; when admitted.	Nature of pyæmic attack.	Date of seizure.	Result.	Post-mortem appearances.	Duration of attack.
8..	M	53	Fractured ribs on both sides; lung penetrated; scalp wound. Oct. 26	Erysipelas of head and face; immense and rapidly spreading carbuncle of back	Oct. 31, 1864	Died Nov. 13	—	13 days
9..	F	45	Carbuncle on back; incisions. Oct. 29	Phagedæna	Nov. 2, 1864	Recovered Dec. 5	—	33 days
10..	M	56	Simple fracture of leg. Oct. 24	Erysipelas of head and face	Nov. 3, 1864	Recovered Dec. 3	—	30 days
11..	F	Middle aged	Chronic glaucoma; Hancock's division of ciliary region. Nov. 3	Rapid sinking; no diagnosis formed during life	Nov. 4, 1864	Died Nov. 8	Peritoneum universally inflamed and thickly coated with creamy lymph	4 days
12..	M	70	Simple fracture of patella	Vomiting; rapid sinking	Nov. 4, 1864	Died Nov. 6	Exactly like the preceding case	2 days
13..	M	—	Smash of leg; amputation below knee. Nov. 4	Diffuse cellular inflammation of stump and thigh; double pleurisy	Nov. 7, 1864	Died Dec. 10	Stump and thigh sloughy and largely infiltrated with pus; both pleuræ contained turbid fluid and soft adhesions	33 days
14..	M	30	Compound fracture of patella; joint opened. Oct. 22	Diffused cellular inflammation of whole limb; general pyæmia	Nov. 9, 1864	Died Dec. 25	Entire limb sloughy and infiltrated with pus; purulent deposits in lungs	46 days
15..	M	—	General anasarca and ascites, from which he was convalescent	Erysipelas of head, face, and neck; diffuse peritonitis	Nov. 10, 1864	Died Nov. 17	Purulent peritonitis	7 days
16..	M	—	Hernia, testis	Erysipelas of scrotum, abdomen, and thighs; diffuse peritonitis	Nov. 14, 1864	Died Dec. 18	Purulent peritonitis; pelvic and femoral veins filled with purulent clots	34 days
17..	M	29	Syphilitic ulcer of leg	Phagedæna	Nov. 18, 1864	Sent home immediately	—	—
18..	M	50	Acute Bright's disease, 3 weeks	Erysipelas of neck and throat; diffuse peritonitis	Nov. 20, 1864	Died Nov. 23	Purulent peritonitis	3 days
19..	M(a)	45	Scalp wound. Nov. 1	Erysipelas of head and face; many joints inflamed	Nov. 25, 1864	Recovered Dec. 10	—	15 days
20..	F	—	Ovarian tumour, with ascites; paracentesis. Nov. 24	Erysipelas of abdomen; diffuse peritonitis	Nov. 30, 1864	Died Dec. 5	General peritonitis; abdomen contained opaque serum, and much shreddy lymph	5 days
21..	M(b)	29	Caries of malleolus; gouging. Nov. 26	Erysipelas of foot and leg	Nov. 30, 1864	Recovered	—	—
22..	M	66	Enlarged prostate	Diffuse peritonitis	Dec. 1, 1864	Died Dec. 5	Purulent peritonitis	4 days
23..	F	Middle aged	Sinus resulting from chronic mammary abscess; laid open. Nov. 24	Erysipelas of breast; diffuse peritonitis	Dec. 2, 1864	Died Dec. 4	Intense general peritonitis; universal coating of lymph	2 days
24..	M	—	Suppurating bursa over olecranon; incision. Dec. 1	Erysipelas of arm; pleuro-pneumonia; suppuration of knee-joint, and diffused suppuration of thigh	Dec. 5, 1864	Died	—	—
25..	M	—	Spontaneous anæmia	Small carbuncle on neck; erysipelas of neck, head, and face	Dec. 10, 1864	Died	—	—
26..	M	—	Fatty tumour of neck; excision. Dec. 1	Erysipelas of head, face, neck, and back	Dec. 10, 1864	Recovered	—	—
27..	M	63	Intracapsular fracture of neck of femur	Erysipelas of leg; diffuse peritonitis	Dec. 13, 1864	Died Dec. 18	—	5 days
28..	M	—	Compound fracture of arm; excision of elbow. Dec. 12	Diffuse cellular inflammation of arm; general peritonitis	Dec. 13, 1864	Died Dec. 20	—	7 days
29..	M(c)	—	Caries of malleolus; gouging. Nov. 26	Second attack of erysipelas of foot and leg	Dec. 14, 1864	Recovered	—	—
30..	F	—	Scirrhus of breast; amputation. Dec. 1	Diffuse peritonitis and pleurisy	Dec. 17, 1864	Died Dec. 19	—	2 days
31..	F	32	Ulcer of rectum; forcible dilatation of sphincter. Dec. 16	Peritonitis	Dec. 17, 1864	Died Dec. 23	—	6 days
32..	M	—	Smashed hand; amputation. Dec. 13	Erysipelas of arm	Dec. 17, 1864	Recovered	—	—
33..	M	30	Acute Bright's disease, 1 month	Peritonitis; pleurisy	Dec. 21, 1864	Died Dec. 23	—	2 days
34..	M	34	Simple fracture of leg. Jan. 7, 1865	Erysipelas	Jan. 14, 1865	Died Jan. 28	—	14 days
35..	M	24	Compound fracture into elbow-joint. Jan. 18	Phagedæna	Mar. 11, 1865	Died Mar. 30	—	19 days

(a) This patient's son was attacked by erysipelas at home the day after he had visited his father at the Infirmary.
(b) Same case as No. 29. (c) See Case 21.

The majority of the cases of pyæmia have arisen sporadically, and have apparently had no immediate connexion with other disorders. Occasionally, however, erysipelas and other diseases of a like type have been present in the hospital during the presence of pyæmia. Notably there occurred, a few months ago, three cases of pyæmia, two of which were under my care, and are referred to again below, during an epidemic of phagedæna. (See also Cases 6 and 14 in the tabular statement.)

In the worst forms of acute pyæmia I cannot say that I have seen any good effect derived from treatment. The slighter forms are not unfrequently recovered from. The measure which has undoubtedly yielded the best results, and which alone, in my judgment, deserves the name of remedy, is the placing of the patient in a gentle but continuous current of fresh air. Good support, regulated both in quality and quantity by the patient's capability of digestion, is also requisite.

Two cases have recently arisen in my wards—the only two I have had during my two years' connexion with the new Hospital,—at a time when there seemed to be a disposition in this part of the country for wounds to assume an unhealthy character, as was evidenced by a severe outbreak of phagedæna in almost every ward in which wounds were collected, and by the simultaneous admission from the surrounding and even distant districts of unhealthy phagedænic sores.

The first of the two occurred in a youth who was suffering from acute necrosis of the right humerus. After the usual succession of rigors and sweating, the left hip and right knee-joints became painful and swollen. The second was in a man beyond middle age, who had been cut externally for strictured urethra, and in this case also the local manifestation was in one knee.

I make special mention of these cases because of the excellent effect produced on emptying the joints by means of the pneumatic aspirator. In the former case an ounce and a half of pus was removed from the hip-joint, and two ounces of purulent synovia from the knee, and in the latter, an ounce and a half of purulent synovia was taken from the knee. In each the recovery was rapid and complete, both as to the general and local affection.

In the Old Leeds Infirmary pyæmia may be said to have been endemic. The cases were by no means rare. This was due in a great measure, if not entirely, to the crowding together in an old ill-constructed building of a very large number of severe injuries and operations of magnitude. In our new Hospital pyæmia is almost unknown. I have a strong conviction that with thorough ventilation, the spreading out of cases over a sufficient space, and the observance of cleanliness, pyæmia will become a rare affection. In order to avoid it I carry out these views to the best of my ability, and hitherto, with the exceptions above mentioned—due unquestionably to the presence in the wards of many offensive sores,—my efforts have been completely successful.

Statistics of Small-pox in the German Empire.—According to the statistical account published by the German Chancery, the number of cases of small-pox that occurred in the various States composing the German Empire from 1860 to 1870-71 amounted to 232,824, of which 28,539 terminated fatally. In 208,793 of the cases it is stated whether vaccination was performed or not—viz., unvaccinated 27,793, vaccinated 181,000. There were also 6015 revaccinations. Of the non-vaccinated 8894 died, or 32 per cent., of the vaccinated 17,260, or 9·5 per cent., and of the revaccinated 445, or 7·4 per cent.—*Berlin. Klin. Woch.*, August 11.

Removal of Pigmentary Stains after Venereal Eruptions.—M. Langlebert wishes to make known a simple means of effecting the removal of the pigmentary spots which syphilitic eruptions, and especially ecthyma, leave behind. Of a deep yellow, sometimes almost black, they are very lasting, those of the legs sometimes persisting for years, to the great annoyance of the patients. The various applications hitherto employed being of little avail, M. Langlebert having remarked that blisters which had been kept open only for a few days leave, especially in individuals of a dark complexion, white traces that are well-nigh indelible, applied in an old case of syphilitic ecthyma small blisters over the syphilitic patches, and maintained suppuration for a week by means of blistering ointment. The success was complete, and has induced him to recommend the adoption of the practice.—*Gaz. des Hôp.*, Aug. 2.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 6, 1873.

THE DAIRY REFORM COMPANY AND THE OUTBREAK OF ENTERIC FEVER.

The Dairy Reform Company furnishes a telling instance of the truth of the adage that "it is not in mortals to command success." There is every reason to believe that in an age of dishonest trading this Company has conducted its business honestly, that it has endeavoured to supply its customers with the best milk, and that it has, in truth, sold a milk in which the chemist could detect no fault—a milk unadulterated with water or any other fraudulent addition. The milk was obtained from cows fed on pastures not irrigated with sewage, in a generally healthy and productive part of the country. In fact, every recognised requisite for a good milk supply—healthy cattle, good pastures, and honesty of purpose and practice—was provided in the dealings of this unlucky Company, and yet they stand convicted of having spread disease, death, and misery amongst a very large number of innocent people—their customers—in one of the healthiest parts of one of the healthiest cities in Christendom.

Up to a certain point there is no doubt that the Dairy Reform Company are simply to be pitied. Up to August 4 they were the innocent authors of an enormous and wide-spread evil—an evil which, apart from all commercial considerations, would by none, probably, be more poignantly regretted than by the directors of the Company themselves. But from and after the date of August 4 the relations of the Company to their customers were placed on a different footing, and their conduct demands, and undoubtedly will receive, an impartial investigation from the guardians of the public health. On that day the Company received a letter from Dr. Whitmore, the Medical Officer of Health for St. Marylebone, from which the following is a quotation:—

"Without presuming to express any opinion as to the cause of this outbreak, I nevertheless feel that the occurrence of so many cases of the disease amongst children and others who habitually drink your milk is, to say the least, a remarkable coincidence; and, as Medical Officer of Health of this parish, I feel it my duty to suggest for your serious consideration the

necessity of your at once ceasing to supply the public with milk obtained from your present sources, and until it can be shown that the outbreak has its origin in other causes."

This letter was delivered on August 4. We will at present say nothing with regard to other warnings addressed to the Company. The simple and sufficiently remarkable fact is that after receiving this communication the Company do not appear to have instituted any skilled inquiry as to any sources of contamination which might be present at their dairy farms until August 12—eight days afterwards; and up to the following day they continued to distribute their deadly poison amongst their customers. Such a disregard of official medical advice and apparent indifference as to consequences can certainly only with difficulty be justified.

But the charge against the Company does not rest here. On August 7 Dr. Whitmore again wrote to the directors of the Company in the following terms:—

"Since the date of my letter addressed to your manager, Mr. Maconochie, suggesting to him the necessity of suspending for a time the sale of your milk, several other cases of typhoid fever have been brought to my notice, all of which have occurred in families who obtain their milk supply from your establishment. Under these circumstances I feel that my official position as Medical Officer of Health of this important parish imposes upon me the very responsible duty of calling upon you at once to discontinue any further supply of milk to the public from your present source until such time as the true cause of the outbreak can be ascertained. I must also take leave to say that should you think proper to disregard this notice, and should the investigation which I am now pursuing prove that the present outbreak of fever in that district is in any way attributable to the milk, the responsibility of any future ill-consequences that may occur will be yours.

To this letter Dr. Whitmore received an answer that the directors were prepared to obey his orders "provided that the Vestry will undertake to compensate us weekly or monthly for all the loss or injury which we may sustain in loss of custom or reputation"!—certainly the first time in the history of commerce, we should think, that a vendor has required to be recompensed for not being permitted to sell food that was suspected to be poisonous to human beings! But these were not the only or even the most important warnings the Company received. On Monday, August 11, the following letter was delivered to the directors by Dr. Murchison. It was written on the preceding Saturday, August 9:—

"Sir,—Within the last week we have been called to see a large number of cases of enteric fever, and many others well authenticated have been brought to our notice which have commenced in the West-end of London, mostly since the middle of last month. These cases cannot be traced to any defective drainage or to polluted water, and they are not restricted to localities supplied by one water company. The one condition in common has been the use of milk supplied by your dairy, and in several families there have been special circumstances corroborating the opinion that the milk has been the medium of conveying the poison. This evidence is so strong that we deem it to be our duty to call your attention to the matter, in the hope that you will suspend the issue of milk from your dairy until the cause of the outbreak has been thoroughly investigated. The facts we refer to have been communicated to Mr. J. N. Radcliffe, the Medical Inspector of the Privy Council, who has been deputed to inquire into the matter. (Signed) "William Jenner, M.D.
"C. Murchison, M.D.

"P.S.—Of thirty-seven families in which it has come to our knowledge that typhoid fever has occurred, thirty-five are supplied with milk from your dairy.—C. M."

To this appeal, signed by perhaps the two greatest authorities on the subject of enteric fever, the directors answer in a long letter, dated August 11, in which they recite a list of reasons for differing from Sir William Jenner and Dr. Murchison in the opinion they had formed as to the cause of the fever, but which contains the following:—

"The Company is under contracts for £12,000 worth of milk, and if we were to discontinue selling the milk in London we must of course have it destroyed in the country, as we could not make the poisoned milk into cheese or butter. The Company also have premises in several parts of London, some of them on long leases, and adapted for their own purposes at a very large capital outlay, none of which would be of the slightest use to any other business, and they are under obligations to pay rent, etc., amounting to £650 a year."

In another paragraph they speak of the loss to the individual members of the Company.

Now, it is at least greatly to be regretted that the directors of a public commercial company of high character, and established we have no doubt on principles of honour, should have committed the very grave mistake of even hinting a pecuniary reason for not instantly stopping the issue of a food which they were warned by the highest authorities was spreading death and disease amongst their customers. We would give the directors full credit for all they have done for improving the milk supply of the metropolis; we allow that to them the reasons against assigning to their milk the fever outbreak may have appeared good and sufficient; but we cannot allow that they are fitted to be judges in the matter. *Qui s'excuse s'accuse*, and the letter which we publish from the Secretary of the Company, Mr. Maconochie, is of that character; but whatever may be said by the Secretary in mitigation, the fact remains that for eight days after they had been warned by a public medical officer the directors continued to circulate their fever-spreading milk, without instituting any skilled inquiry as to its possibility of contamination; and they virtually acknowledged in their answer to Dr. Whitmore's second letter, quoted above, that they were influenced by pecuniary motives in the course they pursued.

MEDICAL USES OF ELECTRICITY.—No. II.

Electricity as a Help in Diagnosis.

In diagnosis assistance can be obtained from electricity in cases in which there is altered muscular contractility, or altered muscular or cutaneous sensitiveness, or both of these conditions. We have used the word sensitiveness, because much confusion is often made in the use of the terms "electric irritability" and "electric contractility," and it should be remembered that these do not mean the same thing, though they are often employed interchangeably, as the irritability of a muscle is evidenced by its contraction. "Irritability" of a muscle truly used signifies susceptibility of a muscle to the action of electricity, or of any other irritant or excitant; "contractility," its capacity of action, or the amount of force with which it contracts. Let a current of electricity be applied to the arms of a patient in whom one arm (say the left) is paralysed, while the right is healthy, and the muscles of the latter are found to act with much greater force, much more vigorously, than those of the left. This does not of itself prove that the "muscular irritability" of the muscles of the right arm is greater than those of the left, but that they are stronger, and therefore act with greater power. To test truly the "irritability," the sensitiveness or excitability of a muscle, find out the lowest power that will excite it to contract. Take, for instance, a case of hemiplegia; apply the rheophores of a faradic instrument to one of the muscles of the healthy side, and find the lowest power to which the muscle answers; then apply the rheophores to the same points of the corresponding muscle on the opposite or diseased side, and notice whether or no it contracts: if it does, lower the power of the current; if it still excites contraction the irritability of the muscle is increased; or *vice versâ*, according to the result. If the voltaic current is used to test with, one electrode should be kept stationary, and the current interrupted by repeatedly raising and reapplying the other, or by gliding it over the muscle. And it must be remembered that great

care must be taken to apply the current in an exactly similar manner on both sides—the electrodes or rheophores must be applied to identical parts of the muscle. When using the voltaic current particularly care must be taken to pass it in the same direction in both limbs. A centrifugal current—that is, a current passing from a positive electrode downwards to a negative electrode applied farther from the centre than the positive electrode—is called a "direct" or descending current; and a current which passes in the reverse direction is an "indirect" or ascending current. Now, healthy nerve and muscle are more sensitive to a descending than to an ascending current; therefore, care must be taken not to reverse the current when testing "irritability."

In hemiplegia it will most likely be found that the irritability of the muscles to either a voltaic or a faradic current is normal; there is no disease of the muscular tissue. Let the current then be passed along the motor nerves of a muscle, and if this responds to the excitation, it is proved further that the conducting power of the motor nerves has not been injured, and that the spinal cord is not diseased or destroyed at the part whence those nerves are given off; there is not "spinal paralysis"; the mischief then is cerebral. It may be, however, that the irritability is lessened somewhat, even in hemiplegia, from disuse, and in such case a few applications of faradism will suffice to restore it. When the case is of such standing that rigidity has come on, the irritability will probably be found to be increased; and this points to some irritative lesion, as increased vascularity of the brain or hæmorrhage into its substance.

It will be gathered from what has been said, then, that one of the diagnostic uses of electricity is to determine, in a case of loss of voluntary power in a muscle or in a limb, whether this depends on something that cuts the muscle or muscles off from the influence of the spinal cord, or on something which, though it does not deprive them of that influence, does paralyse them to the will. In cerebral disease, *per se*, there is no diminution of the electro-contractility of the paralysed muscle; there may be, as we have before explained, an increase of it.

In spinal disease so situated that it affects the cord above that portion of it which gives off the nerves bdistriuted to the paralysed muscles, the electro-contractility of the affected muscles is not necessarily diminished.

But the electro-contractility of the paralysed muscles is lessened or destroyed when that portion of the spinal cord supplying the nerves to the affected muscles has been destroyed or injured.

In traumatic paralysis the same effect is produced—*i.e.*, when the motor nerve of a muscle has been cut through, or is pressed upon by an exostosis, or is in some other way cut off from the influence of the spinal cord, the electro-contractility of the muscle is destroyed or diminished.

In the last two classes of cases there is true "spinal paralysis"—the "spinal paralysis" of Marshall Hall,—the affected muscle or muscles being functionally shut off from the spinal cord.

In simple "*cerebral paralysis*," then, the electro-contractility of the muscles is normal; in "*spinal paralysis*" it is diminished or destroyed, and the degree of loss bears a direct proportion to the amount of interference between the muscles and the spinal cord, or the amount of mischief in the cord itself. This rule undoubtedly holds good in the great majority of cases of cerebral paralysis, but not in all; and Dr. Althaus has stated that in one hundred cases he found the sensitiveness or excitability in some cases diminished and the muscles flaccid, in some increased (cases of early rigidity and irritative lesion), and in others normal.

In *hysterical paralysis* the electro-contractility is as a rule normal, though "electro-sensibility" may be lowered or lost—that is, the patient may scarcely or not at all feel the contraction of the muscles, even though the electric current excites them to powerful action. If, however, the paralysis has continued for some time, and the muscles have become flabby and soft, there will be found some lessening of their excitability as well as of their strength; but a few applications of the current will remove this condition.

Again, electricity may be of great and valuable service in distinguishing between real and feigned disease. In railway accident cases, for instance, it is not rarely asserted that persons feign or "put on" symptoms—that they sham paralysis of a limb, for example; and there is no doubt whatever that this is sometimes done; or, persons who have been in a railway accident may be frightened into the belief that they are more seriously injured than they really are, and the idea that a limb has been paralysed may render it powerless when it is not really paralysed by disease: and in both these classes of cases electricity may be of essential service. Test the muscular irritability of both sides with the faradic current, and if there is a marked difference in the response of the muscles on the two sides it is certain that there is more the matter than can be either feigned or fancied. Cases have been published in which a patient has been accused of, and had been believed by medical men to be, feigning paralysis of a limb, but when the electric test was tried it at once proved that the paralysis was real. A faradic current that excited vigorous action in the healthy limb had not the slightest effect on the muscles of the other limb—a differentiation that it was utterly impossible for the patient to produce; no exertion of the will can prevent a healthy muscle from contracting under a strong electric current.

In some kinds of paralysis it is found that the muscular irritability to the electric current is greatly diminished or lost if either faradism or the rapidly interrupted voltaic current be applied; but to a slowly interrupted voltaic current the affected muscles not only do act, but show a greater degree of irritability than the healthy muscles do. And reaction of this sort is only found in peripheral paralysis. It is therefore of great service in diagnosing peripheral from central disease, as, for example, in distinguishing between paralysis of the facial nerve and facial hemiplegia. It will also help to decide in a case of paralysis of the extensor muscles of the fingers and wrist whether this is caused by lead or by a rheumatic affection of the radial nerve. In the latter the reaction is normal, but in lead palsy the reaction to the faradic current is lessened or lost, while to the slowly interrupted voltaic current it is increased. In some cases of the "essential" paralysis of children—cases caused by the local application of cold and not dependent on special disease—the same reaction is found.

It is doubtful whether any real aid to diagnosis is to be obtained from modification of the electric sensibility of either the skin, the muscles, the trunks of the nerves, or of the nervous system generally.

THE ASHANTEE WAR.

It is satisfactory to be able to state that the views persistently advocated by us since the outbreak of the war on the Gold Coast have been endorsed by the authorities, and it is no longer a secret that at the termination of the rainy season active operations on a sensible scale will be undertaken to crush the petty enemy who has had the effrontery to place himself in opposition to the British arms. Sir Garnet Wolseley, accompanied by a numerous staff, will shortly leave this country for the seat of war, and, after a careful survey of the situation and necessities, will transmit requisitions to the authorities for all that he may consider necessary in the shape of men and stores. The troops selected will leave England so as to arrive on the coast exactly at the moment they are required. There will thus be no longer delay in such a pestiferous climate than is absolutely

required to carry out the details which will already have been laid down, and, having chastised the invaders, the expeditionary regiments will immediately return home. This promptitude of action will be the means of saving many lives; and, although rumour asserts that the war will be carried so far into the Ashantee kingdom as to destroy the capital of Coomassie itself, situate about 130 miles from the coast, we venture to predict that, in proportion to the strength employed on this service, the death-rate will be smaller than that now occurring during the continuance of the defensive attitude which we have been constrained to adopt by the overwhelming incursion which has been organised on our almost defenceless settlement.

Stores of all descriptions are being hurriedly forwarded to Cape Coast Castle, and scarcely a week passes without some vessel being despatched with supplies from this country. The Government would appear at last to have recognised the importance of dealing with this matter once and for all. Since the beginning of the present century we have been in a chronic state of enmity with the Kings of Ashantee, and when we have been successful (which has not always been the case) the results achieved have been so small as to leave the prestige of our great power far from satisfactorily established in the savage mind. Taking England's last "little war" against the King of Abyssinia and his capital of Magdala as a specimen, it will at once be seen that, however trifling, whatever *is* to be done is worth doing well, and that thoroughness of action pays best in the long run. The employment of natives to assist us, in the shape of an organised body such as the Houssa force, may be all very well to preserve peace when once its necessity to the enemy has been enforced, but it is an established fact that the blacks will contend much more stoutly against their own colour than against whites, and we sincerely hope that Sir Garnet Wolseley will not be induced to restrict his demand for our own soldiers by depending too much upon what *may* be accomplished by the bands which Captains Glover and Thompson are about to organise.

We hear on good authority that a vessel will be appointed as a hospital ship for the reception of the wounded and invalids; this, if placed off Cape Coast Castle, will obviate the necessity of treating the sick on shore, and, to those who are acquainted with the deadly effects of the climate, it will at once show that the heads of the Medical Department are earnestly endeavouring, by every means in their power, to mitigate the evils of this deadly campaign. Other vessels should be appointed to transport all men who are capable of removal, as soon as possible, to this country; and the importance of carrying out such an arrangement will doubtless not be overlooked.

If, as is the opinion of many, the present war might have been avoided by retaining a sufficient force upon the coast, instead of inviting attack by exhibiting our comparative weakness, we trust the Government will now atone for its past shortcomings, and with every confidence in the known experience of those who at present direct the affairs of the Medical Department, we look forward to a result as satisfactory and lasting as that which followed our march to the capital of Abyssinia.

THE WEEK.

TOPICS OF THE DAY.

Sir A. Grant, the Principal of the University of Edinburgh, has thought it necessary to publish in the *Times* newspaper a defence of that University in reference to its treatment of the lady medical students. He commences by saying that he acknowledges and regrets "the hardship and difficulty of the position in which the ladies referred to have been placed; but this is owing to the state of the law of the land as interpreted by the Court of Session, and not to any discreditable transactions on the part of the University." After stating the facts of the long history of the attempt of Miss Jex Blake and her companions to effect and maintain a footing in the University, Sir A. Grant concludes:—

"I sincerely sympathise in the earnest appeal made by Miss Jex Blake—in the very able letter which forms the subject of your article—to the Legislature to take up the consideration of the medical education of women. It is a subject well worthy the attention of the Legislature, and one which can only be properly dealt with, as a general social subject, by the Legislature. Whether or not a university is a suitable institution for the medical instruction and examination of women is a wide question, on which I will not venture to enter. But, however this be decided, all other universities of the United Kingdom must share in the decision of the University of Edinburgh, and this University will loyally bear her part in carrying out whatever Parliament may ordain as expedient. In the meantime, under considerable obloquy, she can at all events claim to have contributed something in the way of experience to the elucidation of the question."

Now, it appears to us that Sir A. Grant has conferred little benefit on the University of which he is Principal, or on the cause of the women medical students, by the publication of his letter. Here to excuse is to accuse, and the Principal's letter is throughout an apology. The real apology, we think, ought to be made by those who ran the risk of injuring an ancient University and renowned school of medicine by permitting, in the first instance, the admission of women. Once admitted to the University, the mischief was done, and it would be difficult to persuade the sympathisers with the lady-student cause that they have not been hardly dealt with. Sir A. Grant's letter, however, contains the admission that the disturbances amongst the students arose in consequence of the women students "having joined a mixed class in anatomy under an extra-academical lecturer," a proceeding which very properly and naturally, we should think, "outraged the feelings or prejudices of the students." The University Court had had the decency, it will be remembered, to refuse to hold mixed classes. In Thursday's *Times* Miss Jex Blake replies at length, giving her view of the facts of the case.

The death-rate of London in the week ending August 30 fell to eight below the average numbers in the corresponding week of the last ten years. The total number of deaths was 1477. The deaths from the different forms of fever were 38, from diarrhœa 277. Diarrhœa is declining in fatality. The deaths from this cause in the previous week were 362.

A case of supposed Asiatic cholera in Shoreditch, Newcastle-under-Lyne, turns out to have been a sporadic one. The man is said to be recovering. A schooner arrived at Wick from Dantzic on Tuesday, and the captain reported that he had a case of cholera on board. The vessel was removed to St. Clair's Bay. The man who was ill is recovering; and, should no fresh case occur, after disinfection the vessel will be allowed to come into the harbour.

The Medical Director-General of the Navy reports upon the condition of the invalids who have recently arrived at Portsmouth from the West Coast of Africa on board H.M.S. *Himalaya*, that the troops left England 110 strong, and reached Cape Coast Castle in time to take part, under Colonel Festing, R.M.A., in the action at Elmina. Fever, however, soon broke out, and, with the exception of about twenty men who have remained behind with their chief, all were invalided and shipped on board H.M.S. *Himalaya* for England, but eleven died on the passage, and sixty were on arrival sent to Haslar Hospital for treatment.

AMBULANCES FOR MILITARY HOSPITALS.

We were rather surprised to read, in the *Times* of last week, a letter from a correspondent at Plymouth, complaining—with

seeming good cause—of the defective arrangements existing at Stoke Hospital for the removal of sick and wounded men. From the account given, it would appear that a private of the Army Service Corps fell out of a train whilst in motion about twelve miles from Plymouth; he was picked up by a passing train, and being found to be much injured, was promptly taken back. The authorities at the military hospital were at once communicated with on the subject of providing an ambulance for his removal, but on arriving at Plymouth, the medical officer of the volunteers—who had humanely accompanied him—found nothing waiting but a light cart with bare boards, in which he very properly refused to allow the injured man to be placed. A fatigue party, with a stretcher, was after a long delay procured, and by this means the man at length reached Stoke Hospital. It is, moreover, stated by the same correspondent that the local press had already commented on the manner in which the invalids arriving at Plymouth from Dartmoor during the Autumn Manœuvres were received by the hospital authorities. This is a state of things which clearly should not be allowed to exist. If—as was stated by the driver of the light cart—the hospital had no more appropriate conveyance at hand, we may fairly ask whose fault it is that one of our largest military hospitals is left unprovided with so necessary an article of equipment as an ambulance for the removal of the sick and wounded. Plymouth is a large garrison town with several detached barracks, the sick of all regiments and detachments quartered there being treated in the hospital at Stoke, and it seems preposterous to imagine that the want of such a conveyance can really exist. Should this, however, prove to have been the case, we can only trust that the publicity now given to such an awkward fact will be the means of rousing someone, either at head-quarters or at Plymouth, to a sense of doing (even if tardily) their duty.

DISEASE OF THE HEART FROM OVER-EXERTION.

There are few more interesting subjects in cardiac pathology than the so-called "spontaneous" enlargement of the heart. Many authors have gone so far as to deny *in toto* the occurrence of uncomplicated hypertrophy or dilatation of the heart or of one of its ventricles; but their position has now for some time been untenable, as was especially pointed out by Dr. Quain in his recent lectures on "Diseases of the Muscular Walls of the Heart." We have now before us a contribution of no less than nineteen cases of the kind, observed by Fräntzel in soldiers who had taken part in the Franco-Prussian war (Virchow's *Archiv*, 1873, vol. lvii., p. 215, and *Centralblatt*, 1873, No. 35). These patients were perfectly healthy at the commencement of the campaign, and began to suffer from cardiac symptoms for the first time during the course of the war. When they came under treatment at the end of the campaign they were found to be labouring under enlargement of the heart, without discoverable disease in any other part of the vascular system, in the lungs, or in the kidneys. Of the cases enumerated the left ventricle alone was hypertrophied and dilated in ten, the right ventricle alone in two, and both ventricles in three; and in two other cases dilatation alone of the one ventricle or of the other was found. Fräntzel accounts for the cardiac enlargement by the extreme fatigue and muscular exertion which the men underwent for months in the field. The increased pulmonary activity induced by the obstruction to the expansion of the thorax under the uniform raised the tension in the pulmonary artery, and caused dilatation with hypertrophy of the right ventricle; and in the same way a corresponding enlargement of the left ventricle was brought about by the severe muscular exertion generally, as well as by the contraction of the peripheral arteries during the cold of winter. The occurrence of simple dilatation is accounted for by the extreme severity of the exertion in some cases, and by the proportionately less resistant power of the cardiac tissue in others, who were badly nourished under the circumstances of privation in which their disease commenced.

THE INNERVATION OF THE INTESTINES.

Within the last few years very much has been done and written by Nasse, Schiff, Mayer, and V. Basch, and others, upon the movements of the stomach and intestines, as well as upon the nervous supply of their arteries, and the relation of the vascular condition to the vermicular movements of the alimentary canal. The latest experiments on this subject are those of Hougkeest van Braam, who followed Sanders' method of opening the abdominal cavity under a solution of common salt at the temperature of the blood (Pflüger's *Archiv*, 1873, vol. vi., No. 266, and *Centralblatt*, 1873, No. 29). The following results at which he has arrived are decided and satisfactory. The vagus is the motor nerve of the stomach, but not of the small intestine, and movements of the latter after irritation of the vagus are due to the escape of the masses from the stomach into the intestine. Neither has the vagus any influence on the movements of the colon or uterus. The splanchnics are at once the inhibitory nerves of the intestine and stomach and the vaso-motor nerves of the intestine, and it is for this reason that the gastric movements are less readily induced by irritation of the vagus if the splanchnics remain uncut. The author does not decide whether the inhibitory action of the splanchnics exists independently of their vaso-motor action or is merely a consequence of it. That the latter is more probably the case is shown by the circumstance that the movements of the intestines are in great measure dependent on the condition and amount of the blood in the intestinal vessels. Local irritation does not spread normally or induce peristaltic movements. Anti-peristaltic movements do not occur normally; yet the entrance of fæcal masses into a portion of the intestine induces a movement therein which may extend peristaltically beyond.

IRREGULAR PRACTITIONERS AND THEIR VICTIMS.

A verdict of manslaughter was returned at an inquest held on Saturday last, at Barnstaple, on the body of Mrs. Elizabeth Yeo, who had died suddenly, against a chemist named Goss, of Bramton. It appeared from the evidence that the deceased, while suffering from malignant cancer, was under the treatment of the accused, who first gave her some ointment and lotion for outward application. Her system had absorbed large quantities of impure sulphate of zinc. As stated by Dr. Thompson, of Bideford, zinc applied to an absorbent surface for a long time would be highly dangerous. The deceased had used the lotion for two months before her death. A coroner's warrant was issued for the apprehension of Goss.

HOSPITAL MANAGEMENT IN SYDNEY.

A Royal Commission for inquiry into the working of public charities in Sydney is now sitting, and startling disclosures have been made as to the management of the Sydney Hospital and other kindred institutions. The evidence of patients and nurses in the Hospital tends to prove the existence of very gross negligence on the part of the authorities.

UNHEALTHY DWELLINGS.

Dr. Whitmore, in his report on the sanitary condition of the Marylebone district, states—"The one great obstacle to the sanitary improvement of the destitute poor is the structurally defective condition of the dwellings in which they are compelled to live. No material reduction in the present death-rate can be expected until all ruinous and dilapidated houses in the parish are pulled down, and healthy commodious ones erected in their stead."

FEVERS IN WOLVERHAMPTON.

The spread of typhoid and typhus fevers at Wolverhampton is causing considerable anxiety amongst the inhabitants. During the past week there have been several deaths from these diseases, and the death-rate is seriously high amongst young children.

HEALTH OF MARYLEBONE.

There were only 164 cases of medical outdoor relief in Marylebone parish during the week ending the 23rd ult., as against 226 in the corresponding week of last year.

FROM ABROAD.—THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE—THE GERMAN COMMISSION ON CHOLERA.

The second meeting of the French Association for the Advancement of Science has just been held, with full success, at Lyons. M. Ducros, the now celebrated Préfet of the Rhône, seated on the right hand of the President, welcomed the members "in the name of the great city of which he had the difficult honour of being the representative." The President, M. De Quatrefages, in his address, observed that the Association was to be congratulated that amidst the changes in municipalities and préfets it had been alike welcomed by all, belonging, in fact, as it did, to no party. Amidst the present confusion that prevails in France, let it then plant its standard "Science and our Country," and rally around it all lovers of truth. Slow indeed had been the progress of science, and its appreciation, even within the last hundred years. How changed are matters now, "when science seems, like a magic tree, visibly growing, adding without cessation bough to bough, branch to branch. Reflect a moment, and without exaggeration or metaphor you will see that it is impossible to comprehend the actual condition of our scientific acquisitions without admitting that a more or less important discovery is made almost every day, perhaps every hour." The present age can only in energy be compared in science with what the period of the revival of learning was for letters. It is also remarkable for its practical applications of science; and this, so far from being deprecated, is but another feature of progress: new and diversified problems are for ever being set, the solution of which calls forth renewed efforts of pure science. It is in the great centres of industry, where applications reign supreme, that science, without which these cannot be, receives surest recognition. Strange as it may seem, it is amongst the lettered class that science least receives its due, determined as it would seem to defend foot by foot a domain which was once all its own. While duly valuing all that great writers have done for us, and the cultivation of languages whence our own is derived, we should take care that our children are initiated at an early period into the knowledge of scientific facts, ideas, and methods; for if science is popularised with so much difficulty, if it is too often treated with indifference by those who owe it most, and if recruits are so much wanted to carry on its work, the fault has chiefly arisen from a system of instruction in which literature alone is present, and in which science takes no part. The impressions of childhood are not to be effaced; and what respect can the scholar acquire for that which he sees treated as an importunate accessory? Manhood reached, what interest can be felt in that which has never been learnt; and what is to be expected of what is not even known? This is why governments have taken so little account of men engaged in studying nature and her forces; and yet on emergencies they have to be eagerly sought, as witness the great and numerous services they rendered during the siege of Paris. Under more peaceful circumstances they are sought for as indispensable as jurors in international exhibitions. These once passed away, the governments, instead of retaining their *savants* as advisers, allow them to disperse until new emergencies arise; but "the day will come when every great administration will have its 'consulting committee' essentially composed of men of science; and be sure that then many errors will be avoided, and many forces now lost will be utilised." But in order that such an institution should arise and flourish, the necessity of this intervention of science must be generally apprehended and accepted; and it is with this view that the French Association opens its doors to all comers.

"But let us not dissimulate the fact that we shall require perseverance. It is not in a few years that habits are transformed, and French habits are but little favourable to our operations. Generations have succeeded each other, living in indifference with regard to what we are seeking favour for, and do not be surprised if their descendants resemble them. They will oppose to us that force of inertia which too often wears out the boldest courage and the most noble ardour. They perhaps will even add some raillery and disdain. Let us despise these arms of ignorance and indolence, and appeal from them to time. Persevere! and with our country as our object, science as a means, the past as a lesson, and the future as a hope, let us forget nothing and labour on."

The section of the Medical Sciences, which seems to form a more prominent feature than the similar section in our British Association, elected Professor Claude Bernard as its president. M. Ollier read a paper on the Surgical Means for Increasing the Growth of Bones, founded on a series of experiments and clinical observations. He finds that where there has been arrest of growth of the long bones, impeding progression or causing deformity, he can induce increase of growth by producing a superficial exfoliation of bone by means of caustics. In an instance in which, after an arrest of growth of the radius had been followed by deformity of the hand consequent on the continued growth of the ulna, this was rectified by the removal and crushing of the cartilage of the latter. M. Gayet, of Lyons, gave an account of his experiments on Regeneration of the Crystalline Lens, whence he concluded that what has hitherto been regarded as regeneration of the lens was really but the complement of the development of the primary crystalline, which had been extracted at an age when the animal had not attained full growth. This accords with the results of clinical observation, no reproduction of the lens having ever been met with. M. Gayet also described a modification he has introduced of Graefe's Operation for Cataract. M. Foltz, of Lyons, read a memoir on the Homology of the Thumb with the two last toes. M. Diday electrified the audience with his Physiological Theory of Love, which in the brief account we have seen of it is not intelligible. M. Chauveau gave to the section what he termed a demonstration of the Transmission of Tuberculosis by the Digestive Organs. He observed that his numerous observations enabled him to state that if the healthy young of animals susceptible of tuberculosis were fed with food with which the matter of tubercle was mixed they would all exhibit tuberculosis in various organs. In anticipation of this meeting he had purchased some healthy calves, and, having had them fed as described, on slaughtering them the sixtieth day after the first ingestion the lymphatic system was found extensively tuberculised, while caseous deposits existed in the lungs. M. Delore read a paper on the "Sudden Rectification of In-Knee." This deformity, which is a common result of rickets and scrofula, which prevail so extensively at Lyons, M. Delore states is principally due to exaggeration of the natural curvature of the femur and tibia, accompanied by great depression of the internal tuberosity. In 350 cases he has rectified it by forcible pressure under chloroform, continued until the periosteum is detached and the epiphysis is separated, as announced by a cracking sound. The position is maintained by a starch bandage, and in a month the cure is complete. No accident has occurred, but the operation should not be performed after the fifteenth year or on weak subjects. Dr. Blane, of our Indian Medical Service, drew the attention of

the section to the question of the Propagation of Cholera, which, he said, all his investigations led him to attribute to potable water, and that the purity of this constituted the sole prophylactic. As a disinfectant he prefers chloride of aluminium, which he not only adds to the excrements, but administers by the mouth and with ice in enemata.

The Federal Council of the German Empire has appointed the following distinguished persons as a new Cholera Commission:—Generalarzt Dr. Böger and Professor Hirsch as representing Prussia; Professor von Pettenköfer for Bavaria; Medicinalrath Dr. Günther for Saxony; and Obermedicinalrath Dr. Volz for Baden—Professor Pettenköfer to preside. Its object is to pursue an exhaustive inquiry into the history and mode of propagation of cholera, undertake investigations as to the cholera germ or poison, and examine into all the local and individual circumstances that may influence the course of the disease and its practical treatment. The results of the labours of the Commission are to be published in an exhaustive treatise illustrated by plans and maps. It is evident, at all events, that much old ground is destined to be trodden over again, many theories are to be revcutilated, and that a portly tome will be compiled. But shall we be any nearer to the preventiou of the scourge which, when it arrives, always, under all forms of treatment, exacts its terrible penalty of a 50 per cent. mortality?

ON MUSCULAR IRRITABILITY AFTER SYSTEMIC DEATH.

(Croonian Lecture.)

By BENJAMIN WARD RICHARDSON, M.D., F.R.S.

[Abstract.]

The lecturer commenced by referring to the labours of Dr. Croone, the physician with whose name this lecture is connected. Croone was distinguished as one of the founders and as first Registrar of the Royal Society, and his scientific work included important contributious to the subject of muscular motion. Immediately preceding Croone, Nicholas Stenon, of Copenhagen (first an anatomist and afterwards Bishop of Heliopolis, a man whom Haller has described as *vir industrius, candidus, innocuus et magnus inventor*, and whom the Grand Duke of Tuscauy buried in the tomb of his Royal house), had made kuown the fact that the contractile portiou of muscle is resident in the carneous or fleshy part of the muscle, as distinguished from the fibrous part. This discovery, seized by Croone, led him to observe that the fleshy part of muscle is made up of fibres, and that each fibre possesses a distinct power of contraction; so that, to use his own words, "the force of the whole muscle is but an aggregation of each particular fibre."

Upon this observation, perfeetly original at the time it was announced, Crooue advaneed an hypothesis as to the cause of muscular motion. He showed that for muscular contraction it was necessary that the arteries should supply blood to the fleshy muscular fibres—that the blood should pervade the fibres—that iu its course, forced on by the stroke of the heart, it should mix with another liquor within the muscles, aud diffuse into the minute vesicles of which each muscular fibre is ultimately composed. To complete the mechanism for motion, he held that the nervous filaments which ramify into each muscle supply a refined fluid, much more active than the muscular fluid, by which the activity of the muscle is called into play.

The leeturer uext briefly traced the various hypotheses that have beeu advanced to explain muscular motion since the time when Croone made his original observations, the purport of the argument being that, although great advances have been made in the study of structure, and one very great advance in the study of functions—viz., by Haller in his separation of the respective forces of nerve and muscle—the precise question of the cause of muscular motion remains much in the same doubt as Croone left it.

Respecting the various theories and hypotheses since the time of Crooue, the author had nothing to say iu detail; the object of his lecture was to put forward certain facts he had learned on the phenomenon of muscular irritability after systemic death—that muscular irritability which remains sometimes for a brief, at other times for a long period after all the outward manifestations of life have ceased, aud when, to the common apprehension, the animal tissues are dead. He included in the same study certain examples in which muscular irritability has for a time ceased, but has become redeveloped under new conditions. He thus included the study of those states which favour the continuance of irritability or which destroy it, and those couditions which suspend but do not destroy it. By this method of research the author thinks we may proceed backwards towards living irritability, and may determine upon what that depends with more facility than by experimenting on the phenomena of irritability in the living animal. He imagines that if he knew nothing of the construction of a watch, or why for a certain time a watch maintains its motion, and if he had nobody to teach him these things, he might be better able to arrive at the fact he wanted by trying to set the motionless watch into motion than by interfering with it while it is iu motion.

The record of experimental endeavour carried out with the design above explained included a review of the work of twenty-five years. The subjects brought under consideration were arranged as follows:—

(1.) The effect of cold on muscular irritability after systemic death.

(2.) The effect of motor forces, mechanical, calorific, electrical.

(3.) The effect of abstracting and supplying blood.

(4.) The effect of certain chemical agents, inorganic and organic.

Effect of Cold.

Previous to the time of John Hunter it was supposed that cold was the most effective agent for destroying muscular irritability, and to this day the impression is commonly maintained; so that the sensatiou of cold in a motionless animal is accepted as the surest evidence of death. Hunter was the first to show by direct experiment that this was au error, aud that cold suspends irritability without destroying it. The original experiment of Hunter illustrative of this position was here described. The effects of cold employed in various ways iu the author's experimental researehes were now detailed systematically. The effect of cold in suspending the muscular irritability of fish, reptiles, and frogs was first described. On all these animals it was shown that cold could be made to suspend without destroying the muscular irritability for a long period of time, and that in fish (carp, on which the author had made the greatest number of experiments) the restoration of irritability could be perfected to the extent of the restoration of the living function.

Passing to warm-blooded animals, the author showed that in every animal that has been deprived of life without the occurrence of mechanical injury there is a period in the process of cooling wheu general muscular irritability may be made manifest. He demonstrates this fact by the simple experiment of throwing a current of water heated to 115° Fahr. over the arterial system of the recently dead auimal. If the surrounding temperature be high at the time of this experiment the operation should be performed within a few minutes after death; but if the temperature be below freezing-point, it may be delayed for a long period. In one experiment the author reproduced active muscular contraction in an animal that had lain dead and exposed to cold 6° below freezing-poiut for a period of three hours. In this case the muscles generally remained irritable for seven minutes after the injection of the heated water, while in the muscles of the limbs, by repeating the injection at intervals, the irritability was maintained for two hours.

The author drew a comparison between these experimental results and the phenomena of muscular irritability that have been observed in the humau subject after death by cholera. A short description of the muscular movements occurring sometimes after death from cholera was introduced. The movements were not conscious, nor were they promoted by electrical excitation; but the flexors and extensors belonging to each part in which there is movement are alternately contracted and relaxed as if from some iuternal influenee. The same observations apply to the phenomena of contraction and relaxation in the muscles of animals that have been held in abeyance by cold and have been called into action by the injeetion of heated fluids.

The influence of cold in suspending without destroying muscular irritability was further evidenced by the experiment of subjecting some young animals to death by the process of drowning them in ice-cold water. It was shown that in the kitten the muscular irritability may be restored to the complete re-establishment of life after a period of two hours of apparent systemic death, although the muscles when the animal is first removed from the water may give no response to the galvanic current. This same continuance of irritability after apparent systemic death by drowning in ice-cold water has been observed in the human subject, not in so determinate, but in an approximated degree. An instance was adduced in which a youth who had been deeply immersed for twelve minutes in ice-cold water retained muscular irritability so perfectly that he recovered, regained consciousness, and lived for a period of seven hours.

Commenting on the method of irritability, the author showed that a certain period of time is required before the irritability is raised from a mere passive condition, in which it responds only to external stimuli, into the condition necessary for independent active contractility. The change of condition from the passive to the active state, when it occurs, is so sudden as to seem instantaneous at first, then it is slowly repeated. This rule holds good in respect to voluntary muscles and involuntary. It is specially true in regard to the heart, which organ, the author states, may perform its office under two distinct degrees of tension and pressure—a low tension, in which the organ itself is reduced in size and moves almost insensibly; and a full tension, in which it is of larger size and moves with a sufficient power to impel the blood so as to overcome the arterial elasticity and the capillary resistance.

Another fact bearing on this subject is, that in rapid decline of muscular irritability the muscles most concerned in the support of the organic functions—namely, the heart and the muscles of respiration—are the last to yield up their spontaneous power; but when they have lost their power, they are the last to regain it. To this rule there is one exception—viz., in the muscular fibre of the right auricle of the heart.

The author then explained that the degree of cold which suspends irritability is fixed within certain measures of degree, from 38° to 28° Fahr. being the most favourable degrees of cold. Above a temperature of 38° Fahr. the muscles in a little time pass into permanent rigidity—*rigor mortis*. Below 28° the muscles, if the effect of the cold be extended to their whole structure, pass into some new molecular condition from which they do not return into active life; at least, they do not by means of any process of recovery with which we are at present conversant.

Effect of Motor Forces.

Cold, by the inertia it induces, suspends, under certain conditions, but does not destroy, muscular irritability. The motor forces, on the contrary, quicken the irritability for a brief period, and then completely destroy it. A method may perhaps be discovered for overcoming the effects of these forces, but at present it is not known. The mode in which all the motor forces act in arresting irritability is by the induction of a contractile state, which, once established, remains permanent. It should be remarked however, that the forces respectively named mechanical, calorific, electrical, act with different degrees of intensity, perhaps because we cannot as yet apply them, in this particular research, with equal measures of intensity. The author here related his experiments on the effect of the different forces upon the right auricle of the heart, and reported as the result of his observations that, while all the forces act ultimately alike in producing permanent contraction, the mechanical excitation is much slower than the calorific; while electrical excitation appears to hold an intermediate place, as if it were a combination of mere mechanical motion with an increased temperature. Electrical tension may nevertheless be increased so as to rival heat in its immediate effect on contraction.

The author here traced out the results of a series of short sharp irritations of muscle with a needle-point, and compared them with the effect of a blow, showing that in each case rigidity follows, but is much slower in development when it is excited by the needle.

The influence of heat in destroying irritability, by its power of producing permanent contraction, was described from experiments bearing on the relation of temperature to the muscular contraction of different animals—frogs, pigeons, and rabbits. It was shown that a relative rise in temperature in each class, a rise averaging 12° in Fahr. scale, from the natural temperature of the animal, is efficient for producing permanent rigidity, the cause of the ultimate rigidity being coagulation of the coagulable muscular fluid.

The effect of electrical excitation is in the same direction, but is varied according to the mode in which the excitation is performed. Discharge from the Leyden jar produces contraction, which is permanent or intermittent in accordance with the mass of the muscle and the intensity of the discharge. This fact was elucidated by reference to a series of experiments with a Leyden battery, placed in cascade, and the effect produced by the discharge from ninety-six feet of surface upon animals of different sizes and weights, from sheep down to pigeons, as well as on sections of the bodies of the same animals immediately after death. The experimental facts demonstrated that with an efficient discharge the whole muscular system of a small animal could be fixed instantly in the rigidity of death, and that the precise position of the animal at the period immediately preceding death was retained with such perfection, so sudden was the change, that nothing but physical examination by the hand could bring to the mind the fact that the animal had passed from life into death.

But the same shock passed through a sheep weighing 54 lbs. produced only a temporary contraction of muscle, and required several repetitions before the rigidity was rendered permanent.

By employing discharges of lower tension it was found that muscles, or special tracts of muscles, in the same animal immediately after its death, could be made rigid quickly or slowly by variation of the intensity of the discharge.

The effect of the intermittent electro-magnetic current was next brought forward, and was shown to resemble closely that of the simple electrical discharge from the Leyden phial. Intensified, it induces instant and permanent contraction; and if it be repeated, even with but sufficient force as to call forth feeble contraction, it destroys the irritability, *cæteris paribus*, more quickly than if the muscle had been left at rest.

Parenthetically, the lecturer dwelt here on the common practice, after sudden death, of endeavouring to excite the action of the enfeebled heart by passing through it an electrical current. Some practitioners, said the author, have gone so far as to introduce a needle into the heart itself, and to make the needle act as one of the conductors from a battery. Such experimentalists, before they undertake this operation on the human subject, should at least observe the effect of the agency they are employing on the exposed heart of an inferior animal recently and suddenly killed by drowning or by a narcotic vapour. They would learn then with what infinite facility the muscular irritability of the heart, in all its parts, is excited for a moment only, to be permanently destroyed. They would learn that if blood be not passing through the muscular structure concurrently with the exciting agent, they could not more effectually arrest function than by the very method they have adopted to sustain it.

The influence of the continuous current on muscular irritability was introduced by the author, together with a special reference to the first experiments of Aldini on the bodies of malefactors who had been recently executed; and it was shown from Aldini's most noted experiment how largely the phenomena of motion he induced in a dead man, and the recital of which caused so much sensation in the year 1803, were due, not to the galvanism, but to the circumstance that the dead body had been exposed for the hour after death, and before the experiments commenced, to the action of cold two degrees below freezing-point. On the whole the continuous current acts on muscular fibre after the manner of heat. If the muscle recently dead be exposed to cold, the current, when sufficient, restores for a limited period the irritability, and finally destroys it by inducing persistent contraction; if the muscle recently dead be left at its natural temperature, the current simply shortens the period of irritability by quickening contraction.

Abstraction and Supply of Blood.

Under this head the author first considered the effect of abstraction of blood from the living muscular fibre. He showed that when the flow of blood was very rapid there was invariably a given period of muscular excitation. In sheep killed in the slaughterhouse he found that this muscular excitement occurred at the time when the proportion of blood removed from the animal was equivalent to about the 320th part of the weight of the animal. The increased irritability passes rapidly into general convulsion without consciousness,

and, as a rule, ceases for a time with a temporary cessation of further loss of blood. After this the irritability remains if the bleeding be arrested altogether, and can be called into action by any external stimulus, although it is rarely spontaneously manifested when the vessels are left divided and open. After an interval of one or two minutes there is a recurrence of loss of blood, followed by a muscular excitement which marks the moment of systemic death. The breathing and circulation cease, but the voluntary muscles retain their irritability for several minutes, until they undergo permanent contraction—indeed, they retain their irritability under the influence of cold, and lose it under the influence of mechanical motion, heat, or electricity, as markedly as when death has been produced without abstraction of blood.

The fact of the two stages of exalted muscular irritability during abstraction of blood is important, as indicating the two different tensions of muscle to which reference has already been made. The first convulsive action, convulsion of syncope, marks a definite period, when the tension of the heart, and therewith of the whole vascular system, is reduced to a degree of action well defined and attended with definite phenomena. In this stage the force of the heart is sufficient to move the unconscious muscles, and gradually, if blood be resupplied, to lift them again into the condition for the sudden development of active conscious life. The second excitement—convulsion of death—indicates the period when the passive or lower tension of the muscular power ceases.

A distinction was here drawn by the author between the muscular condition present during syncope and during death. Syncope, it was urged, means the continued action of the heart at a low tension, from which it can be suddenly raised into full tension with restoration of the powers of life; death means the cessation of the lowest tension at which the heart can effectively work.

It was shown that in all the cases of restored animation after apparent death the condition of the heart was that of a muscle acting under the lower degree of tension. In this intermediate stage, between syncope and death, the most striking results were obtainable; but beyond this stage the methods so successful during it were practically useless for restoration.

The experiments of the author for re-establishing artificial respiration, together with artificial circulation, and of these combined with electrical excitation of the nervous centres, were next referred to; but as they had already formed the subject of a paper read before the Society, they were but briefly dwelt upon. If, continued the author, the question be asked, why, at a certain stage of hæmorrhage, there is development of muscular excitability, the answer is not difficult. The phenomenon is probably due to an irregularity in the distribution of power between the muscular organ and the nervous centre with which it is connected: the effect is due, that is to say, to a continued nervous irritation applied to the muscle after the resistance of the muscle is impaired, while the cessation of the motion is due to the nervous exhaustion that succeeds. In this first series of changes the voluntary muscles and the voluntary centres are involved; but the loss of blood continuing, the same series of changes affect in turn and in like order the involuntary muscles and their nervous centres. The result of this is the second convulsion, indicating death, after which there is no further motion except that which belongs to particular parts; there is no central motion, that is to say, supplying all parts as from a prime source of power, and sustaining all parts from a prime direction of the motion supplied.

The author described in this place a number of experimental attempts to preserve blood for the purposes of transfusion. He had endeavoured to preserve by slow desiccation of blood; but had found that when blood was submitted to evaporation, however slowly, an albuminous pellicle formed on the upper surface, exactly as casein forms on milk, and this prevented the perfection of the process. Recently he had been more successful by evaporating blood to which saline substances had been added; he could not, at the same time, pronounce what he considered a satisfactory termination of this line of experimental inquiry.

Effect of some Chemical Agents.

In this portion of his lecture the author detailed a series of experimental researches with various chemical substances, organic, inorganic, and intermediate, which tend to prolong the period of muscular irritability by diffusion through the tissues of animals recently dead. The substances which suspend irritability act in two ways. Some, like chloride of sodium and other soluble saline substances, act merely by holding the coagulable fluid of the muscular tissue in a continued state of fluidity; others seem to have a different action, and to hold the nervous function also in suspense. The nitrite of amyl and other members of the nitrite series belong to this last-named class of agents, and some of the cyanogen bodies exert a similar influence. In experiments with nitrite of amyl on cold-blooded animals (frogs), the author had suspended muscular irritability for a period of nine days, and had then seen it restored to the extent even of restoration of life. In one instance this restoration took place after the commencement of decomposition in the web of the foot of the animal. In warm-blooded animals a series of suspensions had been effected by nitrites and also by cyanogens, not for so long a period, but for periods of hours, in one instance extending to ten hours.

Under the head "Action on Nervous Matter" the author included, finally, a description of certain experiments he had made to determine the direct effects of some agents upon the nervous matter. In the whole series of his inquiries no fact had impressed him more forcibly than this, that the muscular irritability, in so far as it belongs to the muscle, may be sustained for hours after the nervous excitation which calls it into spontaneous action has ceased. Hereupon he infers that after death the nervous matter undergoes a change of condition which, in result, is identical with that change in muscle which we call "rigor mortis." There is evidence, moreover, from some rare cases, that the final inertia of nervous matter may be suspended and revived, so that all the muscles may be reanimated. This point was elucidated by reference to the phenomena that had recently been observed by Mr. Wasdale Watson, of Newport, Monmouthshire, on a double monster, photographs of which were placed before the Society. In this instance two children were born so attached that the separation of them was impossible. Both lived equally for three hours after birth, and then one died, and remained dead for three hours, while the other lived. At the end of the time named the dead child recommenced to breathe, and showed other signs of restored muscular power; then it sank into a second death, but at intervals of about four hours moved again; at length, twenty-three hours after its first apparent death, during a fit of crying of the living child, it recovered sufficient power to breathe and even to cry, and manifested evidence of life in all its muscles, except the heart, for twenty minutes, when it had a severe convulsion which stopped all further motion.

In this instance the author believed that the retention of muscular irritability had depended upon the retention in the nervous organism of the conditions necessary for exciting motion.

He proceeded to describe his researches as to the possibility of suspending nervous changes incident to death, so as to retain the conditions requisite for the communication of nervous impulse to muscular fibre.

Summary.

1. There are three degrees of muscular irritability—the active efficient, passive efficient, negative inefficient. The muscle after death may be suspended in any of these conditions for action; but, as a rule, it is the last condition only that is maintained long after death.

2. Muscular irritability may be suspended or stopped altogether under three different conditions, having reference to its connexion with nervous activity:—(*a*) The nervous and muscular activities may be suspended equally, on which there may follow spontaneous return of motion. (*b*) The muscular irritability may outlive the nervous function, on which the phenomenon of irritability may be induced by the application of the motor forces, but there is no return of spontaneous irritability—*i.e.*, of irritability belonging to the animal as an independent agent. (*c*) The nervous function may outlive the muscular irritability, under which circumstances irritability is invariably stopped by the production of persistent contractility of the muscular fibre.

3. Nervous activity exciting muscular action is identical with all the motor forces and particular to none. It is equivalent to mechanical, calorific, or electrical force, and equally susceptible of manifestation through either.

4. Muscular irritability after death is possible under conditions which, so far, are thus known. Cold, in certain defined degrees, suspends without destroying it. The motor forces strike it into rest. Blood sustains it or stops it according to the balance of power existing between the muscular and nervous systems. Some chemical agents suspend it independently, others suspend it together and equally with

suspension of the nervous function. When suspension is equal there may be spontaneous return; when it is unequal there is no return.

In conclusion, the author said there had been six great advances in physiological medicine—viz., the introduction of the art of anatomy, the discovery of the circulation of the blood, the discovery of the chemical process of respiration and nutrition, the discovery of the ultimate structure of animal bodies, the discovery of osmosis and of the crystalloidal and colloidal conditions of animal matter, and the discovery of methods for the general and local extinction of pain. The next grand advance has for its design the discovery of the precise relationships of nervous to muscular structure in the living and in the dead conditions. That established, the phenomena of muscular movement, its suspension or its destruction, will be understood like every other physical fact that lies this side of ultimate fact—that is to say, that lies, as this clearly does, within the range of experimental inquiry.

ON HYSTERICAL ANOREXIA.(a)

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In my opinion we shall never succeed in composing the history of hysterical affections but by the separate study of each symptomatic group. After this preliminary analytical labour, we may collect the fragments, and from them reproduce the whole disease. Regarded in its entirety, hysteria has too many individual phenomena and hazardous incidents to allow of the particular being found in the general.

This procedure, very questionable when applied to diseases limited as to time, as to space and localisations, and as to the modality of phenomena, here finds its legitimate employment. I have already endeavoured to characterise cough and temporary catalepsy of a hysterical nature; and others have devoted valuable monographs to hemiplegia, transitory or permanent contractions, anæsthesia, etc. On the present occasion I wish to treat of a symptomatic complexus too often observed to be a mere exceptional occurrence, and which possesses the further advantage of enabling us to penetrate into the intimacy of the mental dispositions of hysterical subjects.

The disturbances of the digestive organs which supervene during the course of hysteria are numerous. They consist in repeated and sometimes almost incoercible vomiting, in gastric pains, hæmatemeses, in constipations, or diarrhœas, which are singular, whether by their evolution or by some of their characters. Among the more serious symptoms, vomiting of blood has chiefly attracted the attention of physicians. Gastralgias—purely subjective phenomena—are ill understood, and disturbances of the intestinal canal give rise to much uncertainty.

Attention has been paid in preference to the curious perversions of appetite, examples of which superabound in almost innumerable varieties. While relating singular cases of strange appetite, the true condition of the patients has not been investigated; and the whole is reduced to the profitless notion that hysterical patients are liable to the most out-of-the-way disorders of the digestive functions. Nevertheless, it would not be impossible to attempt a classification of this description of anomalies; but although I have had the opportunity of observing a great number of these, I do not intend to speak of them here, even incidentally.

The object of this memoir is to make known one of the forms of hysteria of the gastric centre which is of sufficient frequency for its description not to be, as too readily happens, the artificial generalisation of a particular case, and constant enough in its symptoms to allow of physicians who have met with it controlling the accuracy of the description, and to prevent those who have yet to meet with it in their practice being taken unawares. The term "anorexia" might have been replaced by "hysterical inanition," which would better represent the most characteristic of the accidents; but I have preferred the former term, without otherwise defending it, precisely because it refers to a phenomenology which is less superficial, more delicate, and also more medical.

Of the different stages of which digestion consists, the best analysed by patients, and the least easily investigated by the physician, is the appetite for food. If the term "anorexia" is generally adopted to represent a pathological condition, it has no physiological correspondent, and the word "orexia" does not exist in our language. The consequence is that we are defective in expressions for the degrees or varieties of inappetence—the poverty of our vocabulary corresponding to the insufficiency of our knowledge.

In certain cases there is suppression of appetite, without the patient exhibiting aught else than regret at the absence of a stimulus for taking food. Repugnance is not present, and frequently the proverb *l'appetit vient en mangeant* receives its justification. Under other conditions, the patient has a more or less decided repugnance for certain aliments, while in other cases any alimentary substance whatever excites disgust. However general the inappetence may be, it always has its graduated scale, so that aliments are not indiscriminately rejected with the same insistance.

On the other hand, there are affections, whether of the stomach or of the central nervous system, whether localised or diathetic, which are accompanied by an illusory sense of appetite, occurring at unequal or quasi-regular intervals. In certain hysterical and in certain diabetic patients these false appetites become exacting and imperious. Almost always such patients, in obedience to a theoretical hypothesis, entertain the idea that their uneasiness is due to inanition, and that it may be overcome by the aid of nutriment, however reduced in quantity this may be. Experience shows us that two drops of laudanum succeed better in appeasing this imaginary hunger than does the ingestion of aliments.

Exactly opposed to this exaggeration is the diminished appetite and the conviction that food will prove injurious, the patient here, as in the former case, acting in conformity to an instinctive hypothesis. When she is docile, and desirous of being delivered from her fears, she makes the effort, and acquires the conviction either that her health is improved under the employment of alimentation, even though it does cause suffering, or that her apprehensions have been ill-founded. When indocile, and anxious before all things to avoid pain, which, although hypothetical, is dreaded in advance, she persists in her abstinence from food. This is the case with the hysterical patients whose history I shall now endeavour to depict. Cases which persist for years are not suitable for narration, and I believe that it will be better, in place of particular facts, that I should present a somewhat diagramatic sketch of the disease.

A young girl, between fifteen and twenty years of age, suffers from some emotion which she avows or conceals. Generally it relates to some real or imaginary marriage project, to a violence done to some sympathy, or to some more or less conscient desire. At other times, only conjectures can be offered concerning the occasional cause, whether that the girl has an interest in adopting the mutism so common in the hysterical, or that the primary cause really escapes her.

At first, she feels uneasiness after food, vague sensations of fulness, suffering, and gastralgia *post-prandium*, or rather coming on from the commencement of the repast. Neither she nor those about her attach any importance to this. The same sensations are repeated during several days, but if they are slight they are tenacious. The patient thinks to herself that the best remedy for this indefinite and painful uneasiness will be to diminish her food. Up to this point there is nothing remarkable in her case, for almost every sufferer from gastralgia has submitted to this temptation, until he has become assured that such relative inanition is not only profitless but aggravates his suffering. With the hysterical things take another course. Gradually she reduces her food, furnishing pretexts sometimes in a headache, sometimes in temporary distaste, and sometimes in the fear of a recurrence of pain after eating. At the end of some weeks there is no longer a supposed temporary repugnance, but a refusal of food that may be indefinitely prolonged. The disease is now declared, and so surely will it pursue its course that it becomes easy to prognosticate the future. Woe to the physician who, misunderstanding the peril, treats as a fancy without object or duration an obstinacy which he hopes to vanquish by medicines, friendly advice, or by the still more defective resource, intimidation. With hysterical subjects a first medical fault is never reparable. Ever on the watch for the judgments concerning themselves, especially such as are approved by the family, they never pardon; and considering that hostilities have been commenced against them, they attribute to themselves the right of employing these with implacable tenacity. At this initial period, the only

(a) *Archives Générales de Médecine*, April, 1873.

prudent eourse to pursue is to observe, to keep silent, and to remember that when voluntary inanition dates from several weeks it has become a pathologieal condition, having a long course to run.

It is neeessary, in order to appreciate at their value the various elements which concur in the development of the disease, to submit each of these to a minute analysis. The gastric pain, which is, or appears to be, the point of departure of the accidents, requires especially that we should dwell upon it. It varies in intensity from a confused sense of pressure to a kind of stomachal cramp, accompanied by fainting, pallor, sweats, or even shivering. There is neither vomiting nor any real desire to vomit even in extreme eases, the patient only asserting that a degree beyond would induce this. In mere appearanee these painful paroxysms in nowise differ from those which are so frequently met with in all affections of the digestive organs. Food induces them, and they do not oeeur except after meals. If this were really so, we should want any distinctive signs, and should be reduced to adding gastralgia to the already too long list of localised hysterical neuroses.

But the painful sensation persists more or less during the intervals of the repasts, being sometimes insignificant, sometimes more eonsiderable, and now and then so attenuated in degree that the patient complains of a general uneasiness without being able to indicate a fixed point. Whatever may be its form, seat, or degree, is this painful sensation due to a stomachal lesion, or is it not only the reflex impression of a perversion of the central nervous system? I cannot believe that the solution ean rest doubtful from the moment that the question is put. At the commencement of a great number of cerebro-spinal diseases we meet with præeordial suffering, a sense of epigastric pressure, or contractions, which also attend even transitory emotions. All of us have felt this kind of uneasiness while referring it to the definite moral cause that has given rise to it; but supposing an individual suddenly seized with this epigastric constriction, without any obvious eause, the uneasiness becomes such as to give rise to anxiety. The patient seeks from whence so strange an impression can arise, and it is often in such a seareh that the *délire des persecutés* eommences. Supposing that the cephalic affeetion does not lead to such serious consequenees, the first and most natural hypothesis that occurs to the patient is that he is suffering from disease of the stomach. All præeordial anxiety, with apprehension and the semi-vertigo it entails, becomes exaggerated by food, which forms an additional reason for attributing it to gastric irritation.

The characteristics of this gastralgia from reflex causes are not impossible of discernment, the circumstances under which they may exist being by no means of rare occurrence. It is distinguished from painful irritation of the stomach because it is not exactly localised, and is accompanied by an entirely special inquietude; it is sudden, the way not having been prepared for it by gradually increasing indigestions; it is not followed by dyspeptic accidents; the intestinal functions remain unimpaired save by habitual constipation, which is easily overcome; the nature of the food taken exercises no influence on the paroxysms; and the character of the pain, when it really exists, bears no analogy to the gastric suffering determined by a lesion, however superficial.

From the moment that the nature of this *malaise* has been ascertained, important progress has been made in the establishment of the diagnosis. I cannot too strongly insist on these splanchnic neuroses, and on their relations to certain cerebral conditions.

The hysterieal subject, after some indecision of but short duration, does not hesitate to affirm that her only chance of relief lies in an abstinence from food; and, in fact, the remedies appropriate to other gastralgias are here absolutely inefficacious, however zealously both physician and patient may employ them. The repugnance for food continues slowly progressive. Meal after meal is discontinued, one of these, whether breakfast or dinner, alone being alimentary; and almost always some article of diet is successively suppressed, whether this be bread, meat, or certain vegetables—sometimes one alimentary substance being replaced by another, for which an exclusive predilection may be manifested for weeks together. Things may be thus prolonged during weeks or months without the general health seeming to be unfavourably influenced, the tongue being clean and moist and thirst entirely absent. The persevering constipation readily yields to mild laxatives, the abdomen is not retracted, and sleep continues more or less regular. There is no emaciation, although the amount of nutriment scarcely amounts to a tenth of that habitually required by the patient. The power of resistance of the general health in the hysterieal is too well known for astonishment being excited at seeing them support without injury a systematic inanition to which robust women could not be exposed with impunity. Moreover, this diminution of aliment is made not suddenly, but by degrees, so that the economy more easily habituates itself to the decrease. Another ascertained fact is, that so far from muscular power being diminished, this abstinence tends to increase the aptitude for movement. The patient feels more light and active, rides on horseback, receives and pays visits, and is able to pursue a fatiguing life in the world without perceiving the lassitude she would at other times have complained of. There are no visible signs of chlorosis or anæmia, or, at least, inanition cannot be accused of having induced them, for most of the patients were already in a chloro-anæmic condition.

If the situation has undergone no change as regards the anorexia and refusal of food, the mental condition of the patient is brought out more prominently, while the dispositions of those surrounding her undergo modification as the disease becomes prolonged. If the physician had promised rapid amendment, or if he has suspected a bad disposition on the part of his patient, he has long since lost all moral authority. Nevertheless, the patient only exceptionally resists the administration of medicines. Just as she is invincible in regard to food, she shows herself docile even for the least attractive remedies. I have seen one chewing morsels of rhubarb whom no consideration would have induced to taste a cutlet. The most active gastric stimuli, purgatives whether mild or drastic, mineral waters, produce no effect, good or bad. The same may be said of diffusible stimuli, fetid gums, valerian, hydro-therapeutics, douches at different temperatures, as also of tonics, preparations of iron, cutaneous derivatives, etc. Laxatives alone are of use by removing constipation, none of the other agents even producing a diminution of the anorexia. When after several months the family, the doctor, and the friends perceive the persistent inutility of all these attempts, anxiety and with it moral treatment commences; and it is now that is developed that mental perversion, which by itself is almost characteristic, and which justifies the name which I have proposed for want of a better—hysterieal anorexia.

The family has but two methods at its service which it always exhausts—entreaties and menaces,—and which both serve as a touchstone. The delicacies of the table are multiplied in the hope of stimulating the appetite; but the more the solicitude increases, the more the appetite diminishes. The patient disdainfully tastes the new viands, and after having thus shown her willingness, holds herself absolved from any obligation to do more. She is besought, as a favour, and as a sovereign proof of affection, to consent to add even an additional mouthful to what she has taken; but this excess of insistance begets an exeess of resistanee. For it is a well known law conformable to the experience of all that the best way to double the obstinacy of the hysterical is to allow the supposition, explicitly or implicitly expressed, to transpire that if they would they could dominate their morbid impulses. A single concession would transfer them from the position of patients to that of capricious children; and to this concession, in part from instinct and in part from obstinacy, they will never consent.

(*To be continued.*)

REVIEWS.

The Science and Art of Nursing the Sick. By Æneas Munro, M.D. Glasgow: J. Maclehose. 1873.

This is an attempt to supply a hitherto marked deficiency in the literature of this subject. The author claims to have had special opportunities, and has evidently taken no small pains to produce a work that should form a useful practical guide to the sick-room. Its scope is somewhat ambitious, dealing not only with the duties of an ordinary nurse, but entering minutely into the question of diet, sketching briefly many points of minor surgery, and giving full instructions for monthly nursing.

A suggestion thrown out in the earlier portion of the work "that it would be advisable to organise a staff of district visiting nurses, similar to or combined with the district Bible-

woman, as now employed by some of our churches," is a very good one; "such an organisation might prove of incalculable benefit in showing the people how to clean their homes *properly*, how to cook their food *well*, and many other things of a similar nature." He justly observes that "the Church in this respect has shot ahead of our profession."

There is much in this work that the young practitioner will be glad to learn. It is just the book to place in the hands of any intelligent woman intending to qualify as nurse, and if more heads of households were familiar with its teachings, it would save them much anxiety and the doctor much unnecessary trouble.

The chapter on sick-diet is well worth perusing, and, together with the appendix on "Invalid Cookery Receipts," will doubtless prove of great service to many an invalid whose friends have taken the trouble to study them.

The chapter on "Nursing during Pregnancy and in the Lying-in Room" would almost better have formed a separate treatise; for though it is essential that a monthly nurse should understand the details of a sick-room, still it is not requisite, nor desirable, that an ordinary nurse should combine the duties of the lying-in room with her other acquirements—the two should be perfectly separate and distinct. The subject is well and exhaustively treated, and is evidently written by one who thoroughly understands the practical details.

The work itself reflects great credit on the author, and deserves a large circulation. It is printed on toned paper, in a bold clear type, that, in the quiet hours of watching, might easily be read without distress.

Leçons Cliniques sur les Maladies des Femmes. Par T. Gallard, Médecin de l'Hôpital de la Pitié. Paris: J. B. Baillière. 1873. Pp. 792; 94 figures.

Clinical Lectures on the Diseases of Women. By Dr. Gallard. London: Baillière, Tindall, and Cox.

The author in his preface tells us that the work does not purport to be a systematic treatise on the subject, but simply, as its title suggests, clinical lectures, which were delivered from time to time to his class at the above-mentioned Hospital. He prefers rather to describe accurately a few subjects than to sketch merely a great number, and has endeavoured to show that a study of these diseases offers no more difficulty or obscurity to the general practitioner than that of any other organ in the economy. He says:—

"I shall be happy if the readers of this book arrive at the same conviction and acquire the same confidence in themselves; for I desire nothing so much as to succeed in popularising this part of science, in rendering it so simple and accessible to all that we shall be able at length to see this speciality disappear from the practice of medicine, from those who pretend to monopolise in a small number of privileged hands all that belongs to the treatment of diseases of women."

The first 144 pages are occupied with preliminary details as regards the normal anatomy of the female organs, methods of examining, use of speculum, sound, etc.; a clear understanding of this necessarily important study being much facilitated by several illustrations of the various instruments employed. Then follow some well-written chapters on metritis, the author dividing this subject into the simple acute parenchymatous, the internal or acute mucous (metritis hæmorrhagica), and the chronic metritis.

The space devoted to the first of these, more especially in reference to treatment, is not so great as one would have expected, considering that acute metritis is the precursor of the chronic form, to which the author devotes over 200 pages. He illustrates his views by clinical cases—a method which will approve itself as eminently useful to the busy practitioner. Menorrhagia he considers as the principal, if not the only symptom that can be regarded as pathognomonic of acute internal metritis, and advises the intra-uterine injection of tinct. fer. perchl., etc., only when the acute symptoms are subsiding and merging into the chronic form. He speaks very favourably of digitalis in this condition, and regards it as the most useful agent in restraining the hæmorrhage and relieving the inflammation.

The chapter on chronic metritis enters fully into the symptoms, diagnosis, and treatment of this troublesome affection. The author discusses the relative merits of bleeding, tartarised antimony, mercury, iodine, hyoscyamus, arsenic, ergot, digitalis, alkalies, and abstinence; and under the local medication, leeches, baths, injections, tampons, caustics, actual cautery, blisters, electricity, etc.; and then enters upon the hygienic management, hydrotherapie, regimen, and, in fact, everything that has been or is supposed to influence the course of this disorder.

The chapter on hypertrophic elongation of the cervix uteri comprises the symptoms, diagnosis, and treatment of this rare condition, M. Huguier's conoidal amputation of the neck being the only mode described. The description of fibroid tumours of the uterus applies more to polypi, or, at any rate, intra-uterine, and not intra-mural, fibroids, removal by the écraseur or the scissors being the methods recommended. He quotes M. Nélaton as advocating the removal of intra-mural growths by free incision and enucleation, but states that he has never met with one favourable for such an operation. Although he professes to disbelieve in the absorption or disappearance of these growths by any remedies we can employ, he yet advises the administration of alkalies, iodine, etc., with this object in cases not deemed proper for operation.

The subject of cancer is treated at length. He considers the occurrence of metrorrhagia as one of the most important symptoms in the differential diagnosis between chronic metritis and cancer in the early stage, it being a constant symptom in the latter and exceptional in the former, occurring suddenly without any assignable cause, and often very profuse.

In considering the etiology of cancer, he regards it as the result of a particular predisposition—of a morbid state anterior even to its formation—a diathesis, in fact. He thinks it impossible that chronic metritis can degenerate into cancer.

Although advocating removal of the cervix, he does not consider Récamier's plan of removal of the whole of the uterus justifiable.

He devotes two chapters to the subject of hæmatocele, and agrees with Velpeau—only to puncture in case of absolute necessity.

The volume closes with a consideration of ovaritis—marriage being recommended as a remedy when leeches, scarification, and other measures have been resorted to in vain.

Besides a table of contents, there is a very good index, which facilitates reference and makes the volume very complete.

The practitioner will find the subjects enumerated discussed in a practical and simple manner; and, although he will not find anything more than our recent text-books give, still it is an honest record of careful thought and observation, and will well repay perusal. If the author be as good at other subjects as he shows himself to be in this, he, for one, has justified his opening remarks.

GENERAL CORRESPONDENCE.

THE FLUID MEASURE OF THE BRITISH PHARMACOPŒIA.

Letter from Dr. Lewis Shapter.

[To the Editor of the Medical Times and Gazette.]

Sir,—According to the accepted method of interpreting the fluid measure of the British Pharmacopœia, one fluid ounce is very generally assumed to have its equivalent in two tablespoon of fluid, two fluid drachms in one dessertspoonful, and one fluid drachm in one teaspoonful. It is only necessary, however, to test the spoons in common use in order to demonstrate the fallacy of such a comparison, and to point to the necessity for the revision of a system which, as at present understood, can only tend to inaccuracy of observation. Will you permit me, therefore, to direct attention to the results of such simple experiments which appear to prove, as accurately as the circumstances of the case will admit, that one tablespoon contains one fluid ounce (an eight-ounce bottle being equal to either ten, nine, or barely eight tablespoonfuls, according to the spoon used), one dessertspoon contains four fluid drachms (with scarcely any variation), one teaspoon contains two fluid drachms (with slight variation); or, in other words, our supposed doses are being in many cases simply doubled from a misinterpretation of figures in common use. The effect of such a misunderstanding—which, I believe, will be almost universally admitted—must necessarily be to produce an erroneous knowledge not only of the doses, but also of the special uses of drugs; so that, to insure requisite and essential accuracy, it seems impossible to overrate the importance of an alteration in the present system; for even if these facts are known, and acted upon by some, yet this very circumstance

can only tend to an increased want of uniformity in practice, and more unreliable methods of observation. Without entering, then, into detail regarding the obvious errors that may arise under the existing method of interpretation, I would only add that these remarks are supported by the variations, practically observed, regarding the efficacy of the same prescribed doses in different cases—such variations being probably due, upon the one hand, to the use of graduated glasses, and, on the other, to the adoption of the spoon-measure.

In conclusion, it remains for consideration whether the present standard of comparison (even if revised) is sufficiently reliable to be continued, or whether another method, not subject to variation, can be placed in its stead. Many of the eight-ounce bottles are certainly accurately graduated into eight parts, so that one ounce is taken, or two dessertspoonfuls, but not two tablespoonfuls. This graduation of bottles is, however, by no means universal, and for the most part does not extend, in the case of eight-ounce bottles, to sixteen parts, and in the case of six-ounce bottles to twelve parts. The dessertspoon is not in such common use as to supplant the tablespoon; and the teaspoon (so frequently employed for children), unless we are content to adopt the equivalent measure of two drachms, must be entirely discarded from use. As therefore we are so soon to have an appendix to the British Pharmacopœia, if it is not too small a matter, might I venture the suggestion that it would tend to the advancement of therapeutics if some definite statement were added to it, not only for our own instruction, but also for the special guidance of those whose business it is correctly to interpret our prescriptions.

I am, &c., Lewis Shapter, B.A., M.B. Cantab.

Exeter, September 1.

PURPURA HÆMORRHAGICA.

Letter from Dr. T. Inman.

[To the Editor of the Medical Times and Gazette.]

Sir,—Whilst at the Liverpool Royal Infirmary, I had under my care (at the same time) two very bad cases of this disease—both in young women. One was a servant in good place, well fed, and comfortable. Without any warning symptom she awoke one morning, and found blood coming from her mouth, eyes, and nose. When I saw her the face seemed as if it had been bruised to a jelly by violence. There were apparently severe contusions on the body, and blood was flowing from every cavity of the body except the ears. The urine seemed more like blood than the ordinary fluid.

Within a few days the second patient was admitted, and in precisely the same condition as the first. The closest inquiry could not elicit the existence of premonitory signs, nor of any cause whatever for the occurrence of the complaint, which, as in the first instance, came on suddenly in the night.

The treatment was terebinthinate in both cases; and the diet milk, with a small modicum of spirits and beef-tea. The first patient recovered slowly, and was well in about six weeks; the second died suddenly about the tenth day after seizure.

I am, &c.,

Clifton, August 31. Thomas Inman, M.D. Lond.

THE DAIRY REFORM COMPANY AND TYPHOID.

Letter from Mr. D. Maconochie.

[To the Editor of the Medical Times and Gazette.]

Sir,—It is so difficult for critics, after an event, to place themselves exactly in the position of those who were actors in it and to realise the ignorance of subsequent developments which those actors laboured under at the time, that we are not surprised that our position and action have been to a certain extent, and by some writers, misunderstood. We therefore, Sir, ask your permission to make a very brief statement in your columns, believing that the whole subject is so important to the medical profession that they will not consider us presumptuous, as laymen, in addressing you.

First, Sir, we have always been under the impression that no case of typhoid poisoning through milk had ever occurred, unless in presence either of proof or of the gravest suspicion of adulteration. The idea that there was any real danger of milk which was unadulterated being nevertheless poisoned, had, we readily confess, never occurred to us. Of the immense medical value of genuine milk we had the highest opinion, and when we started business in 1867 we frequently sent in tenders to hospitals and workhouses. Our tenders were always high, for unadulterated milk is an expensive article, and we found to our disappointment that the subject was, with a very few exceptions, treated with the greatest apathy and lukewarmness. This naturally tended still further to throw us off our guard as to sanitary precautions, and we confined our attention to preventing adulteration, to seeing that the milk was properly cooled, the cows properly fed, and to fighting our natural enemies—the perquisite-loving cooks. To give some idea of our system and organisation, we enclose for your inspection a copy of our rules, and the engagement form which all our *employés* sign.

Under this condition of things, we received Dr. Whitmore's statement, that circumstances seemed to point to our milk as producing typhoid, with such absolute incredulity that one of our directors (Mr. Hope) was not even informed of it until the second day. But when we then found that Dr. Whitmore was under the belief that the whole, or the major part, of our milk came from a sewage farm, we regarded the whole thing as arising from a misconception, inasmuch as we derived no part of our supply from any such source.

When persons once start with an apparently justified scepticism of this nature, nothing is more difficult than to surmount it; for what does it involve? That a theory started upon a datum, among others, which was erroneous, should nevertheless prove correct for another reason.

Again, as was very natural, Dr. Whitmore was himself far from satisfied at first that it was the milk, and in his first letter used the following words:—"Without presuming to express any opinion as to the cause of this outbreak." If *he* was doubtful, why should *we* have been certain?—especially as, in the words of our letter to the *Times*, "As often happens, in a moment of anxiety and pressure, the medical gentlemen who first communicated with us each thought that the facts in full detail had been put before us by one of the others. The result was that we remained in ignorance of most of them, and learned them from the columns of the medical journals, for the first time, *after* we had cut off the suspected supply."

But, Sir, we are prepared to go further, and to question the policy on public grounds of stopping any business and throwing out of work a couple of hundred of people on suspicion, however strong; for even one mistake would raise a host of coarse, bitter, and ignorant enemies, of the very class which already gives so much trouble to medical officers.

However, the precautions we are now taking are such as have never before been carried out for the protection of any article of food. They are briefly as follows:—

1. That the sanitary condition of each farm shall be from time to time inspected and reported upon by a medical officer from London.

2. That the local medical men shall report to us weekly on the health of the individuals, and on a single case of infectious disease arising shall immediately stop the milk.

3. That the local veterinary surgeons shall report to us weekly on the health of the cows, having similar power to stop the milk.

4. That all our *employés* in London shall be medically inspected weekly, the London medical man having full power to close all or any of our establishments if he sees fit, without reference to us.

5. That our milk shall be watched and analysed from time to time by two eminent chemists, who have power to enter our premises at all hours, and take what samples they please.

6. Finally, as a satisfaction to themselves, we have sent orders of admission to our premises to the Medical Officer of Health of every district where we have any customers.

If any of your readers can suggest any weak point in our armour, we will take immediate steps to remedy it.

In conclusion, Sir, we beg to say that though circumstances made us appear at first as if antagonistic to the medical authorities, this only arose from the double misunderstanding which we have explained above. What we have always desired to be is a useful and reliable instrument in the hands of the physicians of London.

I am, &c., D. Maconochie, Secretary.

Dairy Reform Co. (Limited), Orchard-st., W., Aug. 28.

Dr. Moore, of Rajpootana, has been awarded the Government prize for the best manual of Indian family medicine.

OBITUARY.

ROBERT BOWER, M.R.C.S.E., L.S.A.

Mr. Bower died at Southport, in Lancashire, on August 24. He had retired from practice for many years, owing to a paralytic seizure. The writer of this paper became acquainted with Mr. Bower at school and studied with him in London. He was considered the best anatomist in Mr. Grainger's school, then a celebrated anatomical school in the Borough, and his success at the College was looked upon as certain. Judge then our surprise and mortification when he left the College a rejected man. Half a dozen hands were held out to welcome him, but to our congratulations he anwered in a faltering voice, "I am rejected." "Rejected!" we all said at once: "Impossible!" and then came the question, "By whom?" "Sir William Blizard." "Upon what question?" "Upon amputation in traumatic gangrene." Away we posted to Mr. Richard Grainger's in the Borough with our bad news. Upon being satisfied that we were not joking, he pulled out his watch and said, "We cannot reach the College before the Court rises, or I would have accompanied you and appealed to Sir Astley Cooper, and asked him whether he would allow one of his best pupils to be rejected on a subject which he had publicly taught and practised in Guy's Hospital." On Mr. Bower waiting upon Sir Astley Cooper the following morning, he said, "Give me Sir William's questions and your answers." To the first and second questions satisfactory answers were given, but the third was fatal to his passing. They were as follows:—1st. How would you treat a case of compound fracture of the forearm? 2nd. But suppose mortification took place, what would you do? 3rd. In case the mortification continued to advance up the limb what would you do then? "I would amputate." "Amputate!" said Sir William; "what, before the line of demarcation had formed?" "Yes, Sir William, in traumatic, but not in idiopathic gangrene." Sir William then said, "I should advise you to study surgery three months longer." Having heard Mr. Bower's statement, Sir Astley said, "As I was in the room, why did you not appeal to me? Your answer was quite right. You have seen me practise it in Guy's. Baron Larrey was the first surgeon to ignore the line of demarcation in traumatic gangrene after the battle of Waterloo. I am very sorry for you. You might have a special examination granted you on petition, but I advise you to wait the three months." Mr. Bower again presented himself at the Christmas examination of 1823 and had a mere formal examination given him. In after years Mr. Richard Grainger alluded to Mr. Bower's rejection when giving evidence before a committee of the House of Commons on some subject connected with our profession. Mr. Bower settled down in Rochdale, where he held a small but highly respectable practice, which he never seemed desirous of extending, probably from the circumstance of his never marrying.

JOHN W. MOORE MILLER, M.D., Inspector-General of Hospitals,

Died at Southsea a few days since. He had received the silver war medal with four clasps for his services at the Pyrenees, Neville, Nivc, and Orthes, and was also engaged in the campaign of 1815. He contributed several articles on "Public Health" and "Drainage" to local periodicals, and "Case of Arrested Development of Bladder and Urethra with Operation for Relief."

GEORGE FABIAN EVANS, M.D., F.R.C.P.,

Died on the 30th instant after an illness of some months, aged 76 years. He was Senior Consulting-Physician to the Birmingham General Hospital, and a practitioner well known in the midland counties. He was a Fellow of the Royal Medical and Chirurgical Society of London.

The papaya tree and its juice are used, says the *Morning Post*, in India to make meat tender. The juice or a solution of it undoubtedly softens, digests, or dissolves meat, albumen, and gluten. Assistant-Surgeon Gopal Chunder Roy has written an interesting paper on this subject in the *Calcutta Journal of Medicine*. He compares the action to that of a ferment, and suggests the administration of a few grains of the dried juice after meals in cases of indigestion depending on a deficient secretion of gastric juice. His experiments were conducted at Netley, under Dr. Parkes.

MEDICAL NEWS.

Royal College of Surgeons.—At the last half-yearly Examination in Arts, etc., for the diplomas of Fellowship and Membership of the College, there were ninety-five candidates for the first-named distinction. Of this number seventy-one passed, and eighteen, having obtained a sufficient number of marks for the Membership, will have to be re-examined in the extra subjects in which they failed. Only six were altogether rejected. The following gentlemen passed for the Fellowship, viz.:—

Messrs. A. R. Anderson, W. C. S. Bennett, A. L. Bowen, R. J. Bryden, F. W. Buée, G. C. R. Bull, J. E. Bullock, R. D. Cameron, W. H. Carrington, F. E. Cockell, F. O. Combe, W. L. Chubb, W. Cock, W. H. Copley, C. Crossley, A. S. Currie, E. W. Dease, F. S. Edwards, W. J. V. Harle, W. Falla, F. W. Giles, F. C. Gayton, J. R. Guy, G. H. Hames, G. F. Harris, C. Gross, H. C. Goold, H. Hine, F. Hickman, R. Hunt, C. Howard, J. H. Kyan, J. W. Jerome, J. C. Keer, H. Le Cronier, J. R. Leeson, J. F. M'Crea, V. Matthews, W. H. Mason, A. S. Morton, E. J. Morley, B. J. Newmarsh, W. J. C. Nourse, T. C. Nugent, W. H. Packer, C. J. R. Owen, A. F. Parker, C. N. Pearson, J. K. Pickford, A. O. H. Phillips, T. G. Prosser, E. A. Praeger, E. L. Robinson, J. H. Simpson, F. H. Spooner, R. C. Stewart, A. J. Sturmer, C. H. Tamplin, G. H. W. Thomas, G. G. Tatham, S. J. Thomson, H. W. G. Triggs, H. H. Tidswell, W. H. P. Thorn, A. Vores, T. J. Verrall, W. J. Walsham, C. E. Walker, W. P. Whitcombe, A. T. O. White, H. R. Whitehead.

For the Membership there were 238 candidates, of which number 181 passed and fifty-seven were rejected. The following were successful, viz.:—

Messrs. J. C. Ady, R. P. Allen, J. Alexander, S. Angear, H. T. Baxter, W. E. Ankliff, J. H. Bennett, N. Bentham, A. Blackmore, W. Beecham, E. Berdoe, F. Browne, H. T. W. Blakeney, D. R. Bowen, R. B. Bothamley, J. H. Breach, E. J. Booth, J. Buckle, C. Bradford, J. F. Brown, J. T. Butterworth, F. Casson, T. W. J. Allen, H. Charles, J. T. Brett, J. Cæsar, T. J. Cadett, F. J. Bennett, H. M. Chapman, P. E. Campbell, W. Chalmers, J. G. Clark, H. E. Davies, J. B. Coumbe, T. W. Colbourn, E. Creighton, E. S. Dalton, H. C. Crew, M. A. Chilton, S. R. Corder, J. L. Denson, R. Dempster, A. S. Dawson, A. Dobson, W. Dunstan, C. Donkin, W. E. Dixon, E. H. Dumbleton, D. C. Embleton, C. H. Downes, E. H. Dyer, T. F. Ensor, H. Ewbank, A. Fawcett, D. Evans, G. Ellis, W. T. H. von Beverhondt, C. J. Fooks, L. B. Eskell, S. B. Fairley, A. G. B. Gipps, J. S. Fallon, A. Fowham, G. A. Farrer, W. Fligg, G. J. W. Flower, W. H. Gaze, W. H. Goodchild, S. J. Gabriel, J. Greenwood, C. R. Graham, T. H. Greame, H. P. Gilbert, H. D. Halliday, G. C. Gaudin, T. Hammond, H. F. Hann, A. A. Hart, J. H. Heritage, J. R. Hewitt, T. L. Hall, J. M. L. Davies, J. T. Hinton, H. Hancock, J. W. Hodgson, H. Harris, W. H. Hiddingh, J. D. Hayward, J. A. Howard, J. T. James, W. Huey, V. A. Jaynes, T. G. Jenkins, W. V. V. Chapman, H. Goodchild, E. E. Jewers, F. P. Jervis, C. A. Lane, A. B. Lipscomb, H. Leak, G. A. Macdonald, W. G. V. Macfarlane, E. D. Maddick, F. W. D. MacGaeken, J. T. J. Morrison, F. W. Mott, H. C. Nance, W. J. Murray, A. R. T. O'Regan, S. F. Newton, W. P. Palmer, R. R. Norton, W. J. Parry, W. T. Parker, A. L. Perkins, W. A. Phillipps, W. W. Pitman, W. O. Piper, W. S. Porter, A. Pratt, J. J. Powell, T. E. G. Prideaux, C. O. Richardson, J. W. L. Russell, J. Rose, A. Shipton, E. W. Pryce, E. S. Russ, T. Sayer, F. Schneider, C. T. K. Shaw, S. G. Sharpe, W. Shaw, J. T. Smith, O. B. Shelswell, T. W. Shepherd, J. A. L. Stephen, F. C. Strutt, F. Smith, J. F. Tabb, W. E. Good, J. H. Thompson, W. B. Stebbing, F. W. Storry, F. H. Smith, A. E. Webb, J. W. L. Ware, W. H. Wheeler, F. A. Trevan, M. J. Verdon, C. J. Williams, T. W. Wakem, C. Wood, W. P. Smith, T. Wilmot, S. W. Woollett, H. Williams, W. L. Yates, W. H. F. Young, W. J. B. Odhams, A. C. Otway, L. W. K. Phillips, J. H. Pettinger, W. Llewellyn, F. A. Leigh, A. P. Cooper, G. N. Stathers, H. Howerd, M. Davies, D. G. Allen, S. W. Coombs, G. Rice, W. J. Jolliffe, G. Fitz Thomas, C. J. Lathbury, F. W. Brookes, C. B. Carter, W. J. Garbutt, F. E. Huxley, W. H. Brown, G. H. Coates, C. J. Fox, R. M. Rogers-Harrison, J. W. Lethbridge, E. A. Rich, J. Scott, E. B. Smith, J. R. Whittingham, F. Wilde, E. J. Loader, J. D. Llewellyn.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Aug. 28:

Foreman, Joseph, Wigan.
Hardwicke, Edward Arthur, Rotherham.
Hibberd, Henry Jukes, Westbourne-place, Harrow-road.
Jackson, William, Leamington.
Keyworth, George Hawson, Wellingley, near Rotherham.
Lakin, Charles, Leicester.
Lambert, John, Farsley, near Leeds.
Tomes, Arthur, Coughton, Warwickshire.

The following gentlemen also on the same day passed their primary professional examination:—

Caddy, Henry, Guy's Hospital.
Elcum, Donald, Guy's Hospital.
Simmonds, William Allason, Guy's Hospital.
Turtle, James Henry, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bennett, Charles John, M.R.C.S. Eng.—Medical Officer of Health for the Chapel-en-le-Frith, Glossop, and Hayfield Rural, and Glossop and Fairfield Urban Sanitary Districts.

Harris, Michael, M.B. Lond.—Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.

HODGES, FRANK HENRY, M.R.C.S.E., L.S.A., L.R.C.P. Edin.—House-Surgeon and Apothecary to the Leicestershire Infirmary and Fever House.

STRANGE, WILLIAM, M.D., L.R.C.P., L.R.C.S.—Medical Officer of Health for the Rural and Urban Sanitary Districts of Worcester.

NAVAL APPOINTMENTS.

ADMIRALTY.—J. G. Wall and J. W. Scott, Surgeons to the *Repulse*, additional for disposal; W. F. Spencer, M.D., and W. H. Boland, Surgeons to the *Royal Alfred*, additional for disposal; Francis R. M. Loftie, Surgeon, additional to the *Duncan;* Ahmuty Irwin, Staff-Surgeon to the *Rattlesnake*, additional for service in the *Simoom;* Dr. George B. Beale, Staff-Surgeon to the *Fisguard*, additioual for temporary service; Thomas L. Homer, Surgeon to the *Impregnable;* James Donovan, Surgeon to the *Ganges*, additional for service in the *Liberty;* Alfred C. Delmege, M.D., Surgeon to the Royal Marine Artillery Division; J. K. Conway, M.D., Surgeon to the Cape of Good Hope Hospital; Robert Turner, Surgeon to the *Indus*.

BIRTHS.

ARMSTRONG.—On August 25, at Plymouth, the wife of Surgeon-Major Armstrong, 16th Regiment, of a daughter.

BOGLE.—On August 30, at 12, Inverleith-terrace, Edinburgh, the wife of Dr. A. L. Bogle, Surgeon-Major H.M. Bengal Medical Service (retired), of a daughter.

CARMICHAEL.—On August 31, at The Woodlands, Burton-on-Trent, the wife of W. Carmichael, M.D., L.R.C.P., R.N., Staff Surgeon 2nd Class, of a son.

CAWLEY.—On May 25, at Glenelg, Adelaide, South Australia, the wife of Dr. Thomas Cawley, F.R.C.S. Edin., M.R.C.S. Eng., formerly of the Yarmouth and Guy's Hospitals, of a daughter.

CRIBB.—On August 24, at Bishops Stortford, Herts, the wife of Henry Cribb, L.R.C.P. Lond., of a son.

KIRKMAN.—On September 1, at Barming-heath, Maidstone, the wife of William P. Kirkman, M.D., of a daughter.

MURRAY.—On August 29, at Tenbury, Worcestershire, the wife of W. Berkeley Murray, M.D., of a daughter.

ORTON.—On August 27, at 30, Lower Phillimore-place, Kensington, the wife of George Hunt Orton, M.B. Lond., of a son.

WARD.—On August 27, at Northbourne, Chobham, Surrey, the wife of S. M. Ward, M.B., M.A., M.R.C.S. Eng., of a daughter.

MARRIAGES.

BARNARD—LUCAS.—On September 2, at St. Mark's, Kensington, Frederick James Barnard, Esq., formerly of St. John's College, Cambridge, barrister-at-law, Middle Temple, only son of James Barnard, Esq., of Beaumont Villa, Northampton, to Elizabeth Alicia Jane (Lizzie), eldest daughter of the late Dr. Bennett Lucas, F.R.C.S., and of Mrs. Bennett Lucas, of 48, Arundel-gardens, Kensington-park, W.

BAUGAY—JACKSON.—On August 20, at St. Martin's-in-the-Fields, Richard Baugay, M.D., to Margaret Jackson, both of Cheadle, Cheshire.

BELLRINGER—TANNER.—On August 27, at Painswick Church, Thomas Bellringer, Esq., solicitor, Liverpool, to Martha (Patty) youngest surviving daughter of the late Robert Tanner, M.R.C.S., of Castle Godwyn, Painswick, Gloucestershire.

BERGEN—PIPER.—On September 3, at the parish church, Darlington, A. H. V. Von Bergen, Esq., Middleton, St. George, to Ada Maria, elder daughter of S. E. Piper, Esq., F.R.C.S., Orwell House, Darlington.

CAMPBELL—WHYLOCK.—On September 3, at St. Ann's, Lewes, Sussex, John Gore Campbell, Captain 104th Fusiliers, second son of Lieutenant-Colonel J. Campbell, late 60th Rifles, to Florence, eldest daughter of W. Sandom Whylock, M.D., M.R.C.S. Eng., Staff Surgeon-Major, late of the 38th (1st Staffordshire) Regiment.

GREEN—MoWILLIAM.—On September 1, at St. Michael's, East Teignmouth, the Rev. R. Eling Green, B.A., to Isabelle Jean, third daughter of the late James Ormiston McWilliam, C.B., F.R.S., F.R.C.P., M.D., R.N., Medical Inspector of H.M. Customs, London.

HARVEY—POTTER.—On September 2, at St. Botolph's Church, Aldgate, City, George Harvey, M.D., to Julia Agnes, second daughter of Wm. Potter, Esq., Tower-hill, London.

HARVEY—TURNBULL.—On August 27, at St. Mary's Church, Cheltenham, Edward Harvey, Esq., Captain Royal Engineers, to Rose Marion Monckton, daughter of Francis Turnbull, M.D., Surgeon-Major Retired List, Bengal Army.

HAYDON—WARREN.—On August 27, at St. John's, Frognal, Hampstead, Flaxman Haydon, of 55, Basinghall-street, eldest son of S. J. B. Haydon, sculptor, to Fanny, youngest daughter of Charles Holman Warren, M.D., late of Milverton, Somerset.

SANDERS—SPRINGETT.—On August 27, at St. Peter's Church, Brafferton, Richard Careless Sanders, M.R.C.S. Eng., L.S.A., Surgeon Indian Army, to Margaret Cramer, third daughter of the Rev. Robert Springett, vicar of Brafferton.

SAUNDERS—GRIER.—On August 27, at Clifton, Lawrence Saunders, M.D., of Cambridge-terrace, Stapleton-road, Bristol, to Ellen, only daughter of Thomas Grier, Esq., of Cheltenham.

SMITH—GRIMKE.—On August 26, at the Cathedral, Manchester, Herbert Clementi Smith, M.A., Precentor and Minor Canon of the Cathedral, to Ruth Drayton, eldest daughter of Thomas Drayton Grimke, M.D., of Hilton-park, Prestwich.

STEWART—FRASER.—On August 26, at Stirling, William Stewart, M.D., Surgeon 21st Royal North British Fusiliers, to Agnes, second daughter of P. S. Fraser, Esq., J.P., D.L., Edinburgh.

WHYTEHEAD—DUNN.—On September 2, at the parish church, Doncaster, John Burnard Whytehead, of Chatham House, Rothwell, Yorkshire, to Caroline, fourth daughter of George Dunn, M.D., J.P., of The Priory.

DEATHS.

CARROLL, HONOR HEWITT, youngest daughter of the late Rev. John Darwall, of St. John's, Deritend, Birmingham, and widow of J. W. Carroll, M.D., of Calcutta, at York, on August 14, aged 72.

EVANS, GEORGE FABIAN, M.D., at his residence, Birmingham, on August 31, in the 68th year of his age.

FALLS, EDMUND BURKE, Naval Cadet of H.M.S. *Britannia*, and youngest son of W. Stewart Falls, M.D., accidentally drowned at Bournemouth, on the eve of joining his ship, on August 27, aged 13.

HEENAN, ROBERT, C.E., Superintending Engineer Indus Valley State Railway, son of the late John Heenan, M.D., of Parsonstown, Ireland, at Mooltan, Punjaub, on July 26.

HUISH, HENRY, M.D., L.R.C.S., Surgeon-Major (half-pay) 3rd Hussars, at 4, Lipson-terrace, Plymouth, on August 31.

LOWRY, J. R. C., M.B., Indian Medical Staff, son of James Carry Lowry, Esq., Q.C., of Rockdale, county Tyrone, at Kulladghee, Bombay Presidency, on July 19.

MILLER, JOHN, M.D. Edin., Inspector-general of Army Hospitals (retired), at 3, Eastern-parade, Southsea, on August 29.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRKENHEAD BOROUGH HOSPITAL.—House-Surgeon. Candidates must be duly qualified in medicine and surgery, and registered. Applications, with testimonials, to the Chairman of the Weekly Board, on or before September 15.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

BRISTOL DISPENSARY.—Medical Officer. Candidates must possess a diploma in Surgery from the Royal College of Surgeons of London, Edinburgh, or Dublin, or from the Faculty of Physicians and Surgeons of Glasgow. Applications, with testimonials, to the Secretary, on or before September 6.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to John Binks, Esq., Honorary Secretary, Wakefield.

EASTERN DISPENSARY, BATH.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Francis Savage, Esq., Hon. Secretary, 10, Beaufort-buildings East, Bath, on or before September 24.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD, S.E.—Registrar. Particulars may be obtained from the Hospital.

GENERAL HOSPITAL, BIRMINGHAM.—Resident Registrar and Pathologist. Candidates must be duly qualified. Applications, with testimonials, to the House-Governor and Secretary, on or before September 6.

INVERNESS DISTRICT ASYLUM.—Assistant Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to Dr. Aitken, Medical Superintendent, on or before September 15.

LIVERPOOL NORTHERN HOSPITAL.—House-Surgeon. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to the Chairman of the Committee, on or before Sept. 8.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Board, on or before September 20.

MANCHESTER ROYAL INFIRMARY.—Physician's Assistant. Candidates must possess medical and surgical qualifications. Applications, with testimonials, to the Chairman of the Weekly Board, on or before Sept. 6.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Medical Officers. Candidates must be duly qualified. Applications, with testimouials, to P. Goldschmidt, Esq., Chairman of the Board, 100, Albert-square, Manchester, on or before October 15.

PROVIDENT SURGICAL APPLIANCE SOCIETY, 25, BARTHOLOMEW-CLOSE.—Assistant-Surgeon. Applications, with testimonials, to the Secretary, on or before September 10.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Junior House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before September 10.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, QUAY-STREET, MANCHESTER.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Joseph Barber, 14, John Dalton-street, Manchester, on or before September 12.

ST. THOMAS'S HOSPITAL.—Resident Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Treasurer.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant to the House-Surgeon. Applications, with testimonials, to the Secretary on or before Sept. 12.

WANTAGE UNION.—Medical Officer. Candidates must be duly qualified, Applications, with testimonials, to Edward Ormond, Clerk of the Union. Wantage, on or before September 8.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Glendale Union.—Mr. J. K. Thornton has resigned the Ford District; area 11,727; population 2072; salary £10 per annum.

APPOINTMENTS.

Aston Union.—Henry F. Marshall, M.B. Univ. Lond., M.R.C.S. Eng., L.S.A., to the Deritend District.

Christchurch Union.—William Watmouth, M.R.C.S. Eng., L.S.A., to the Eastern District.

Halifax Union.—James E. Crowther, L.S.A., to the Stainland District.

Louth Union.—John D. Wrangham, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Hainton District.

Petworth Union.—William Morris, M.R.C.S. Eng., L.S.A., to the Second District and the Workhouse.

Prescot Union.—Germain King, L.R.C.P. Lond., M.R.C.S. Eng., to the Lower Widnes District.

St. George-in-the-East Parish.—William R. Horniblow, M.D. Edin., M.R.C.S. Eng., L.S.A., to the North District.

South Shields Union.—George F. Henry, L.R.C.P. Edin., L.R.C.S. Edin., to the Westoe District.

Dr. Edwards, the Medical Officer, reported to the Newcastle Town Council on Tuesday last that there was a case of undoubted Asiatic cholera in the town, but the patient was slowly recovering.

The British Medical Benevolent Fund has received £100 in donations from Miss Caroline Brown for 1873.

The late Mr. John Stuart Mill, by his will, leaves a sum of £3000 to any university in the United Kingdom which first opens its degrees to women. He also leaves £3000 to endow scholarships for female students only.

Health of the Punjaub.—The Sanitary Commissioner of the Punjaub, in his weekly report ending June 21 last, states that there has been a considerable decline in the number of deaths at Delhi; the deaths from all causes have fallen from 154 to 136, and the small-pox deaths from 30 to 11, The death-rate is still very excessive, being 64 per mille. Amritsar continues very unhealthy, though there is a slight decline in the deaths from small-pox, which have fallen from 18 to 15. The death-rate of Siálkot is very excessive. Five deaths are registered there under the head of small-pox, but it is probable that other deaths really due to small-pox are registered under other heads. There is a considerable increase in the number of deaths registered at Jálandhar in the last few weeks. The mortality from small-pox has, as was expected, begun to decline throughout the province; the deaths from this disease have fallen from 893 to 731. Three deaths were registered under the head of cholera in three different districts. There is no reason to believe that they were due to true Asiatic cholera. The annual vaccination report of the Civil Surgeon to the Amritsar Municipal Committee, dated April 15 last, shows that during the four months and six days of the cold weather, when vaccine operations were in progress, 6747 children were vaccinated, against 2000 in the previous year. The present epidemic in the city is the result of the neglect of former years, and it is to be hoped it will be the last. There can be little doubt that the present epidemic would have been much more fatal but for the efforts of the Municipal Committee during the late cold weather to spread vaccination. The epidemic has been light at Amritsar as compared with the experience of other cities.

Marini's Anatomical Preparations.—Among the most curious things at the Vienna Exhibition are the anatomical preparations of Dr. Marini, of Naples, showing how various parts may be preserved for years in an extraordinary manner. The freshness which a portion of, or a whole, subject may exhibit is astonishing. For example, a foot prepared at Paris in 1864, and bearing Professor Sappey's voucher, remained quite unaltered; and on making an incision into it the subjacent parts looked as fresh as those of a person just dead. The fatty tissue presents its ordinary aspect, and the tendons have their pearly lustre. The tissues, moreover, retain their transpareney, and, viewed in the dark before a light, their different layers and the position of the bones are distinguishable. By one of his processes Dr. Marini produces what he calls the "coriaceous" condition, in which the tissues are hard and without transpareney, but on being placed in water recover all their freshness. A portion of such a preparation made in 1863, exhibited before the jury, had all the appearance of being part of a recent corpse. It will be remembered that at the Paris Exhibition of 1867 M. Brunetti obtained the grand prize for his preparations made by the agency of tannic acid; but these, although exhibiting the natural forms, were dry and hard. At present M. Marini keeps his procedure a secret. Another ingenious procedure is only employed for embalming and what he calls petrifaction. By this means Thalberg has been preserved in a "fresh" state for the adornment of his widow's drawing-room. That property of electricity has been utilised by which it transports certain salts, molecule by molecule, to one of the poles, and eliminates others, so that the tissues to their ultimate cellular terminations become penetrated with insoluble salts, while the general form is preserved. Signor Daffito, a former préfet of Naples, was recently so embalmed, and as it is a long process, Dr. Marini, in order not to have to go to the cemetery every day while it was going on, attached a small electrical bell, which sounded as long as the electrical current continued, desiring the keeper of the cemetery to let him know when it ceased ringing. The popular imagination became aroused, and it was asserted that the devil in person was ringing the confessional bell in the ears of the defunct préfet—he having died without extreme unction, and having had only civil burial."—*Lyon Méd.*

Hired Nursing the Best.—Dr. Weir Mitchell writes: "What you want in the sick-room is a calm, steady discipline, existing but unfelt—the patient, cool control which a stranger is far more apt to exercise than a relative. In a word, just as the doctor feels it unwise to attend alone his own dear ones in grave illness, for like but lesser reasons, the best nurse is a stranger,—one who is naturally free from worry and irritation, who is unmoved by traditions of love, and who, acting purely and simply from sense of duty, takes that care of her own health which is essential to make her nursing perfect. Such an attendant is willing to take her share of sleep and fresh air, and so remain cool and tranquil under all circumstances and in all exigencies, making far more light the task of the doctor, and able from experience of illness to note changes and call for aid at needed times. Such help excludes from the sick-room that host of little annoyances for doctor and patient which I may call fuss. Most doctors will agree with me that, save in the case of infants, when the mother cannot and should not be displaced, the best nursing is paid nursing, and the worst very often that which comes from the family."—*Philadelphia Medical Times*, 1873, No. 80.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

F. Edgar.—The letter is not suited to our columns, but if you like to send an advertisement in the usual way we will hand it to our publishers for their consideration.

Rahere.—The old students' dinner will take place as usual in the Grand Hall of St. Bartholomew's on Wednesday evening, October 1.

Bibliopole.—Both the libraries you mention are closed for the month of September.

W. C. F.—Next week.

Huntington need have no scruple under the circumstances stated of enforcing the agreement.

Herbert G. should apply to the Hospital Board.

Foot and Mouth Disease and Milk.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—There being at the present time such a discussion on the question of the effect of milk from cattle being fed on sewage grass, I beg to relate the following:—At the end of 1872, during the prevalence of the foot and mouth disease in North Wales, a farmer I am acquainted with had his cattle ill from it. Being afraid to sell his milk or butter as usual, but obliged to milk the cows, the milk was thrown away, and his family were obliged to purchase for their own use. After a few days, however, his wife thought the milk appeared very good, and began to use it and make butter from it for their own use. She speaks of the milk and butter as good or better than usual. The family consists of the farmer, wife, and nine or ten children (varying in age from two to seventeen years), two female servants, and three or four lads and men who worked on the farm—none of whom were rendered ill by the use of the said milk. I should have hesitated to use the milk myself—but facts are stubborn things.

London, August 30. I am, &c., G. J. S. Camden, M.R.C.S.

Blex.—The University of Prague has refused admission to the Russian women-students who left Switzerland a short time ago.

Ciro.—Dr. Charles Augustus Vandermonde; left in manuscript papers relating to the state of Medicine in China, partly derived from the notes and observations of his father. He died on May 28, 1762.

A Successful Candidate.—Having passed the preliminary examination, you can enter on your hospital studies in October next. The Students' Number of the *Medical Times and Gazette*, which will be published on the 13th inst., will give you the desired information.

A Double Monster in the Eleventh Century.—Roger of Wendover, in his "Flowers of History," under the date 1062, gives an example of two women more closely united than the "Two-headed Nightingale" exhibited in London three years ago:—

"There was an extraordinary birth on the confines of the lesser Brittanny and Normandy. For in one, or rather in two, women there were two heads and four arms, and everything else double down to the navel; but below there were two legs, two feet, and everything else single. The one laughed, ate, and talked; the other wept, fasted, and kept silence. What they ate with two mouths was expelled at one orifice. At last one of them died, and the other survived: the living bore the dead for nearly three years, till at length she died also from the oppression and stench of the corpse." (Bohn's edition, 1849, vol. i.)

Imposture.—"The Alchemist," by Ben Jonson.

> "The doctor—the smoky-bearded—he
> Will close you so much gold in a bolt's head,
> And in a turn convey in the stead another,
> With sublimed mercury that shall mount in the heat,
> And all fly in fumo."

"The Alchemist" was written against a sect of impostors common in the days of Queen Elizabeth.

B. S.—The lettuce was considered as producing sleep and recovery from intoxication; it was in consequence of this belief that this salad was served up after meals. Thus Martial tells us—

"Claudere quæ cœnas Lactuca solebat avorum,
Dic mihi cur nostras inchoat illa dapes."

Metaphysics.—

"Am I but what I seem, mere flesh and blood?
A branching channel and a mazy flood?
The purple stream that through my vessels glides,
Dull and unconscious, flows like common tides.
The pipes, through which the circling juices stray,
Are not that thinking I, no more than they.
This frame, compacted with transcendent skill,
Of moving joints, obedient to my will,
Nurs'd from the fruitful globe, like yonder tree,
Waxes and wastes. I call it *mine*, not *me!*
New matter still the mould'ring mass sustains;
The mansion chang'd, the tenant still remains,
And, from the fleeting stream repair'd by food,
Distinct as is the swimmer from the flood."

A Doctor's Log.—No. II.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As the vessel daily required seventy tons of coal, a supply was taken in, permitting twenty-four hours' stay at Malta. So, chartering a boat, next an inside car, a hurried visit paid to the lions—including St. John's Church (the celebrated silver gates); the Palace with its marble steps, armoury, and ball-room; the wondrous tapestry, and the relics of the knights; the dried monks, with grinning skulls, shaggy beards, and shrivelled mummy hands—Valetta resembling a star-fish resting on the Mediterranean. The eye, soon wearied of grim forts, batteries, barracks, hospitals, of yellow houses, searches in vain for trees or green fields—anything to relieve the painful glare. At a terrific pace rattling along the City of Stairs, we notice images of saints in various corners of the clean streets; magnificent bow-windowed houses, elegantly designed; trumpery shops, advertising lace, jewellery, coral, sponges, and flowers; handsome well-dressed men; ugly women in black hoods; sleek priests, loathsome beggars, and—most welcome sight—the *fac-simile* of London policeman 192 X; well-drilled soldiers salute with lightning rapidity; officers in smart uniforms, else in plain clothes fit for Rotten-row; officers' wives—neat and nice English ladies all over—flit by. In vain endeavouring to diagnose the faculty either on foot or pill-box-broughamed, observe fine fat aristocratic chemists with waxed moustachios, more resembling heavy cavalry colonels than lean or starved apothecaries. Time not permitting to visit the suburbs, the civil, military, and especially the magnificent naval hospital, or to make inquiries respecting the drainage combination with drinking-water, the amount of typhoid fever, malaria, diphtheria, ophthalmia, granular lids—in fact, the old-established ailments, varied with occasional cholera and suicidal tendencies,—we are told that, hot and dusty in summer, it is muddy and cold in winter; the blazing sun, the damp south-east wind, the heavy dew, the scanty rainfall, the soft spongy sandstone, the scanty vegetation, the island—twenty miles by twelve, and sixty in circumference—over-populated by a puny, half-starved race, are amongst the prominent points leading to the opinion that, unless emigration is encouraged or the barren rock covered with more soil, Malta will ever continue liable to epidemics. To Sir Henry Storks the credit is due of one phase of sanitary legislation as effectual, if not more so in its way, than vaccination. There a few public gardens, with orange groves and lovely purple flowers, also fields about the length and width of this ship (surrounded with stone walls), are welcome oases. The chief productions are corn, cotton, vegetables, fruits; the water, derived from springs, received into aqueducts; the rain-supply stored in tanks; and the drainage has an excellent incline into the sea, which may account for the fine eels, mullet, and lobsters. The opera house is a magnificent building, partially to be accounted for by the amount of rock, the facilities for working and carriage, the cheapness of labour, and the innate artistic taste of the inhabitants. The performance, too, very creditable: an orchestra of forty, some of the singers good—all painstaking; but if little people, with a small company and wretched scenery, ambitiously attempt the "Prophète," the stroke is more bold than commendable. The boxes well filled, the governor enshrined in the centre of the house—and as he enters the band strikes up the National Anthem!—a few people in the stalls, the pit empty, and in the gallery a solitary policeman was sucking oranges. The opera is *the* thing at Malta (a stall costing about £5, if not less, for the season), subscribers generally going on foot—many of the dukes, marquises, and counts living economically. The artillery mess externally has a palatial front, also a fine staircase, lofty rooms with painted ceilings—in fact, the military are everything. I could find out nothing about doctors, but to the best of my belief they are wonderfully clever and painstaking, on fees far smaller than their parochial brethren at home. The history is singularly interesting, associated with the shipwreck of St. Paul, the supposed burial-place of Hannibal, the exploits of the Knights of St. John, and of Count Roger, who *claimed* to be King of Sicily, and, in spite of the Pope, was crowned, without any tattoo question. In 1800, when the unfortunate Maltese were ruled cruelly by the French, the English fleet blockaded the island, and for two years privation and pestilence decimated the garrison, who lived on rats, dogs, cats, and mules, obtained at exorbitant prices. But it was not until 1814 that all previous treaties were ignored, and the Maltese most gladly accepted the British flag and protection. Somehow it was a relief to get out of the harbour to continue the voyage; and, on comparing notes, so many complained of feeling below par—the old Indians very short in temper, several bachelors with "heads" on, whilst the *mal de mer* again attacked those susceptible. A patient whose kidneys had been damaged by Canadian cold years before, suffered all the agonies and inconvenience of diuresis, with insatiable thirst, restless nights, dyspepsia, depression, and lumbar pain. With a history of scarlet and rheumatic fever, and having had good things in his days, the prognosis unfavourable, the tremendous strain of flogging the tired horse to death cannot be ignored, and the mile-posts point out to the sufferer how rapidly he is travelling towards Bright's disease, dropsy, coma, phthisis, or gradual exhaustion. After all, what can be done in middle age beyond general support, taking off pressure at one point to tax doubly the other organs, already overworked, besides attention to the skin? As the *Serapis* steamed along, hotly pursued by another vessel anxious to be the first in the Suez Canal (*en passant*, it is startling to record that the dues to be paid will amount to £2500), the sick-list of women—about six in hospital and to-day probably about twenty attending—afforded materials for note-taking not very comfortably, with the ship rolling, the spray dashing in at the ports, the children squalling, the women grumbling, and the sailors singing or shouting whilst swabbing the decks. A professional "life on the ocean wave" differs vastly from the luxurious comfort of the library and consulting-room in Brook-street. Supposing a weakly infant, brought up by hand, suffering from bronchitis and diarrhœa, whilst the mother gives the history, tells the tale of restless nights, of the tossing, the sea-sickness, the inability to procure cow's milk or suitable food. Neighbours charitably would wet-nurse if their own infants were well, or the supply sufficient. The ship's rations are very good, yet here of no service. The steward has three kinds of milk—Anglo-Swiss, Aylesbury, or Irish. What more can be done? We notice with alarm the depressed fontanelles, the earthy look and smell, the feeble respiration, and the coated tongue; investigatiug a few salient symptoms, whilst the ship gives a lurch, upsetting nurse, patient, physician, and prescription—the stethoscope in one direction, the case-book in another, probably a seasick victim included in the catastrophe oft repeated. Then the weary song of the hot night, restless and disturbed, specially by the noise made by other invalids. The allowance of beer is half a pint per woman, but as nursing mothers at sea require more, an extra supply, on representation, has been granted—indeed, everything that could be done under the circumstances has been done, every suggestion liberally, promptly, carried out—Liebig, arrowroot, stimulants all available, the medical officer writing out a case to explain just cause—besides checking expenditure. The women and children carefully examined, vacciuated, weeded, prior to embarkation; the difficulty to be entirely clear of variola, scarlet fever, typhus, measles, hooping-cough, can never be sufficiently estimated. The period of incubation no man can define; on this point, if books and notes were available, some startling instances might be given, just as curious as the instantaneous blaze of an eruptive fever when a child with a trifling cold has been vaccinated in an infected neighbourhood. Not counting ladies, there are in round numbers about 300 women and children on board, the followiug rules having been framed for their guidance:—At 6.30 a.m., all bedding to be rolled up. 7 a.m.: Breakfast. 7.30 a.m.: Quarters vacated until 11 a.m.; scrubbers at work weather permitting. 12 noon: Dinner. 1.30 p.m.: Quarters vacated until 3 p.m.; swabbers clear up and sweep the place out. 4.30 p.m.: Supper. Sunset: All women and children to go below. 8 p.m.: All in bed; swabbers clear up. 8.30 p.m.: Rounds. Thursday all bedding and boxes on deck (weather permitting), the bunks and quarters scrubbed with soap. No wet clothes to be hung in the wash-house or quarters, and all slops at once to be thrown overboard. Sentries prevent auy man entering except husbands and scrubbers. Women and children of dirty habits will be reported; extreme cleanliness must be preserved about the lavatories, and at the same time there must be no waste of water. Having been round these quarters morn, noon, and night as a matter of duty, in addition to that of pleasure, to criticise the arrangements, one cannot help thinking what a fine thing discipline is. Supposing these women had all their own way, what an amount of mortality and pestilence would be generated and communicated to the troops who cost the country so much, and whose health on landing in India is of such paramount importance! As it is, taking and keeping young children on deck for so many hours has objections in the way of diarrhœa, bronchitis, croup, hooping-cough, and convulsions; also in the way of severe neuralgia, menorrhagia, and tonsillitis, affecting mothers; the complaints, however, in many instances frivolous, not to say under the circumstances unreasonable. On a sea voyage, menstruation goes all wrong, uterine displacements encouraged by vomiting, digestion goes to ruin from the amount of chlorodyne taken. Women will not stump up and down the deck for exercise; the sea air adds a craving appetite to dyspepsia, the best treatment consisting of impromptu dances. The ladies take one side of the deck, the soldiers' wives another; the fiddles strike up galops and waltzes, and thus the demons of malaise, depression, muddy complexion, and morning headaches are expelled. "I love dancing," said a matter-of-fact count to a lovely, fascinating, and conversational partner who deserved a more gallant remark; "it *do* make me perspire." By good luck, Dr. Doyle, R.N., has "Trousseau" on board, where it is recorded that in 1854 a troop-ship proceeding to the Crimea put back to Plymouth, variola having broken out. Cleansed, fumigated, she started again, the disease after fifteen days at sea reappearing. On the next voyage, although every sanitary precaution had been adopted, a similar outbreak again occurred. In other books, also, are wonderful narratives to show that yellow fever for a length of time has been conveyed in the coals. All these lessons urge upon those concerned the careful examination of troops before embarkation, the most rigid precautions during the voyage; and as regards landing and marching in a new country, possibly more anon. Respecting the men, so far, nothiug to record—the bread, biscuit, soup, puddings, rice, preserved meat, potatoes, tea, beer, all satisfactory; and as at the canteen no intoxicating liquors are sold, no drunkenness, scarcely any crime. The sailors, hard-working, contented, and happy, differ from soldiers in being too proud to appear at hospital unless seriously ill. One man is stated to have fallen overboard, fracturing his wrist and losing his cap, yet in extreme peril, Jack first swims for his cap, next for his life, even when hauled on board saying nothing about his hand. What a contrast is the bright, active, dare-devil, honest sailor up in the rigging to the same man drunk and squandering his pay on shore at Portsmouth! Leaving Malta on a Thursday morning, on the following Monday the entrance to the Suez Caual is reached at Port Saïd, consisting of a breakwater, a lighthouse, a harbour, and a curious town—a cross between Aldershot and Charlton Fair—huts and houses, shops and gay stalls in the sand. Egyptian soldiers, Arabs in dressing gowns and surplices—many blind on one side or pitted with variola, scraggy women squatting in the market veiled up to the eyes, half-naked boys, with mules, camels, and dogs are met with. Passing by Dr. Salem, physician and surgeon—advice gratis from nine to one—with a fine array of drugs in the background, hotels, warehouses, and photographic pictures (exiles from Holywell-street), the visitor will only be too glad to take a return boat to the vessel, which in the present case looked magnificent—a kind of floating crystal palace. There are numerous vessels in the harbour, besides enormous dredging-machines, which are constantly at work up and down the canal—the most interesting achievement for centuries: about 86 miles long, 120 feet wide, 30 feet deep, the channel marked out by buoys, the water blue, the banks, at first about six feet, shelving outwards; and beyond the telegraphic posts, an occasional camel or a congregation of red-legged flamingoes, we see nothing but the broad expanse of the dry dreary desert and the bright blue sky overhead. A ship in front runs aground, and we just manage to pass her by triumphantly, shortly after to meet the same misfortune; but the tug, the arrangement of sail, besides the shifting of weight, overcome the difficulty. It is curious to notice myriads of little fish in the eddy swell and return of the stream, for the instant helpless and flopping in the moist sand. There is a pleasant breeze, the thermometer 70° Fahr. Everyone, impressed with the solitary grandeur,

remains on deck, even neglecting meals. But the sick-list is vexing: one little child, dry nursed, has succumbed to diarrhœa with bronchitis, and to-night, when we anchor, a simple solitary grave will be dug in the Egyptian sand. Others are very ill, having caught cold or else malarious fever at Malta, which, although transient to adult men, becomes serious to childreu or nursing mothers. The banks of the canal gradually inclining upwards about thirty feet, after a time the progress resembles that of a railway train through a chalk-cutting, occasionally relieved by a small hut or a signal station. The baby spoken of just now, put into a coffin wrapped rouud with a union jack, was taken on shore in the steam pinnace, aud, the funeral party scrambling up the embankment (sinking deeply at every step), gradually reached the burrow dug in the drifting sand, where, by a lantern's light, the clergyman in his surplice read the burial service over the poor little innocent—a scene singularly impressive; and as the moon photographed the hull, masts, rigging, and ropes of the *Serapis* on the banks of the canal, the solemn awful silence of the vast desert, the bright stars overhead, and the soft balmy air of Egypt, every trivial thought changed into scrious reflection. The next day, passing Ismailia and Lake Timsat, noticing houses and ships, we increase speed to nine knots, and drawing twenty feet of water, the Bitter Lake, dotted with posts and marked with a light-house, is traversed. The general effect and colour of the water resembling the Mediterranean, scanty vegetation and lofty mountains of sand, a great expanse like glass, dotted with a tug here and a dredging machine there, and an occasional vessel. To-day, cases of ophthalmia, trifling as yet, children with diarrhœa, men with syphilis, gonorrhœa, skin eruptions, boils, and trifling ulcers, present themselves. The atmosphere very pleasant, uot the least salt. The bath-water, contrary to expectation, without the slightest tendency to produce smarting. Neither bird, beast, nor fish seen. Last night in the cabins a little stuffy—so it would be in an enormous man-of-war anchored in the Regent's Canal. Distance, 2200 miles to Malta, 1000 thence to Port Saïd, and 86 on to Suez; total, 3286 miles from London. Thermometer 94° Fahr.—on deck near the sweet water canal, in sight of the railway and large houses, docks, hotels, hospital, churches, etc., below the mountains—in fact, SUEZ.

COMMUNICATIONS have beeu received from—

MR. IRVING DE LISLE; Mr. JOHN ST. S. WILDERS; Mr. R. H. LEACH; Dr. SHAPTER; Dr. F. R. WILSON; Mr. J. CHATTO; Dr. HANDFIELD JONES; Dr. T. GRAINGER STEWART; Mr. CAMDEN; Dr. INMAN; Dr. BRUCE; Mr. J. H. THOMAS; Mr. MACONOCHIE; Dr. FAYRER; Dr. G. H. EVANS.

BOOKS RECEIVED—

Thorpe's Quantitative Chemical Analysis—Du Traitement des Rétrécissements de L'Urèthre par la Dilatation Progressive, par T. B. Curtis, M.D.—Liddle's Report on the Sanitary Condition of the Whitechapel District of the Board of Works—Munro on the Science and Art of Nursing the Sick—Posthumous Works of Napoleon III. in Exile, collected and arranged by Count la Chappelle—History of the American Ambulance established in Paris during the Siege of 1870-71, by Thomas W. Evans, M.D., D.D.S., Ph.D.—Ross's Report on the Sanitary Condition of St. Giles's District—Annual Report of the Manchester and Salford Sanitary Association—Fox on the Nature of Zymotic Diseases.

PERIODICALS AND NEWSPAPERS RECEIVED—

Le Mouvement Médical—Bulletin Général de Thérapeutique—La France Médicale—Gazette Médicale—L'Union Médicale—La Tribune Médicale—Centralblatt für die Medicinischen Wissenschaften—Berliner Klinische Wochenschrift—Le Progrès Médical—The Obstetrical Journal of Great Britain and Ireland, No. 6—Edinburgh Medical Journal, September—Pharmaceutical Journal—Lancet—British Medical Journal—Science Gossip—Monthly Microscopical Journal—Bordeaux Médical—Revista Médico-Quirúrgica—Allgemeine Wiener Medizinische Zeitung—Philadelphia Medical Times, August 9 and 16—The Spiritualist.

APPOINTMENTS FOR THE WEEK.

September 6. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

8. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

9. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West Loudon, 3 p.m.

10. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; Loudon, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

11. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 30, 1873.

BIRTHS.

Births of Boys, 1096; Girls, 1061; Total, 2160.
Average of 10 corresponding years 1863-72, 2017·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	735	742	1477
Average of the ten years 1863-72	691·1	659·0	1350·1
Average corrected to increased population	...	...	1485
Deaths of people aged 80 and upwards	...	...	48

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	5	1	5	...	6	2	37
North ...	751729	...	4	2	2	12	1	7	...	86
Central ...	334369	...	...	1	1	8	1	3	...	27
East	639111	1	11	7	1	9	3	2	1	50
South	967692	...	10	1	2	19	2	8	2	77
Total	3254260	1	26	16	7	53	7	26	5	277

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·632 in.
Mean temperature	61·9°
Highest point of thermometer	77·5°
Lowest point of thermometer	47·9°
Mean dew-point temperature	54·4°
General direction of wind	S.W.
Whole amount of rain in the week	1·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 30, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Aug. 30.	Deaths Registered during the week ending Aug. 30.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2160	1477	77·5	47·9	61·9	16·61	1·20	3·05
Portsmouth ...	118280	12·4	99	58	78·6	45·2	61·0	16·11	0·64	1·63
Norwich	81677	10·9	36	30	78·5	47·0	60·9	16·06	0·75	1·90
Bristol	189648	40·4	123	86	74·4	48·3	59·1	15·05	1·70	4·32
Wolverhampton ...	70084	20·7	42	41	77·3	45·7	59·9	15·50	1·17	2·97
Birmingham ...	355540	45·4	252	206	76·4	47·3	59·3	15·16	1·34	3·40
Leicester	102694	32·0	96	69	...	...	...	...	...	...
Nottingham ...	89557	44·9	60	50	77·4	46·1	60·4	15·78	1·25	3·17
Liverpool	505274	98·9	352	275	72·0	50·0	58·5	14·72	0·84	2·13
Manchester ...	354057	78·9	250	187	74·8	49·2	60·6	15·89	1·38	3·51
Salford	130468	25·2	128	64	73·6	46·9	59·4	15·22	1·21	3·07
Oldham	85141	20·4	59	47	68·0	...	...	...	1·48	3·76
Bradford	156609	23·8	141	73	76·8	49·0	59·2	15·11	0·84	2·13
Leeds	272619	12·6	147	148	72·0	50·0	60·5	15·83	1·03	2·62
Sheffield	254352	11·1	158	125	72·0	47·8	59·6	15·33	0·71	1·80
Hull	128125	35·9	77	84	72·0	48·9	59·6	15·33	1·10	2·79
Sunderland ...	102450	31·0	94	55	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	114	83	...	...	...	...	...	...
Edinburgh	208553	47·1	126	54	71·4	49·1	59·2	15·11	1·95	4·95
Glasgow	498462	98·5	358	224	68·5	45·5	58·9	14·94	0·63	1·60
Dublin	314666	31·3	169	135	71·7	44·0	58·5	14·72	2·08	5·28
Total of 21 Towns in United Kingd'm	7507575	34·5	5041	3571	78·6	44·0	59·8	15·44	1·18	3·00

At the Royal Observatory, Greenwich, the mean reading of the barometer in the week was 29·63 in. The highest was 29·78 in. on Wednesday morning, and the lowest 29·32 in. on Thursday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

King's College, London.—Medical

DEPARTMENT.—The WINTER SESSION will be opened on WEDNESDAY, OCTOBER 1st, with an Introductory Address, at 4 p.m., by Professor Edgar Sheppard, M.D.

LECTURERS.

Anatomy, Descriptive and Surgical—Prof. John Curnow, M.D.
Physiology— } Prof. W. Rutherford, M.D.
Practical Physiology— } Demonstrator: Urban Pritchard, M.D.
Chemistry— } Prof. C. L. Bloxam, F.C.S.
Practical Chemistry— } Demonstrator: W. N. Hartley, F.C.S.
Medicine, Principles and Practice of—Prof. George Johnson, M.D.
Surgery, Principles and Practice of—Prof. John Wood, F.R.S.
Clinical Surgery—Prof. Sir William Fergusson, Bart., F.R.S.
Hygiene—Prof. W. A. Guy, M.B., F.R.S.
Botany—Prof. Robert Bentley, F.L.S.
Materia Medica and Therapeutics—Prof. A. B. Garrod, M.D., F.R.S.
Obstetric Medicine and the Diseases of Women and Children—Prof. W. Playfair, M.D.
Forensic Medicine—Prof. D. Ferrier, M.A., M.D.
Comparative Anatomy—Prof. T. Rymer Jones, F.R.S.
Pathological Anatomy—Prof. L. S. Beale, M.B., F.R.S.
Dental Surgery—Prof. Samuel Cartwright, F.R.C.S.
Ophthalmology—Prof. J. Soelberg Wells, M.D., F.R.C.S.
Practical Surgery—Prof. John Wood, F.R.S.
Psychological Medicine—Prof. Edgar Sheppard, M.D.
Dean of the Faculty—Prof. Bentley, F.L.S.
Medical Tutor—Evan B. Baxter, M.D.

KING'S COLLEGE HOSPITAL.

CLINICAL LECTURES are given five times a week by the Physicians and Surgeons. Clinical Instruction is also given in Diseases of the Throat and in Skin Diseases.

Physicians—Dr. G. Johnson, Dr. L. S. Beale, Dr. A. B. Garrod, Dr. Duffin.
Assistant-Physicians—Dr. Yeo, Dr. Kelly.
Physician for Diseases of Women and Children—Dr. W. Playfair.
Assistant Obstetric Physician—Dr. T. C. Hayes.
Surgeons—Sir W. Fergusson, Bart.; John Wood, F.R.C.S.; H. Smith, F.R.C.S.
Surgeon-Dentist—S. Cartwright, F.R.C.S.
Ophthalmic Surgeon—J. Soelberg Wells, M.D., F.R.C.S.
Assistant-Surgeon—H. Royes Bell, F.R.C.S.
Pathological Registrar—C. Kelly, M.D.
Sambrooke Registrars—R. Birch, M.R.C.S.; W. Rose, M.R.C.S.
Administrator of Chloroform—Charles Moss, M.R.C.S.
Vaccinator—W. Dunu, Esq.

An Ophthalmic Department and a Ward for Children are attached to the Hospital.

The Physician's Assistant, Physician-Accoucheur's Assistant, and House-Surgeon, as also their assistants, clinical clerks, and dressers, are selected by examination from among the Students, without extra fees.

SCHOLARSHIPS, REGISTRARSHIPS, AND PRIZES.

WARNEFORN SCHOLARSHIPS.—Students entering the Medical Department of this College in October, 1873, will have the exclusive privilege of contending for two Scholarships of £25 each for three years. These Scholarships are given for proficiency in Divinity, Classics, Mathematics, History, and English. The subjects may be ascertained by applying to the Secretary.

Five Medical Scholarships are awarded at the close of each Winter Session for proficiency in professional subjects—viz., one of £40 for two years, one of £30 for one year, and three of £20 for one year.

A Warneford Scholarship of £25 for two years is also annually awarded for proficiency in Divinity and Hospital Practice.

SAMBROOKE REGISTRARSHIPS.—Two of £50, tenable for two years, are annually awarded to matriculated Students of this department.

DANIELL SCHOLARSHIP.—One of £20, for two years, given for proficiency in Chemistry, is open to Students of the Medical Department.

Endowed Prizes, of the value of £25, £15, £10, and £4 4s. each, and College Prizes of the value of £60 are annually awarded.

For further information apply personally, or by letter marked outside "Prospectus," to J. W. Cunningham, Esq., Secretary.

Sheffield School of Medicine.—

SESSIONS of 1873-4.—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st, when the Introductory Lecture will be delivered by Henry Jackson, Esq., Fellow and Assistant-Tutor, Trinity College, Cambridge, in the Anatomical Theatre at 4 p.m.

LIST OF LECTURES.

Anatomy, Descriptive and Surgical—Mr. Skinner and (Vacant).
Demonstrations of Anatomy—Mr. Clark, Mr. E. Skinner, Mr. T. H. Morton.
Physiology—Mr. Thos. Leeds and Mr. S. Morton.
Principles and Practice of Medicine—Dr. Frank-Smith.
Principles and Practice of Surgery—Mr. W. F. Favell and Mr. Parker, F.R.C.S.; Mr. A. Jackson.
Chemistry—Mr. Allen.
Dental Mechanics—Mr. G. Mosely.
Clinical Medicine—Dr. Bartolomé, Dr. Law, and Dr. Frank-Smith.
Clinical Surgery—Mr. Barber, Mr. W. F. Favell, and Mr. Parker, F.R.C.S.
Practical Surgery—Mr. Hallam.
Practical Physiology—Dr. Thomas.

SUMMER SESSION, commencing MAY 1st, 1874.

Midwifery and Diseases of Women—Dr. Hime.
Materia Medica and Therapeutics—Dr. Young.
Medical Jurisprudence and Toxicology—Mr. Baker and Mr. Harrison.
Botany—Mr. Birks.
Comparative Anatomy—Mr. W. Jackson.
Practical Chemistry—Mr. Allen.
Dental Surgery—Dr. Merryweather.
Demonstrations of Pathology and Microscopy—Mr. Hallam (at the Infirmary).
Demonstrations of Operative Surgery—Mr. Favell and Mr. Parker, F.R.C.S.
Diseases of the Eye—Mr. Clarke.

Perpetual fee for attendance on all the Lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £42.

Prospectuses and all further information may be obtained upon application to the Hon. Secretary,

ARTHUR JACKSON, St. James's-row, Sheffield.

St. Thomas's Hospital,

ALBERT-EMBANKMENT, WESTMINSTER-BRIDGE, S.E.—The MEDICAL SESSION for 1873 and 1874 will commence on WEDNESDAY, the 1st OCTOBER, 1873, on which occasion an Inaugural Address will be delivered by Dr. J. Harley, at Two o'clock.

Gentlemen entering have the option of paying £40 for the first year, a similar sum for the second, £20 for the third, and £10 for each succeeding year; or, by paying £105 at once, of becoming perpetual Students.

PRIZES AND APPOINTMENTS FOR THE SESSION.

The Wm. Tite Scholarship, founded by the late Sir Wm. Tite, C.B., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, was awarded last Session.

First Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, and £5.

Second Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, £5; the Dresserships and the Clinical and Obstetric Clerkships.

Third Year's Students—Winter Prizes, £20, £15, and £10; Mr. George Vaughan's Cheselden Medal; the Treasurer's Gold Medal; the Grainger Testimonial Prize; the two House-Physiciauships; the two House-Surgeoncies; the Resident Accoucheurships. Two Medical Registrarships, at a salary of £40 each, are awarded to third and fourth years' Students, according to merit.

The Solly Medal, with a Prize of 10 Guineas, will be awarded at the end of the Session to a Student of the third, fourth, fifth, or sixth years, for the best Report of Surgical Cases.

MEDICAL OFFICERS.

Honorary Consulting Physicians—Dr. Barker and Dr. J. Risdon Bennett.
Honorary Consulting Surgeon—Mr. Frederick Le Gros Clark.
Physicians—Dr. Peacock, Dr. Bristowe, Dr. Clapton, Dr. Murchison.
Obstetric Physician—Dr. Barnes.
Surgeons—Mr. Simon, Mr. Sydney Jones, Mr. Croft, Mr. MacCormac.
Ophthalmic Surgeon—Mr. Liebreich.
Assistant-Physicians—Dr. Stone, Dr. Ord, Dr. John Harley, Dr. Payne.
Assistant Obstetric Physician—Dr. Gervis.
Assistant-Surgeons—Mr. F. Mason, Mr. Hy. Arnott, Mr. W. W. Wagstaffe.
Dental Surgeon—Mr. J. W. Elliott.
Resident Assistant-Physician—Dr. Evans.
Resident Assistant-Surgeon—Mr.
Apothecary—Mr. R. W. Jones.

Medicine—Dr. Peacock and Dr. Murchison. Surgery—Mr. Sydney Jones and Mr. MacCormac. General Pathology—Dr. Bristowe. Physiology and Practical Physiology—Dr. Ord and Dr. John Harley. Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe. Anatomy in the Dissecting-room—Anatomical Lecturers, Mr. Rainey and Dr. R. W. Reid. Practical and Manipulative Surgery—Mr. Croft. Chemistry and Practical Chemistry—Dr. A. J. Bernays. Midwifery—Dr. Barnes. Physics and Natural Philosophy—Dr. Stone. Materia Medica—Dr. Clapton. Forensic Medicine and Hygiene—Dr. Stone and Dr. Gervis. Comparative Anatomy—Mr. C. Stewart. Ophthalmic Surgery—Mr. Liebreich. Botany—Mr. A. W. Bennett. Dental Surgery—Mr. J. W. Elliott. Demonstrations Morbid Anatomy—Dr. Payne. Mental Diseases—Dr. Wm. Rhys Williams.

T. B. PEACOCK, M.D., Dean.
R. G. WHITFIELD, Medical Secretary.

For entrance or prospectuses, and for information relating to Prizes and all other matters, apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, S.E.

Middlesex Hospital College.—The

WINTER SESSION, 1873-74, will open on OCTOBER 1st with an Introductory Address, at 3 o'clock, by Mr. Henry Morris, M.A., F.R.C.S.

The Medical College attached to the Hospital provides the most complete means for the education of Students who are preparing for the Examinations of the University of London, the Colleges of Physicians and Surgeons, and the Society of Apothecaries.

Some members of the staff receive Students as boarders.

MIDDLESEX HOSPITAL ENTRANCE SCHOLARSHIPS.—Two Entrance Scholarships, of the annual value of £25 and £20 respectively, each tenable for two years, are awarded at the commencement of the Winter Session. For the College prospectus, containing information as to fees, Entrance and other Scholarships, Clinical Appointments, residence of Students, &c., apply to the Dean.

JOHN MURRAY, M.D., Dean.

Liverpool Royal Infirmary School of

MEDICINE.—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st. The Introductory Address will be delivered by Dr. Caton at 3 p.m.

The New Buildings, including a Museum, a complete series of Chemical Laboratories, a Physiological Laboratory, and an additional Dissecting-room, are now completed.

HOSPITAL PRACTICE.—ROYAL INFIRMARY.

Physicians—Dr. Turnbull, Dr. A. T. H. Waters, Dr. Glynn.
Surgeons—Mr. Stubbs, Mr. Bickersteth, Mr. Hakes.
Assistant-Surgeon—Mr. Reginald Harrison.

LECTURES.—WINTER SESSION.

Principles and Practice of Medicine—A. T. H. Waters, M.D., F.R.C.P.
Principles and Practice of Surgery—Reginald Harrison, F.R.C.S.
Physiology—Richard Caton, M.D.
Anatomy—W. Mitchell Banks, F.R.C.S.
Pathology—Alexander Davidson, M.A., M.D.
Ophthalmology—T. Shadford Walker, M.R.C.S.
Chemistry—J. Campbell Brown, D.Sc. Lond.
Anatomical Demonstrations—Michael Harris, M.B.
Histological Demonstrations—Rushton Parker, M.B., B.S., F.R.C.S.

The School of Medicine adjoins the Royal Infirmary and Lock Hospital, and is situated in the immediate neighbourhood of the Eye and Ear Infirmary, the Lying-in Hospital, and the Dispensary for Skin Diseases, where excellent opportunities are afforded for the practical study of these specialties.

A prospectus of the School and further information may be obtained from the Registrar, Mr. Reginald Harrison, 51, Rodney-street, Liverpool.

RULES AND REGULATIONS

OF THE

EXAMINING MEDICAL BODIES IN ENGLAND.

SESSION 1873-74.

EXTRACTS FROM THE REGULATIONS OF THE GENERAL MEDICAL COUNCIL ON THE SUBJECTS OF REGISTRATION OF MEDICAL STUDENTS AND PRELIMINARY EXAMINATIONS.

REGISTRATION OF MEDICAL STUDENTS.

The following regulations have been adopted by the General Medical Council in reference to the registration of students of Medicine:—

1. Every medical student shall be registered in the manner prescribed by the General Medical Council.

2. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council.

3. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.

4. The registration of medical students shall be placed under the charge of the Branch Registrars.

5. Each of the Branch Registrars shall keep a register of medical students according to the subjoined form:—

Form for the Registration of Medical Students.

Date of Registration.	Name.	Preliminary Examination and Date.	Place of Medical Study.

6. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed form, which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and a statement of his place of medical study.

7. The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.

8. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he his Registrar, a sufficient number of blank forms of application for the registration of medical students.

9. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.

10. A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before December 31 in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.

11. The several qualifying bodies are recommended not to admit, after October, 1870, to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least four years previously.

In the case of candidates from other than schools of the United Kingdom the Branch Councils shall have power to admit exceptions to this recommendation.

PRELIMINARY EXAMINATION IN ARTS RECOGNISED BY THE GENERAL MEDICAL COUNCIL.

"That testimonials of proficiency granted by the national educational bodies, according to the subjoined list, may be accepted, the Council reserving the right to add to or take from the list." (A degree in Arts of any university of the United Kingdom, or of the colonies, or of such other universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.)

LIST OF EXAMINING BODIES WHOSE EXAMINATIONS FULFIL THE CONDITIONS OF THE MEDICAL COUNCIL AS REGARDS PRELIMINARY EDUCATION.

I. Universities of the United Kingdom: Oxford: Examination for a Degree in Arts; Responsions; Moderations; Local Examinations (Senior), certificate to include Latin and Mathematics. Cambridge: Examination for a Degree in Arts; Previous Examination; Local Examination (Senior), certificate to include Latin and Mathematics. Durham: Examination for a Degree in Arts; Examination for students in their second and first years; Registration Examination for Medical Students; Local Examinations (Senior), certificate to include Latin and Mathematics. London: Examination for a Degree in Arts; Matriculation Examination. Aberdeen, Edinburgh, Glasgow, St. Andrews: Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery. Edinburgh: Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh. Dublin: Examination for a Degree in Arts; Entrance Examination. Queen's University (Ireland): Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree.

II. Other bodies named in Schedule (A) to the Medical Act.—Royal College of Surgeons of England: Examination conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors. The Society of Apothecaries of London: Examination in Arts. Royal College of Physicians, Edinburgh, Royal College of Surgeons, Edinburgh: Preliminary Examination in General Education, conducted by a board appointed by these two Colleges combined. Faculty of Physicians and Surgeons of Glasgow: Preliminary Examination in General Literature. Royal College of Surgeons in Ireland: Preliminary Examination, certificate to include Mathematics. Apothecaries' Hall of Ireland: Preliminary Examination in General Education.

III. Examining Bodies in the United Kingdom, not included in Schedule (A) to the Medical Act.—Royal College of Preceptors: Examination for a first-class certificate.

IV.—Colonial and Foreign Universities and Colleges.—Universities of Calcutta, Madras, and Bombay: Entrance Examination, certificate to include Latin. M'Gill College, Montreal: Matriculation Examination. University of Toronto; King's College, Toronto; Queen's College, Kingston; and Victoria College, Upper Canada: Matriculation Examination. King's College, Nova Scotia: Matriculation Examination; Responsions. Dalhousie College and University, Halifax, Nova Scotia: Matriculation Examination. University of Fredericton, New Brunswick: Matriculation Examination. University of Melbourne: Matriculation Examination, certificate to include all the subjects required by the General Medical Council. University of Sydney: Matriculation Examination. Codrington College, Barbadoes: 1. English certificate for students of two years' standing, specifying the subjects of examination; 2. Latin certificate, or "Testamur." Tasmanian Council of Education: Examination for the degree of Associate of Arts, certificate to include Latin and Mathematics. Christ's College, Canterbury, New Zealand: Voluntary Examinations, certificate to include all the subjects required by the General Medical Council. The Examiners for Commissions in the Military and Naval Services of the United Kingdom: Certificate to include all the subjects required by the General Medical Council. Cape of Good Hope: Third class certificate in Literature and Science, granted by the Board of Public Examiners. South Australia, South Australian Institute, Adelaide: Preliminary General Examination.

FORM OF APPLICATION FOR REGISTRATION AS A MEDICAL STUDENT.

I hereby apply to be registered as a student in Medicine, in conformity with the Regulations of the General Council of Medical Education and

Registration of the United Kingdom, for which purpose I submit the following particulars :—

Name of Applicant. (To be written in words at length.)		Preliminary Examination.	Date of Preliminary Examination.	Place of Medical Study.
Surname.	Christian Name.			

Applicant's Signature,

Address,

Date of Application,

To the Registrar of the Branch Council for

N.B.—The above form of application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by a certificate of the applicant's having passed a preliminary examination as required by the General Medical Council, and a statement of his place of medical study. The certificate of examination must testify that the student has been examined in—1. English Language, including grammar and composition; 2. Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; 3. Geometry—first two books of Euclid; 4. Latin, including translation and grammar. And in one of the following optional subjects—Greek; French; German; Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

Every student in Medicine is required to pass all the examinations for the degree of B.M., and to reckon the time of his medical study from the final examination for Arts.

1. Candidates for the degree of B.M. are required to pass two examinations, each of which is held yearly in full Michaelmas Term, usually at the end of November, due notice being given, in the usual manner, by the Regius Professor of Medicine. Each examination is conducted by the Regius Professor of Medicine and three persons who have been admitted to Regency either as Masters of Arts or as Doctors, and who are nominated yearly by the Vice-Chancellor, subject to the approval of Convocation. Each examination is conducted partly in writing, partly *vivâ voce*, and part of each is practical. The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every candidate at this second examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus, or in one of those four, and in some modern author approved by the Regius Professor.(a) His knowledge of disease also is tested at the bedside, and he is required to make observations with the microscope or any other aids to diagnosis with respect to patients submitted to him.

Before a candidate is admitted to the first of these two examinations, he must have spent two years in professional studies after having passed the examinations required for the degree of B.A., unless he was placed in the first or second class in the School of Natural Science, in which case, if he receive from the public examiners a special certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this examination at once, and need not then be examined again in any science specified in such certificate. Instruction in Natural Science is carried on at the University Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology, together with courses of lectures by the professors in those and other subjects.(b) Large collections illustrate the several subjects; there is a pathological series, including the collection of Schröder van der Kolk, in the medical department, where there is also a medical laboratory. The Radcliffe Library, containing nearly 20,000 scientific volumes, is open daily to all students from ten till four, and on certain evenings during term. Before a candidate is admitted to the second examination, he must have completed sixteen terms from the date of the same *testamur* and two years from the date of his *testamur* in the first medical examination, and must deliver to the Regius Professor satisfactory certificates of his attendance at some first-class hospital. Everyone attending to be a candidate at either examination is required to give the Professor notice of his intention a fortnight at least before the week in which the examination is to be held.

No one from another University can be incorporated as a Graduate in Medicine without passing these two examinations.

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precincts of the Schools, in the presence of the Regius Professor, a dissertation composed by himself on some medical subject approved by the Professor, and to deliver to him a copy of it.

(a) Such as Morgagni, Sydenham, Boerhaave.

(b) Regius Professor of Medicine, H. W. Acland, M.D., LL.D., F.R.S.; Professor of Geometry, H. J. S. Smith, M.A., F.R.S.; Professor of Natural Philosophy, Rev. B. Price, M.A., F.R.S.; Professor of Experimental Physics, R. B. Clifton, M.A., F.R.S.; Professor of Chemistry, W. Odling, M.A.; Linacre Professor of Physiology, G. Rolleston, M.D., F.R.S.; Professor of Zoology, J. O. Westwood, M.A., F.L.S.; Professor of Geology, J. Phillips, D.C.L., F.R.S.; Professor of Mineralogy, N. S. Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy, J. B. Thompson, B.A.; Demonstrator in Anatomy, Charles Robertson, Esq.; Demonstrator of Chemistry, T. H. G. Wyndham, M.A.; Professor of Botany at the Physic Gardens, M. Lawson, M.A., Magdalen College; Lecturer in Natural Science at Magdalen College, E. Chapman, M.A.; Lee's Reader in Chemistry at Christ Church, A. G. V. Harcourt, M.A., F.R.S.; Lee's Reader in Physics, A. W. Reinold, M.A.

UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.—Before a student can become a Bachelor of Medicine he must have resided nine terms (three academical years).

Five years of medical study are required, of which time six terms (two academical years) shall be spent in the University after the student has passed the previous examination. In the case of those who have graduated with honours as Bachelor of Arts, four years of medical study are deemed sufficient, and four terms only of medical study in the University are required.

The previous examination in Classics and Mathematics may be passed in the first or the second term of residence. In addition to the previous examination, the student is required to pass an examination in Algebra at the same time or in some subsequent term.

There are three examinations for M.B.

The first examination is in—1. Mechanics and Hydrostatics; 2. Chemistry, with Heat and Electricity; 3. Botany. Before presenting himself for it the student must have attended lectures on Chemistry, including manipulations, and on Botany. (Students who have obtained honours in any tripos or passed the general examination for B.A. are not required to be examined in Mechanics and Hydrostatics; and those who have passed the special examination in Botany for B.A. are not required to be again examined in that subject.)

Students who have obtained honours in the Natural Science Tripos and have passed satisfactorily in Chemistry, with Heat and Electricity, and Botany, are exempted from this first examination.

The second examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacology. The student must have completed two years of medical study, the time of medical study required to be spent in the University being included in these two years; and must also produce certificates of attendance on lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy, and Pathology; one year's hospital practice, and one season's dissections.

Students who have obtained honours in the Natural Sciences Tripos, and have passed with credit the examinations in Chemistry, Botany, or Comparative Anatomy, are not required to be again examined in those subjects.

The third examination is in—1. Pathology and Practice of Physic (two papers); 2. Clinical Medicine (in the wards of the Hospital); 3. Medical Jurisprudence. The candidate must have completed the course of medical study, and must produce certificates of attendance on one course of lectures on each of the following subjects:—Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery; and of having attended hospital practice

during three years, and of having been clinical clerk for six months at a recognised hospital, or of having had special charge of hospital, dispensary, or union patients under a qualified medical practitioner.

After the third examination an Act has to be kept, which consists in reading an original thesis, followed by a *vivâ voce* examination on the subject of the thesis, as well as on other subjects of the Faculty.

The Degree of Doctor of Medicine may be taken three years after M.B. An Act has to be kept, with *vivâ voce* examination, and an essay has to be written extempore. A Master of Arts of four years' standing can proceed direct to M.D., provided he produces the same certificates and passes the same examinations as for M.B.

Degree of Master in Surgery.—The candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended a second course of lectures on Human Anatomy, one course of lectures on the Principles and Practice of Surgery, one year's clinical surgical lectures, ten cases of midwifery, a second season of dissections, three years' surgical practice of a recognised hospital, and of having been House-Surgeon or Dresser for six months. The subjects of the examination are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery; and 4. Midwifery.

The examinations are partly in writing and partly *vivâ voce* in the dissecting-room and in the hospital. They take place in the Michaelmas and Easter Terms, an interval of two days being allowed to intervene between the first and second examinations for M.B.

All the subjects required for the first and second examinations may be fully studied, and the necessary certificates obtained, in the medical school of the University. The attendance at the Hospital and lectures in Cambridge is also recognised by the University of London, and by the College of Surgeons and the Society of Apothecaries.

UNIVERSITY OF LONDON.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine shall be required—

1. To have passed the matriculation examination, or to have taken a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided, in the last case, that Latin has been one of the subjects in which he has passed).

2. To have passed the preliminary scientific examination.

3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, at one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom.

4. To pass two examinations in Medicine.

PRELIMINARY SCIENTIFIC (M.B) EXAMINATION.(a)

The preliminary scientific examination shall take place once in each year, and shall commence on the third Monday in July.

[Candidates for the degree of M.B. are strongly recommended by the Senate to pass the preliminary scientific examination before commencing their regular medical studies; and to devote a preliminary year to preparation for it according to the following programme:—*Winter Session:* Mechanical and Natural Philosophy, Chemistry (especially Inorganic), Zoology. *Summer Session:* Practical Chemistry (Inorganic), Botany.]

No candidate shall be admitted to this examination until he shall have completed his seventeenth year, and shall have either passed the matriculation examination(b) or taken a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided, in the last case, that Latin has been one of the subjects in which he has passed); nor unless he have given notice of his intention to the Registrar at least *fourteen days* before the commencement of the examination.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects of the First B.Sc. examination(c):—Mechanical and Natural Philosophy, Inorganic Chemistry, Botany and Vegetable Physiology, Zoology.

EXAMINATION FOR HONOURS.

Any candidate who has passed the preliminary scientific (M.B.) examination in all its subjects may be examined at the honours examination next following the preliminary scientific (M.B.) examination at which he has passed, in (1) Experimental Physics, (2) Chemistry, (3) Botany, and (4) Zoology; unless he have previously obtained an exhibition in either of these subjects at the first B.Sc. examination, in which case he shall not be admissible to the examination for honours in that subject.

If, in the opinion of the examiners, any candidate of not more than twenty-two years of age at the commencement of the pass examination, who shall have passed either the first B.Sc. examination or the preliminary scientific (M.B.) examination, shall possess sufficient merit, the candidate who shall distinguish himself the most of all the candidates who shall have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the pass examination, in Experimental Physics;(d) the candidate who shall have distinguished himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the pass examination, in Chemistry; the candidate who shall distinguish himself the most of all the candidates who shall have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the pass examination, in Botany; and the candidate who shall distinguish himself the most of all the candidates who shall have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the pass examination, in Zoology,—shall each receive an exhibition of forty pounds per annum for the next two years, payable in quarterly instalments (it being intended that one exhibition only shall be given in each case among all the candidates, although some of such candidates may have passed the first B.Sc. examination, and others the preliminary scientific (M.B.) examination); provided that on receiving each instalment he shall declare his intention of presenting himself either at the second B.Sc. examination within two academical years(e) from the time of his passing the first B.Sc. examination, or at the first M.B. examination within three academical years from the time of his passing the preliminary scientific (M.B.) examination, as the case may be.

Under the same circumstances the first and second candidates for honours in Experimental Physics shall each receive a Neil Arnott Bronze Medal.

FIRST M.B. EXAMINATION.

The first M.B. examination shall take place once in each year, and shall commence on the last Monday in July.

No candidate shall be admitted to this examination unless he have passed the preliminary scientific examination at least one year previously,(f) and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts in one of the before-named universities, been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology,

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the preliminary scientific (M.B.) examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the preliminary scientific examination and the first M.B. examination in the same year if they so prefer.

(b) A certificate of age must be produced by every candidate who passed the matriculation examination in the preceding January or June.

(c) Candidates who shall pass in all the subjects of the preliminary scientific (M.B.) examination, and also *at the same time* in the Mathematics of the first B.Sc. examination, shall be considered as having passed both the preliminary scientific examination and also the first B.Sc. examination, without being required to pay an additional fee; and candidates who shall pass in all the subjects of the preliminary scientific (M.B.) examination, and who shall have *previously* passed the first B.A. examination, shall be admissible to the second B.Sc. examination.

(d) The Exhibition in Experimental Physics having been provided by the liberal endowment of Dr. Arnott, will be entitled "The Neil Arnott Exhibition."

(e) By the term "academical year" is ordinarily meant the period intervening between any examination and an examination of a higher grade in the following year, which period may be either *more* or *less* than a calendar year. Thus the interval between the *first* examinations in Arts, Science, and Medicine, and the *second* examinations of the next year in those Faculties respectively, is about sixteen months; whilst the interval between the second B.A. examination and the M.A. examination of the next year, or between the second B.Sc. examination and the D.Sc. examination of the next year, is less than eight months. Nevertheless, each of these intervals is counted as an "academical year." Candidates who had attained the age of 21 years before January 1, 1860, are admissible to the successive examinations for degrees in Science without the intervals between them prescribed by the Regulations. Candidates who have been admitted to the first B.Sc. examination within six months after passing the matriculation examination will be required to give evidence of having completed their 18th year.

(f) *See* footnote (a).

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Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts, dissected during two winter sessions. 4. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, etc. 5. Of having attended to practical pharmacy, and of having acquired a practical knowledge of the preparation of medicines.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the commencement of the examination.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects:—Anatomy, Physiology,(g) Materia Medica and Pharmaceutical Chemistry, Organic Chemistry.

EXAMINATION FOR HONOURS.

Any candidate who has been placed in the first division at the first M.B. examination may be examined at the Honours examination next following the first M.B. examination at which he has passed, for honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry. If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Anatomy, the candidate who shall distinguish himself the most in Physiology, Histology, and Comparative Anatomy, and the candidate who shall distinguish himself the most in Materia Medica, Pharmaceutical Chemistry, and Organic Chemistry, shall each receive an exhibition of £40 per annum for the next two years, payable in quarterly instalments; provided that on re-receiving each instalment he shall declare his intention of presenting himself at the second M.B. examination within three academical years(h) from the time of his passing the first M.B. examination. Under the same circumstances, the first and second candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

SECOND M.B. EXAMINATION.(i)

The second M.B. examination shall take place once in each year, and shall commence on the first Monday in November. No candidate shall be admitted to this examination within two academical years(k) of the time of his passing the first examination, nor unless he have produced certificates to the following effect:—1. Of having passed the first M.B. examination. 2. Of having, subsequently to having passed the first M.B. examination, attended a course of lectures on each of two of the subjects comprehended in the list previously given,(l) and for which the candidate had not presented certificates at the first M.B. examination. 3. Of having conducted at least twenty labours. (Certificates on this subject will be received from any legally qualified practitioner in Medicine.) 4. Of having attended the surgical practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the medical practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine. N.B.—The student's attendance on the surgical and on the medical hospital practice specified in Regulations 4 and 5 may commence at any date after his passing the preliminary scientific examination, and may be comprised either within the same year or within different years; provided that in every case his attendance on surgical and medical hospital practice be continued for at least eighteen months subsequently to his passing the first M.B. examination. Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.(m) 6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients in a hospital, infirmary, dispensary, or parochial union, during six months. 7. Of having acquired proficiency in vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The candidate shall also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects:—General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations shall include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. N.B.—Candidates will be expected to write prescriptions in Latin, without abbreviations. The Senate desire it to be understood that Bachelors of Medicine of the University of London have no right as such to assume the title of Doctor of Medicine.

EXAMINATION FOR HONOURS.

Any candidate who has been placed in the first division at the second M.B. examination may be examined at the honours examination next following the second M.B. examination at which he has passed, for honours in (1) Medicine, (2) Obstetric Medicine, and (3) Forensic Medicine.

If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine shall receive £50 per annum for the next two years, with the style of University Scholar in Medicine.

Under the same circumstances, the candidate who shall distinguish himself the most in Obstetric Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Obstetric Medicine.

Under the same circumstances, the candidate who shall distinguish himself the most in Forensic Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine.

Under the same circumstances, the first and second candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

BACHELOR OF SURGERY.

The examination for the degree of Bachelor of Surgery shall take place once in each year, and shall commence on the Tuesday following the fourth Monday in November.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—1. Of having passed the second examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

The fee for this examination shall be £5.

The examinations comprise Surgical Anatomy and Surgical Operations, by printed papers. Examination, and report on cases, of surgical patients; performance of surgical operations upon the dead subject; application of surgical apparatus; *vivâ voce* interrogation.

EXAMINATION FOR HONOURS.

Any candidate who has been placed in the first division at the B.S. examination may be examined at the honours examination next following the B.S. examination at which he has passed, for honours in Surgery.

If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most shall receive fifty pounds per annum for the next two years, with the style of University Scholar in Surgery.

Under the same circumstances, the first and second can-

(g) Any candidate shall be allowed, if he so prefer, to postpone his examination in Physiology from the first M.B. examination at which he presents himself for examination in the remaining subjects until the first M.B. examination in the next or any subsequent year; but such candidate shall not be admitted to compete for honours on either occasion; and he shall not be admitted as a candidate at the second M.B. examination until after the lapse of at least twelve months from the time of his passing the examination in Physiology.

(h) *See* foot note (e).

(i) Any candidate for the second M.B. examination who has passed the first M.B. examination under the former regulations will be required to have also passed the examination in Physiology at some previous first M.B. examination carried on under the present regulations, at which examination he shall not be allowed to compete for honours.

(k) *See* footnote (e).

(l) *See* First M.B. Examination, Clause 2.

(m) The Senate regard it as highly desirable that candidates for the degree of M.B. should practically acquaint themselves with the different forms of insanity by attendance in a lunatic asylum.

didates shall each receive a gold medal of the value of five pounds.

MASTER IN SURGERY.

The examination for the degree of Master in Surgery shall take place once in each year, and shall commence on the fourth Monday in November.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—1. Of having taken the degree of Bachelor of Surgery(n) in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University—*a*. To clinical or practical surgery during two years in a hospital or medical institution recognised by this University; *b*. Or to clinical or practical surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on clinical or practical surgery, or two years of practice, will be dispensed with in the case of those candidates who, at the B.S. examination, have been placed in the first division. 3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

The fee for the degree of Master in Surgery shall be £5.

The examination shall be conducted by means of printed papers and *viva voce* interrogation, and includes Logic and Moral Philosophy. Any candidate who has taken the degree either of B.A., B.Sc., or M.D. in this University is exempted from this part of the examination; and any candidate who has passed the second M.B. examination may at any subsequent M.S. examination present himself for Logic and Moral Philosophy alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery. Surgery, including a commentary on a case in Surgery by printed papers; Surgical Anatomy, by printed papers; Surgery, by printed papers. Examination, and report on cases, of surgical patients in the wards of a hospital. Dissection of a surgical region or performance of surgical operations; *viva voce* interrogation.

If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Surgery at the examination for the degree of Master in Surgery shall receive a gold medal of the value of £20.

DOCTOR OF MEDICINE.

The examination for the degree of Doctor of Medicine shall take place once in each year, and shall commence on the fourth Monday in November. No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—1. Of having passed the second examination for the degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University—*a*. To clinical or practical Medicine during two years in a hospital or medical institution recognised by this University. *b*. Or to clinical or practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. One year of attendance on clinical or practical Medicine, or two years of practice, will be dispensed with in the case of those candidates who at the second M.B. examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

The fee for the degree of Doctor of Medicine shall be £5.(o)

The examination shall be conducted by means of printed papers and *viva voce* interrogation, and includes Logic and Moral Philosophy. Any candidate who has taken the degree either of B.A., B.Sc., or M.S. in this University, is exempted from this part of the examination; and any candidate who has passed the second M.B. examination may at any subsequent M.D. examination present himself for Logic and Moral Philosophy alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Doctor of Medicine.

Medicine, including a commentary on a case in Medicine or Obstetric Medicine, at the option of the candidate, by printed papers. Medicine, by printed papers. Examination and report on cases, of medical patients in the wards of a hospital. *Viva voce* interrogation and demonstration from specimens and preparations.

If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine at the examination for the degree of Doctor of Medicine shall receive a gold medal of the value of £20.

REGULATIONS RELATING TO CANDIDATES WHO COMMENCED THEIR MEDICAL STUDIES IN OR BEFORE JANUARY, 1839.

Bachelor of Medicine.—Candidates who commenced their professional studies in or before January, 1839, shall be required to pass the preliminary scientific examination in Chemistry and Botany only, and shall be admitted to the first examination for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been engaged during two years in their professional studies. 2. Of having attended a course of lectures on each of four of the subjects comprehended in the list previously given.(p) 3. Of having dissected during nine months. 4. Of having attended to practical Pharmacy during a sufficient length of time to enable them to acquire a practical knowledge in the preparation of medicines.

Candidates who commenced their professional studies in or before January, 1839, shall be admitted to the second examination for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been engaged during four years in their professional studies. 2. Of having passed the first M.B. examination. 3. Of having attended a course of lectures on each of two of the subjects comprehended in the list previously given.(q) 4. Of having dissected during twelve months. 5. Of having attended to practical Pharmacy during a sufficient length of time to enable them to acquire a practical knowledge in the preparation of medicines. 6. Of having conducted at least six labours. 7. Of having attended the surgical practice of a recognised hospital or hospitals during twelve months. 8. Of having attended the medical practice of a recognised hospital or hospitals during other twelve months. 9. Of moral character from a teacher in the last school or institution at which they have studied, so far as the teacher's opportunity of knowledge has extended.

Candidates who have not taken a degree in Arts or passed the matriculation examination in this University, will be required to translate a portion of Celsus *de Re Medicâ*.

REGULATIONS RELATING TO PRACTITIONERS IN MEDICINE OR SURGERY DESIROUS OF OBTAINING DEGREES IN MEDICINE.(r)

Bachelor and Doctor of Medicine.—Bachelor of Medicine.—Candidates shall be admitted to the two examinations for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been admitted prior to the year 1840 members of one of the legally constituted bodies in the United Kingdom for licensing practitioners in Medicine or Surgery; or of having served previously to 1840 as Surgeons or Assistant-Surgeons in her Majesty's Army, Ordnance, or Navy, or in the service of the Honourable the East India Company. 2. Of having received a part of their education at a recognised institution or school, as required by the charter of the University. 3. Of moral character, signed by two persons of respectability.

Candidates who have not taken a degree in Arts, or passed the Matriculation examination in this University, will be required to translate a portion of Celsus *de Re Medicâ*.

Doctor of Medicine.—Candidates who have been engaged during five years in the practice of their profession shall be admitted to the examination for this degree on producing certificates to the following effect:—1. Of having been engaged during five years in the practice of their profession. 2. Of

(n) Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates, the attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

(o) This fee will continue to be £10 to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of £5 at the preliminary scientific examination.

(p) *See* First M.B. Examination, Clause 2.

(q) *See* First M.B. Examination, Clause 2.

(r) All these regulations are applicable exclusively to practitioners who obtained their licences or commissions prior to 1840.

having taken the degree of Bachelor of Medicine in this University.

Candidates who have not taken a degree in Arts, or passed the matriculation examination in this University, will be required to translate a portion of Celsus *de Re Medicâ*.

Examinations in 1873-74.—The following are the dates at which the several remaining medical examinations for the year 1873-74 will commence:—Matriculation: Monday, January 12, 1874. Bachelor of Medicine: Second M.B., Monday, November 3. Bachelor of Surgery: Tuesday, November 25. Master in Surgery: Monday, November 24. Doctor of Medicine: Monday, November 24.

UNIVERSITY OF DURHAM.

For Registration.—No one shall be held to be a student in Medicine who has not been registered in a register kept for that purpose. No one shall be so registered unless he has passed one of the preliminary examinations recommended by the General Medical Council. Every registered student shall receive from the Registrar a certificate of his registration, for which he shall pay the sum of five shillings. The registration examination shall be directed to the rudiments of Religion, Literature and Science, and shall be conducted by two or more examiners nominated by the Warden. The registration examination shall be held twice a year—viz., shortly before the winter session, and shortly before the summer session, of the College of Medicine, Newcastle-upon-Tyne. The registration examination will begin at Durham on Tuesday, September 16, 1873, and on April 14 and September 15, 1874, at 9 a.m. each day. Applications to be made to Arthur Beanlands, Esq., Durham, at least one month before the day of examination, to whom also each candidate must, at the same time, send the examination fee, £1, and a certificate of character, and specify the optional subject in which he wishes to be examined.

Subjects of Examination for September 16, 1873.—Necessary Subjects:—The History contained in the Acts of the Apostles; English Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Euclid, Books I. and II.; Latin Grammar, with Virgil, Æncid, Lib. I. and II.; and one of the following optional subjects:—Greek Grammar, with Xenophon's Memorabilia; French Grammar with Voltaire's Charles XII.; German Grammar, with Goethe's Dichtung und Wahrheit, Book I.; Elementary Questions in Mechanics, Hydrostatics, and Pneumatics.

Subjects of Examination for April 14 *and September* 15, 1874.—Necessary Subjects:—The History contained in the Acts of the Apostles; English Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Euclid, Books I. and II.; Latin Grammar, with—in April, Cæsar, De Bello Gallico, Lib. I. and II.; in September, Virgil, Æneid, Lib. I. and II.; and one of the following subjects:—Greek Grammar with Xenophon's Memorabilia; French Grammar, with Voltaire's Charles XII.; German Grammar, with Goethe's Dichtung und Wahrheit, Book I.; Elementary Questions in Mechanics, Hydrostatics, and Pneumatics. The following examinations are also accepted as qualifications for registration:—1. Durham senior examination of persons not Members of the University. For this, candidates are required to satisfy the examiners in Latin, Algebra (including Simple Equations), Euclid (Books I. and II.); and one of the four following subjects:—(1) Greek, (2) French, (3) German, (4) Mechanics, Hydrostatics, and Pneumatics. 2. Durham examinations for students in Arts in their first year.

The next senior examinations of persons not Members of the University will commence at Durham, on Monday, June 8, 1874, at two o'clock.

For Licences and Degrees.—Candidates for the degrees of M.C., M.B., and M.D., in the University of Durham, are required to reside for three terms, as students in Arts, at the University, either in Durham or in Newcastle.

For the Licence in Surgery.—The regulations are the same as those for the licence in Medicine, except that the final examination is directed more particularly to Surgery, and may or may not be passed at the same time as the final examination for the licence in Medicine.

For the Licence in Medicine.—A candidate must produce certificates of registration as a student in Medicine, of having, after registration, spent four years in medical study at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858, one of the said four years being spent at the University College of Medicine, Newcastle-on-Tyne, of good moral conduct, and of having attained the age of 21 years. There are two examinations; one after the second winter session, the other after the fourth winter session, of medical study. The first is directed to Anatomy, Physiology, and Chemistry; the second to the other branches of medical education, and more particularly to the Practice of Medicine.

For the Degree of Master in Surgery.—A candidate must be a Licentiate in Surgery, and also a Licentiate in Medicine, of the University, and of the standing of eighteen terms (six years) at least from the date of his registration at Durham, and of three terms at least from the date of his admission to the licence in Surgery. He must be a Bachelor of Arts, or have passed the final examination for B.A., or one equivalent thereto, and must have kept one year's residence in Arts, either at Durham in the University, or at Newcastle-upon-Tyne in the Durham University College of Medicine. The examination for this degree is directed chiefly to the Practice of Surgery.

For the Degree of Bachelor of Medicine.—A candidate must be of the standing of one year at least as a Licentiate in Medicine, and of six years at least from the date of his matriculation. He must either be a Bachelor of Arts or have kept one year's residence in Arts, either at Durham in the University, or at Newcastle-upon-Tyne in the Durham University College of Medicine, and have passed the final examination for the degree of B.A., or an equivalent thereto. The examination for this degree is directed chiefly to the Practice of Medicine.

For the Degree of Doctor in Medicine.—A candidate must be of the standing of one year at least as a Bachelor in Medicine of the University of Durham, and of the standing of seven years from the date of his matriculation at Durham, and must perform such exercises as the Warden and Senate require.

The examinations for the licences and degrees in Medicine and Surgery are conducted in Newcastle. Those for the licences: 1. By printed papers of questions. 2. Practically in Anatomy, Physiology, Chemistry, Materia Medica, Pharmacy, Surgery, Medicine, Midwifery, and Medical Jurisprudence. 3. *Vivâ voce* on all the subjects. The examinations are held, except in special cases, yearly in the month of June, at the close of the Easter Term, and are open to Members of the University. The next examination will begin on Monday, June 8, 1874, at 9 a.m. The licences and degrees are conferred in Convocation at Durham. The examiners are appointed yearly by the Warden of the University, and approved by Convocation.

Expenses at Durham.—The average annual cost of residence at University College may be estimated at £80 to £85; at Bishop Hatfield's Hall, at £65 to £70. Students may also, with the consent of the authorities, reside in a private house or lodging (approved by the authorities) without becoming members of any college or hall. The University fees payable by such students will amount to about £20 per annum.

Fees for Examination and Degrees: For senior middle class examination, £1; for examination at the end of first year, £1; for registration examination, £1; for registration, 5s.; for a certificate in Chemistry, 10s.; for each public examination in Medicine or in Surgery, £1; for a licence in Medicine, £3; for a licence in Surgery, £3; for a degree of Master in Surgery, £6; for a degree of Bachelor in Medicine, £6; for a degree of Doctor in Medicine, £6.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

BY-LAWS RELATING TO MEMBERS.

1. The Members of the College, present and future, shall be alone eligible to the Fellowship. They shall have the use of the Library and Museum, subject to the regulations relating thereto, and shall be admitted to all lectures, and shall enjoy such further privileges as may from time to time be defined by the by-laws; but they shall not be entitled to any share in the government, or to attend or vote at general meetings, of the Corporation. 2. All persons who have been admitted, before February 16, 1859, Licentiates of the College, shall be entitled to be admitted Members of the College, provided that they have, since their admission as Licentiates, obeyed the by-laws, and do accept such Membership, and engage henceforth to obey the by-laws of the College. 3. Any extra-Licentiate who shall have produced testimonials as to character satisfactory to the Censors, and shall have assured the said Censors that he is not engaged in the practice of pharmacy, and who shall comply with such other regulations as are required

by the by-laws of the said Corporation, may be proposed to the College to be admitted a Member of the College. 4. Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the by-laws and regulations of the College, may be proposed to the College to be admitted a Member of the College. 5. Every candidate for the membership of the College, under the last by-law, who shall have commenced his professional studies after September, 1861, shall satisfy the Censors' Board that previously to the commencement of his professional studies he has obtained a degree in Arts from some university of the United Kingdom or of the colonies, or from some other university specially recognised by the Medical Council; or that he has passed examinations equivalent to those required for a degree in Arts. All other candidates for Membership shall be examined on the subjects of general education by the President and Censors of the College. 6. Every candidate for Membership shall furnish proof that he has attained the age of twenty-five years. 7. Every candidate shall produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College. 8. Every candidate (*except such as shall be admissible under the provisions of Sections* 15 *and* 16) shall produce proof of his having been engaged in professional studies during a period of five years, of which four years at least shall have been passed at a medical school or schools recognised by the College. 9. Every candidate (*except such as shall be admissible under the provisions of Sections* 15 *and* 16) shall produce evidence, satisfactory to the Censors' Board, of his having studied the following subjects:—Anatomy (with Dissections), during two winter sessions(a); Physiology, during two winter sessions; Chemistry, during six months; Practical Chemistry, during three months; Materia Medica, during three months; Practical Pharmacy, during three months (by Practical Pharmacy is meant instruction in the laboratory of a registered medical practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a public hospital or dispensary recognised by the College); Botany, during three months (this course of lectures may be attended prior to the commencement of professional studies, and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination will be exempt from attendance on this course); Morbid Anatomy, during six months (this includes attendance and instruction in the post-mortem-room during the period of clinical study); Principles and Practice of Medicine, during two winter sessions (it is required that the principles of public health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine: the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Principles and Practice of Surgery, during *two winter sessions* (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Medicine, during *three winter sessions and three summer sessions*(b) (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Surgery, during *two winter sessions and two summer sessions* (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school: by Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases); Midwifery and the Diseases peculiar to Women, during three months (certificates must also be produced of attendance on not less than twenty labours, and of instruction and proficiency in vaccination); Forensic Medicine, during three months; of having attended diligently during three winter sessions and three summer sessions the Medical Practice, *and during three winter sessions and two summer sessions the Surgical Practice*, of an hospital containing at least 100 beds; of having been engaged during six months in the clinical study of Diseases peculiar to Women; and of having served the office of clinical clerk in the medical wards during at least six months. [The requirements printed in italics apply to candidates who commenced their professional education in the United Kingdom on or after October 1, 1867; and to candidates who commenced their professional education at a recognised foreign or colonial school on or after October 1, 1868.] 10. Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding by-law (*except such as shall be admissible under the provisions of Section* 16), shall, nevertheless, bring proof of his having attended during at least twelve months the medical practice of an hospital in the United Kingdom containing at least 100 beds. 11. If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness, in any respect, for admission to examination, they may submit the case to a general meeting of the Fellows. 12. No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicines; or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues. 13. No candidate shall be admitted to examination who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses. 14. Every candidate (except in cases specially exempted under Sections 15 and 16) shall give proof of his acquirements by written answers to questions placed before him, and shall be examined *viva voce* at three separate examinations, and shall be approved by the President and Censors, or by the major part of them. 15. Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at a university in the United Kingdom wherein the courses of study and the examinations to be undergone by the students previously to graduation shall have been adjudged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the examinations hereinbefore described, except such as relate to the third or pass examination; the nature and extent of which examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the Membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages. 16. If any candidate who has attained the age of forty years shall produce testimonials not merely satisfactory as to his moral character and conduct and his general and professional acquirements, but further showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a medical practitioner, the Censors' Board, having well weighed and considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient. 17. Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the primary examination.(c) 18. Any candidate who shall have obtained a degree in Surgery, at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and the Principles and Practice of Surgery. 19. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

The fee to be paid for admission as a Member of the College shall be thirty guineas.

BY-LAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE MEMBERSHIP.

Every candidate for the Membership of the College (except such as shall be admissible under the provisions of Sections 15 and 16 of the by-laws) will be required to pass the following examinations:—

The first examination, on Anatomy and Physiology, will be conducted on successive days, as follows:—On Monday: Evening, from 7 to 10, by written questions. On Tuesday: Evening, commencing at 7 o'clock, *vivâ voce*, on dissections and preparations.

(a) The winter session comprises a period of six months.

(b) The winter session comprises a period of six months, and the summer session a period of three months.

(c) *See* Regulations relating to the examinations.

The second examination will be conducted as follows:—On Monday: Evening, from 7 to 10, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. On Tuesday: Morning—The candidate's practical knowledge will be tested, either at the College or in the surgical wards of an hospital; Afternoon, from 1 to 4, on Materia Medica, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology. *This Examination will be conducted by written questions and partly in a practical manner.* Evening, commencing at 7 o'clock, by written questions on Midwifery, and the Diseases peculiar to Women. On Thursday, commencing at 7 p.m., examination *viva voce*.

The third or pass examination will be conducted on successive days, as follows:—On Thursday, from 2 to 6, by written questions on Medical Anatomy, and on the Principles of Medicine. On Friday, from 2 to 6, by written questions on the Practice of Medicine, including the Principles of Public Health and on Psychological Medicine. On Saturday or Monday, the candidate's practical knowledge will be tested, either at the College or in the medical wards of an hospital. On Tuesday, examination, *viva voce*. On Wednesday, examination, *viva voce*.

1873.—Third or Pass Examination:—On Thursday, October 23.

1874.—On Thursdays, January 22, April 23, July 23, October 22. The first and second examinations are generally held at the commencement of the same months.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second examination until after the termination of four years of professional study, nor to the third or pass examination until after the completion of the required course of professional study.

Every candidate must give fourteen days' notice, in writing, to the Registrar of the College, of his intention to present himself for examination, at the same time transmitting the following certificates:—*For the Primary Examination.*—Evidence of having passed an Arts examination; and, in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a degree in Arts from some university of the United Kingdom or of the colonies, or from some other university specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school: all other candidates for membership shall be examined on the subjects of general education by the President and Censors of the College. *For the Second Examination.*—Evidence of having completed four years of professional study; of having attained the age of twenty-one years; of instruction and proficiency in the practice of vaccination; and of having attended not less than twenty labours, and of having discharged the duties of clinical clerk, and performed the duties of dresser, for periods of not less than three months. *For the Pass Examination.*—Proof of having attained the age of twenty-five years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

BY-LAWS RELATING TO LICENTIATES.

The College will, under its Charter, grant licences to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery (which licences are not to extend to make the Licentiates Members of the Corporation), to persons who shall conform to the following by-laws.

Every candidate for the College licence (except when otherwise provided by the by-laws) is required to produce satisfactory evidence to the following effect:—1. Of having attained the age of 21 years. 2. Of moral character. 3. Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College. 4. Of having been registered as a medical student in the manner prescribed by the General Medical Council. ["After October, 1870, every candidate (not exempted from registration) is required to have been registered at least four years previously."] 5. Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—*a*. Attending the practice of a hospital or other institution recognised by the College for that purpose. *b*. Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery. *c*. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidate shall have passed an examination in the subjects of general education will not be recognised by the College. 6. *Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals,* of having discharged the duties of clinical clerk at a recognised hospital for a period of not less than three months; of having performed the duties of dresser at a recognised hospital for a period of not less than three months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women. 7. Of having studied the following subjects:—Anatomy (with dissections) during two winter sessions; (d) Physiology during two winter sessions; Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months (by Practical Pharmacy is meant instruction in the laboratory of a registered medical practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a public hospital or dispensary recognised by the College); Botany during three months (this course of lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination will be exempt from attendance on this course); Morbid Anatomy during six months (this includes attendance and instruction in the post-mortem room during the period of clinical study); Principles and Practice of Medicine during two winter sessions (it is required that the principles of public health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine: the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Principles and Practice of Surgery, during *two winter sessions* (e) (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Medicine, during *two winter sessions and two summer sessions* (e), (the attendance on these lectures must not commence until after the first winter session at a recognised medical school); Clinical Surgery, during *two winter sessions and two summer sessions* (e), (the attendance on these lectures must not commence until after the first winter session at a recognised medical school; by Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases); Midwifery and the Diseases peculiar to Women, during three months (certificates must also be produced of attendance on not less than twenty labours, and of instruction and proficiency in vaccination); Forensic Medicine, during three months. 8. Of having passed the professional examinations.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. (f) Any candidate who shall have obtained a degree in Medicine at a university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory

(d) The winter session comprises a period of six months, and the summer session a period of three months.

(e) The requirements printed in italics apply to candidates who commenced their professional education in the United Kingdom on or after October 1, 1867; and to candidates who commenced their professional education at a recognised foreign or colonial school on or after October 1, 1868.

(f) *See* Regulations relating to the examinations.

to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

Any candidate, being a "registered medical practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

BY-LAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE LICENCE.

Every candidate for the College licence, before he is admitted to examination, will be required to sign a declaration, stating that he has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

The first examination, on Anatomy and Physiology, will be conducted on successive days as follows:—On the first day: Evening, from 7 to 10, by written questions. On the second day: Evening, commencing at 7 o'clock, *viva voce*, on dissections and preparations. The second, or pass examination, will be conducted on successive days, as follows:—On the first day: Evening, from 7 to 10, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. On the second day: Morning—The candidates practical knowledge will be tested, either at the College or in the surgical wards of an hospital. Afternoon, from 1 to 4, on Materia Medica, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology.(g) This examination will be conducted partly by written questions and partly in a practical manner. Evening, commencing at 7 o'clock, by written questions on Midwifery and the Diseases peculiar to Women. On the third day: Evening, from 7 to 10, by written questions on Medical Anatomy, and on the Principles and Practice of Medicine, including the Principles of Public Health. On the fourth day: Morning—The candidate's practical knowledge will be tested, either at the College or in the medical wards of an hospital. Evening, commencing at 7 o'clock, *viva voce*, on the Principles and Practice of Medicine, Surgery, and Midwifery.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school; nor to the second, or pass examination, until after the termination of four years of professional study.

The College does not admit to the pass examination any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least four years.

Any candidate who shall be rejected at the first examination, will not be re-admitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study satisfactory to the examiners, during that time.

Any candidate who shall be rejected at the second or pass examination, will not be re-admitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised hospital, and also of attendance on clinical lectures, or other professional study satisfactory to the examiners, during that time.

Every candidate intending to present himself for examination, is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following certificates:—For the First Examination: Evidence of having passed an Arts examination, of having been duly registered as a medical student, and of having completed the second winter session of professional study at a recognised medical school. For the Second, or Pass Examination: Evidence of having completed four years of professional study, of having attained the age of 21 years, of instruction and proficiency in the practice of vaccination, of having attended not less than twenty labours, and of having discharged the duties of clinical clerk, and performed the duties of dresser, for periods of not less than three months. A testimonial of moral character is required of every candidate.

Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.(h)

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the first examination.

Any candidate who shall have obtained a degree in Medicine at a university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination.

Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

Any "registered medical practitioner" whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been, with the consent of the College, admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary.(i)

The fee for the College licence is fifteen guineas,(k) of which five guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the licence, and he will be admitted to one subsequent first examination without the payment of an additional fee.

Any candidate who shall be rejected at the second or pass examination will have the fee paid on admission to this examination returned to him, less three guineas.

(g) Candidates who shall have passed the first examination for the licence at this College before October 1, 1867, are exempted from re-examination on Materia Medica, and on Chemistry in its application to Pharmacy.

Examinations of candidates for the College licence will take place, commencing as follows:—For the first examination on the first Mondays in the months of October and December, 1873, and February, April, July, October, and December, 1874; and for the second, or pass examination, on the second Mondays in the same months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RELATING TO THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF FELLOW.

SECTION I.—*Preliminary Examination.*—I. Candidates will be required to produce one or other of the following certificates or *testamurs*, viz.:—1. Of Graduation in Arts at a University recognised for this purpose. The following are the Universities at present recognised, viz.:—Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ireland, Edinburgh, Glasgow, Aberdeen, and St. Andrews; Calcutta, Madras, and Bombay; Canada, M'Gill College, Montreal, and Queen's College, Kingston. A certificate or *testamur* of graduation in Arts at a Foreign University, on the special recommendation of the Court of Examiners, approved by the Council. 2. Of having passed such examinations in Arts as shall from time to time be required for graduation in Medicine by a University recognised for this purpose. The following are the Universities at present recognised, viz.:—Oxford, Cambridge, Dublin, London, and Durham. (N.B. In the case of the University of London, the certificate of having passed the Matriculation examination must contain evidence that the candidate passed in Greek and in French or German, in addition to the several compulsory subjects comprised in the examination.) II. Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an examination

(h) Hours of attendance, from 11 a.m. to 4 p.m.; Saturdays, from 11 a.m. to 2 p.m.

(i) Forms of application may be obtained of the Registrar of the College.

(k) The fee must be paid three days prior to the day on which the examination commences.

in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of the Council of the College.

The following are the subjects of the examination referred to in the foregoing paragraph for December, 1873, and until further notice, viz. :—

Part I. Compulsory Subjects.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions, and of decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics. Euclid, Books I. and II. or the subjects thereof. Algebra to simple equations inclusive. 9. Translation of a passage from the second book of Cæsar's Commentaries "De Bello Gallico." 10. Translation of a passage from the first book of the Anabasis of Xenophon. 11. Translation of a passage from X. B. Saintine's "Picciola"; or, at the option of the candidate, translation of a passage from Schiller's "Wilhelm Tell."

Part II. Optional Subjects.—Papers will also be set on the following subjects; and each candidate will be required to offer himself for examination on one subject, at his option :— 1. Translation of a passage in French or German, as the case may be, from the before-mentioned works. Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or selected. 2. Mechanics. The questions will be chiefly of an elementary character. 3. Chemistry. The questions will be on the elementary facts of Chemistry. 4. Botany and Zoology. The questions will be on the classification of plants and animals. The quality of the handwriting and spelling will be taken into account. N.B. Each candidate (who has not already paid the amount) is required to pay a fee of £2 on the morning of the first day of the examination, prior to his admission thereto. The next examination will be held on or about the third Tuesday or Wednesday in December. The exact dates of the examinations will be duly advertised when fixed in the journals; and candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of the examination.

Note.—*Candidates who passed, prior to the 1st of January, 1870, an examination recognised as equivalent to the preliminary examination for the diploma of Member, will be required in order to qualify for the Fellowship to pass in Algebra, Greek, and French or German, included in Part I., and in one, at their option, of the four subjects included in Part II. of the foregoing examination, and those who passed, subsequently to the 1st of January, 1870, an examination equivalent to that required for the Membership, will have to pass in all the aforesaid subjects excepting Algebra, when the certificate shall contain evidence that this last subject was included in the first-named examination.*

Special Notice.—In the case of candidates, natives of India, the certificates of having passed the matriculation examinations of the Universities of Calcutta, Madras, and Bombay, will be recognised as equivalent to the foregoing preliminary examination, provided that they contain evidence that, in addition to the compulsory subjects thereof, the candidate passed in Latin, and, in lieu of Greek, in one of the Eastern languages comprised in the lists of subjects issued from time to time by the respective Universities.

Section II.—*Professional Education.*—I. Except in the cases and instances hereinafter provided for to the contrary, every candidate for admission to the first or anatomical and physiological examination for the Fellowship is required to produce the following certificates, viz. :—1. Of having passed the preliminary examination appointed by the Council, or such other examination as the Council may from time to time determine to be equivalent thereto. 2. Of having studied Practical Pharmacy during three months. 3. Of having attended lectures on Anatomy during two winter sessions at a recognised school or schools. 4. Of having performed dissections at a recognised school or schools during three winter sessions. 5. Of having attended lectures on General Anatomy and Physiology during one winter session at a recognised school. 6. Of having attended a practical course of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class, at a recognised school. *Note A.*—By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not hereby intended that the learners shall perform vivisections. 7. Of having attended one course of lectures on Comparative Anatomy, one course of lectures on Chemistry, and a three months' course of Practical Chemistry (with manipulations) in its application to medical study, at a recognised school or schools. *Note B.*—The course of lectures on Chemistry included in Clause 7 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination. *Note C.*—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

II. Except in the cases and instances hereinafter provided for to the contrary, every candidate before his admission to the second professional examination is required to produce the following certificates, viz. :—1. Of being twenty-five years of age. 2. Of having been engaged for six years in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College for that purpose; or if the candidate be already a Member of the College, he shall produce certificates of having been engaged for two years in the acquirement of professional knowledge in recognised hospitals and schools, in addition to the certificates required for the diploma of Member. 3. Of having attended lectures on Surgery during one winter session at a recognised school. 4. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding clause No. 3, at a recognised school. *Note D.*—The course of Practical Surgery referred to in Clause 4 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to Surgery, on the living person, or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effect of diseases and accidents on the living person or on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy and otherwise. 5. Of having attended, at one or more recognised school or schools, one course of lectures on each of the following subjects, viz. :—Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours), Pathological Anatomy during not less than three months. *Note E.*—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course. 6. Of having performed operations on the dead body under the superintendence of a recognised teacher. 7. Of instruction and proficiency in the practice of vaccination. *Note F.*—In the case of candidates who commence their professional education on or after October 1, 1868, the certificate of instruction in vaccination will only be received from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place. 8. Of having attended the surgical practice of a recognised hospital or hospitals during four winter and four summer sessions, and the medical practice of a recognised hospital or hospitals during one winter and one summer session. 9. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months. *Note G.*—It is intended that the candidate should receive the instruction required by Clause 9 at an early period of his attendance at the hospital. 10. Of having attended clinical lectures on Surgery during two winter and two summer sessions, and clinical lectures on Medicine during one winter and one summer session at one or more recognised hospital or hospitals. 11. Of having attended, during three winter and two summer sessions, demonstrations in the post-mortem rooms of a recognised hospital. 12. Of having served the office of

House-Surgeon or Dresser, for not less than six months, in a recognised hospital.

Notice.—*The alterations in the Regulations, which are applicable to candidates who commenced their professional studies on or after October* 1, 1870, *are contained in Clauses* 3, 5, *and* 6, *paragraph I., in Clauses* 3, 4, 5, 9, 10, *and* 11, *paragraph II., and in notes A, B, C, D, E, and G, paragraphs I. and II. of Section II.*

III. In the case of a candidate who shall have taken by examination the degree of Bachelor or Master of Arts in any university in the United Kingdom recognised by the Council for this purpose, it shall be sufficient for him to produce a certificate or certificates that he has been engaged for five years (instead of six years) in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College for that purpose.

IV. Any Member of the College shall, after the expiration of eight years from the date of his diploma, be entitled to be admitted to the professional examination for the Fellowship upon the production of a certificate, signed by three Fellows, that he has been for eight years in the practice of the profession of Surgery, and that he is a fit and proper person to be admitted a Fellow if upon examination he shall be found qualified.

Section III.—*Professional Examinations.*—1. The examinations are held twice in the year, in the months of May and November, and at such other times as the Council may appoint. 2. The examinations occupy not less than two days, either successive or at such intervals as the Court of Examiners may appoint. 3. The first examination, on Anatomy and Physiology, is partly written and partly *viva voce* on the recently dissected subject and on prepared parts of the human body. The second examination, on Pathology, Therapeutics, and the Principles and Practice of Surgery and Medicine,(a) is partly written, partly *viva voce*, and partly on the practical use of surgical apparatus, and includes the examination of patients, and operations on the dead body. 4. Prior to his admission to the first or anatomical and physiological examination, the candidate is required to pay—*a.* A fee of five guineas, to be allowed on the fee for the diploma of Fellow, but to be retained in case of rejection. 5. Prior to his admission to the second professional examination, the candidate is required to pay—*a.* (b) A fee of five guineas (if a Member) over and above all charges for stamps, to be retained in case of rejection. *b.* (b) A fee of twenty-five guineas (if not a Member) over and above all charges for stamps, of which five guineas will be retained in case of rejection. 6. A candidate whose qualifications shall be found insufficient on his anatomical and physiological examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of six months from the date of his reference. 7. A candidate whose qualifications shall be found insufficient upon his pathological and surgical examination shall be referred, and shall not be allowed to present himself for re-examination until after the expiration of one year from the date of his reference, unless the Court of Examiners shall otherwise determine.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER OF THIS COLLEGE.

I. *Preliminary General Education and Examination.*—(1.) Candidates who commenced their professional education on or after January 1, 1861, will be required to produce one or other of the following certificates:—1. Of graduation in Arts at a university recognised for this purpose. The following are the universities at present recognised, viz.:—Oxford, Cambridge, Dublin, London, Durham, Queen's University in Ireland, Edinburgh, Glasgow, Aberdeen, and St. Andrews, Calcutta, Madras, and Bombay; Canada—M'Gill College, Montreal, and Queen's College, Kingston. 2. Of having passed an examination for matriculation, or such other examination as shall, in either case, from time to time be sanctioned by the Council of this College, at a university in the United Kingdom, or at a colonial or foreign university recognised by the Council of this College. The following are the examinations at present recognised under this Clause (No. 2), viz.:—Oxford.—Responsions or Moderations. Middle-Class Examinations, Senior, the certificates to include Latin and Mathematics. Cambridge.—Previous Examination. Middle-Class Examinations, Senior, the certificates to include Latin and Mathematics. Dublin.—Entrance Examination. London.—Matriculation Examination. Durham.—Examination of students in Arts in their second and first years. Middle-Class Examinations, Senior, the certificates to include Latin and Mathematics. Registration Examination for medical students. Queen's University in Ireland.—Two years' Arts course for diploma of Licentiate in Arts. Preliminary Examinations at end of B.A. course. Middle-Class Examinations, the certificates to include Latin and Mathematics. Matriculation Examinations. Edinburgh, Aberdeen, Glasgow, and St. Andrews.—Preliminary or Extra Professional Examinations for graduation in Medicine. Calcutta, Madras, and Bombay.—Matriculation Examinations. Canada—Queen's College, Kingston.—Matriculation Examination, Preliminary Examination of students in Medicine; M'Gill College, Montreal; University College, Toronto; Victoria College, Toronto; University of Laval, Quebec.—Matriculation Examinations. Nova Scotia—King's College, Windsor.—Matriculation Examination. Responsions. New Brunswick; Fredericton.—Matriculation Examination. Dalhousie College and University, Halifax.—Matriculation Examination. Australia—Melbourne.—Matriculation Examination, with a certificate that the student has passed an Examination in Latin. Sydney; Matriculation Examination. New York—Bellevue Hospital Medical College.—Matriculation Examination. 3. Of having passed the preliminary examination for the Fellowship of this College. 4. Of having passed the preliminary examinations of the Royal Colleges of Surgeons of Ireland and of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow. 5. Of having passed the Examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland. 6. Of having passed the first-class examination of the Royal College of Preceptors. 7. Of having obtained the *testamur* of the Codrington College, Barbadoes. 8. Of having obtained the degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate that the student has been examined in Latin and Mathematics. 9. Of having passed the voluntary examinations of Christ's College, Canterbury, New Zealand, the certificate to include all the subjects required from time to time in the preliminary examination of the College. (2.) Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an examination, in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.

The following are the subjects of the examination referred to in the foregoing paragraph for December, 1873, and until further notice, viz.: Part (1.)—Compulsory subjects:—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions, and of decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History, that is, the succession of the sovereigns and the leading events of each reign. 8. Mathematics: Euclid, Books I. and II., or the subjects thereof; Algebra to simple equations inclusive. 9. Translation of a passage from the second book of Cæsar's Commentaries, "De Bello Gallico." Part (2.)—Optional Subjects:—Papers will also be set on the following six subjects, and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the first book of the Anabasis of Xenophon. 2. Translation of a passage from X. B. Saintine's "Picciola." 3. Translation of a passage from Schiller's "Wilhelm Tell." Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or

(a) Candidates can claim exemption from examination in Medicine under the following conditions, viz.:—1. The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine of a colonial or foreign university approved by the Council of the College. 2. A declaration by the candidate, prior to his admission to the final examination for the Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same. N.B.—A candidate who has passed an examination in Medicine for the Membership will not be required to pass any further examination in Medicine for the Fellowship.

(b) The sum of £2 paid on the Preliminary Examination will be allowed against these amounts.

optional. 4. Mechanics. The questions will be chiefly of an elementary character. 5. Chemistry. The questions will be on the elementary facts of chemistry. 6. Botany and Zoology. The questions will be on the classification of plants and animals. The quality of the handwriting and the spelling will be taken into account. N.B.—Each candidate (who has not already paid the amount) is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. The next examination will be held on or about the third Tuesday or Wednesday in December. The exact dates of the examination will be duly advertised when fixed in the medical journals. Candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of the examination.

Note.—A candidate in order to qualify for the Fellowship is required, in addition to the subjects included in Part (1), to pass in Greek and in French or German, and in one at his option of the remaining subjects in Part (2).

II. *Professional Education.*—(1.) Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge in conformity with the regulation in the preceding section are not recognised.

(2.) The following will be considered as the commencement of professional education:—1. Attendance on the practice of a hospital or other public institution recognised by this College for that purpose. 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College. *The commencement of professional study, otherwise than by attendance on lectures in recognised medical schools, or by attendance on the practice of recognised hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the hospital or other institution to the practice of which he shall have entered, and will, consequently, date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the necessary preliminary examination in general knowledge.*

(3.) Candidates will be required to produce the following certificates, viz.: 1. Of being twenty-one years of age. 2. Of having been engaged, subsequently to the date of passing the preliminary examination, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge. 3. Of having attended lectures on Anatomy during two winter sessions. 4. Of having performed Dissections during not less than two winter sessions. 5. Of having attended lectures on General Anatomy and Physiology during one winter session. 6. Of having attended a practical course of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class. *Note A.*—By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not hereby intended that the learners shall perform vivisections. 7. Of having attended lectures on Surgery during one winter session. 8. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 7. *Note B.*—The course of Practical Surgery referred to in Clause 8 is intended to embrace instruction in which each pupil shall be exercised in practical details such as in the application of anatomical facts to Surgery, on the living person or on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person or on the dead body. The performance, where practicable, of the operations of Surgery on the dead body. The use of surgical apparatus. The examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy and otherwise. 9. Of having attended one course of lectures on each of the following subjects, viz.: Chemistry, Materia Medica, Medicine, Forensic Medicine; Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months. *Note C.*—The course of lectures on Chemistry included in Clause 9 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination. 10. Of having studied Practical Pharmacy during three months. 11. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study. 12. Of instruction and proficiency in the practice of vaccination. *Note D.*—In the case of candidates who commenced their professional education on or after the 1st of October, 1868, the certificate of instruction in vaccination will only be received from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place. *Note E.*—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course. 13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter(c) and two summer(d) sessions. 14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months. *Note F.*—It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the hospital. 15. Of having, subsequently to the first winter session of attendance on surgical hospital practice, attended, at a recognised hospital or hospitals, clinical lectures on Surgery during two winter and two summer sessions. 16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of practical surgery. 17. Of having attended during the whole period of attendance on surgical hospital practice (see Clause 13) demonstrations in the post-mortem rooms of a recognised hospital. 18. Of having attended, at a recognised hospital or hospitals, the practice of Medicine, and clinical lectures on Medicine, during one winter and one summer session.

Notice.—*Clauses* 6, 8, 11, 14, *and* 17, *and Notes A, B, C, E, and F, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause* 9, *are applicable to candidates who commenced their professional education on or after the 1st of October*, 1870. N.B.—Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

III.—1. Certificates will not be received on more than one branch of science from one and the same lecturer; but anatomy and dissections will be considered as one branch of science.

2. Certificates will not be recognised from any hospital in the United Kingdom unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any school of anatomy and physiology or midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any school of surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

3. No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients.

4. The recognition of colonial hospitals and schools is governed by the same regulations with respect to number of patients and to courses of lectures as apply to the recognition of provincial hospitals and schools in England.

5. Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations

(c) The winter session comprises a period of six months, and, in England, commences on October 1, and terminates on March 31.

(d) The summer session comprises a period of three months, and, in England, commences on May 1 and terminates on July 31.

of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as a dresser for a period of at least six months will be required.

6. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools. N.B.—At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

7. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any university recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being 21 years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

9. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will be admitted to examination on producing, together with their diploma or degree, proof of being 21 years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

IV. *Professional Examination.*—This examination is divided into two parts. 1. The first or primary examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. 2. The second or pass examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine,(e) is partly written, partly oral, and partly on the practical use of surgical apparatus, and the practical examination of patients. 3. The primary examinations are held in the months of January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the pass or surgical examination until after the termination of the fourth year of their professional education. 5. The fee of £5 5s., paid prior to the primary examination, and allowed on the whole fee of £22(f) payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of £5 5s. prior to being again admitted to that examination, which *additional* fee is also retained. 6. Five guineas, part of the sum of £16 15s., the balance of the whole fee due for the diploma and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of £5 5s. prior to being again admitted to the said pass examination, which *additional* fee is also retained. 7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. 8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months, subsequently to the date of his reference. 9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

(e) Candidates can claim exemption from examination in Medicine under the following conditions, viz.:—1. The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine of a Colonial or foreign university approved by the Council of the College. 2. A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

QUALIFICATION IN MIDWIFERY.

REGULATIONS RESPECTING THE PROFESSIONAL EDUCATION OF CANDIDATES FOR THIS CERTIFICATE.

1. Persons who were Fellows or Members of the College prior to the first day of January, 1853, will be admitted to examination for the certificate of qualification in Midwifery upon producing their diploma.

2. Persons having become Members of the College subsequently to the first day of January, 1853, will be admitted to examination on producing their diploma, together with a certificate or certificates of having attended twenty labours.

3. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma, licence, or degree, proof of being 21 years of age—of having been occupied at least four entire years in the acquirement of professional knowledge—of having attended one course of lectures on Midwifery—and of having attended not less than twenty labours.

4. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma or degree, proof of being 21 years of age—of having been occupied at least four entire years in the acquirement of professional knowledge—of having completed, at recognised schools, the Anatomical and Surgical education required of candidates for the diploma of Member of the College—of having attended one course of lectures on Midwifery—and of having attended not less than twenty labours.

5. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, prior to the first day of January, 1853, will be admitted to examination on producing the several certificates of professional education required for admission to examination for the diploma of Member of this College at the period when such persons shall respectively have, in such manner, commenced their professional education.

6. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, after the 31st day of December, 1852, will be admitted to examination on producing certificates of being 21 years of age—of having been engaged during at least four entire years in the acquirement of professional knowledge—of having completed at recognised schools the professional education required of candidates for the diploma of Member of this College—of having attended one course of lectures on Midwifery and the Diseases of Women and Children—and of having personally conducted thirty labours.

Note.—All candidates who shall commence their professional education on or after October 1, 1866, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed a preliminary examination in general knowledge recognised by this College.

N.B.—The fee for the certificate is as follows, viz.:—1. Persons who were Fellows or Members of this College prior to January 1, 1853, two guineas. 2. Persons admitted Fellows or Members of this College subsequently to January 1, 1853, three guineas. 3, 4. Persons producing any other diploma or certificate or degree which may be considered by the Council to afford satisfactory proof of sufficient surgical and medical education, three guineas. 5, 6. All other persons, ten guineas.

The examinations are held in the months of February, May, August, and December.

REGULATIONS RELATING TO THE DIPLOMA IN DENTAL SURGERY.

Education.—Candidates are required to produce the following certificates:—

1. Of being twenty-one years of age.

2. Of having been engaged during four years in the acquirement of professional knowledge.

3. Of having attended, at a school or schools recognised by this College, not less than one of each of the following courses of lectures, delivered by lecturers recognised by this College—namely, Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica.

4. Of having attended a second winter course of lectures on Anatomy, or a course of not less than twenty lectures on the Anatomy of the Head and Neck, delivered by lecturers recognised by this College.

5. Of having performed Dissections at a recognised school during not less than nine months.

(f) This sum of £22 is exclusive of the fee of £2 paid for the preliminar examination.

6. Of having completed a course of Chemical Manipulation, under the superintendence of a teacher or lecturer recognised by this College.

7. Of having attended, at a recognised hospital or hospitals in the United Kingdom, the practice of Surgery and clinical lectures on Surgery during two winter sessions.

8. Of having attended, at a recognised school, two courses of lectures upon each of the following subjects—viz., Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by lecturers recognised by this College.

9. Of having been engaged, during a period of not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner.

10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years.

N.B.—The students of the London schools are required to register the above certificates at this College; and special returns will be required from the provincial schools.

Examination.—The examination is partly written and partly oral.

The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to the practice of the Dental Profession.

The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc.

Members of the College, in the written examination, will only have to answer those questions set by the section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination will be examined only by that section.

A candidate whose qualifications shall be found insufficient will be referred back to his studies, and will not be admitted to re-examination within the period of six months, unless the Board shall otherwise determine.

Examinations will be held in January and June.

The fee for the diploma is ten guineas, over and above any stamp duty.

Note.—A ticket of admission to the museum, to the library, and to the College lectures will be presented to each candidate on his obtaining the diploma.

SOCIETY OF APOTHECARIES (ENGLAND).

Every candidate for a certificate of qualification to practise as an apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school.") 2. Of having served an apprenticeship or pupilage of not less than five years to a practitioner qualified by the Act of 1815. (This period may include the time spent in attending lectures and hospital practice.) 3. Of having attained the full age of 21 years, of which satisfactory evidence will be required. 4. Of good moral conduct. 5. Of having pursued a course of medical study in conformity with the regulations of the Court.

Course of Study.—Every candidate whose attendance on lectures shall have commenced on and after October 1, 1863, must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the first nor later than the 15th of October; and each summer session to extend from May 1 to July 31):—

First Year.—Winter Session: Chemistry; Anatomy and Physiology; Dissections. Summer Session: Botany; Materia Medica and Therapeutics; Practical Chemistry.

Second Year.—Winter Session: Anatomy and Physiology, including dissections and demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session: Midwifery and Diseases of Women and Children, and Vaccination; Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session: Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.

N.B.—All medical students presenting themselves for the second examination shall produce evidence of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least; and also shall produce evidence that they have been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges.

No certificates of lectures or of anatomical instruction delivered in private to particular students, apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.

All students are required *personally* to register the several tickets of admission to lectures and medical practice within the first fifteen days of the months of October and May.

Examination in Arts.—Examinations will be held at the Hall of the Society on Friday and Saturday, January 30 and 31, April 24 and 25, September 25 and 26. Candidates will be examined in the following branches, and no candidate will be approved unless he show a competent knowledge of each branch of the examination:—1. The English language; 2. The Latin language; 3. Mathematics; 4. One of the following subjects at the option of the candidate:—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Natural Philosophy. Candidates applying to be admitted to any examination must pay the fee (one guinea) at least one week before the examination, and must sign their names in the Candidates' Book between 11 a.m. and 3 p.m. o'clock, not later than the previous Thursday. If a candidate fail to pass the examination, the fee will not be returned to him, but he will be admissible to either or both of the two next following examinations in Arts without the payment of an additional fee, upon giving the usual notice, and signing the Candidates' Book.

Syllabus of Subjects for Examination, 1874.—I. The English Language: The leading features of its history; its structure and grammar; English composition. [The books recommended for study in this subject are Adams's "Elements of the English Language" and Trench's "English, Past and Present."] II. The Latin Language: January examination—Cicero: Philippic, I. April examination—Horace: Satires, Book I. September examination—Virgil: Æneid, Book I. Re-translation of easy sentences. Grammatical questions will be introduced into the Latin paper, and each candidate will be expected to give satisfactory answers to these. III. Mathematics: The ordinary rules of arithmetic; vulgar and decimal fractions; addition, subtraction, multiplication, and division of algebraical quantities; simple equations; the first two Books of Euclid. IV. (*a*) Greek: Xenophon, Anahasis, Books I. and II.; grammatical questions. (*b*) French: Molière, "Le Misanthrope"; translation from English into French; grammatical questions. (*c*) German: Schiller's "Wilhelm Tell"; translation of short sentences from English into German; grammatical questions. (*d*) Natural Philosophy: Mechanics; hydrostatics and pneumatics. [The book recommended for study in this subject is Snowball's "Cambridge Course of Elementary Natural Philosophy."]

Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted from candidates who present themselves at the professional examination at the Hall as equivalent to their having passed this examination.

Professional Examinations.—The Court of Examiners meet in the Hall every Thursday, where candidates are required to attend at 4.30 p.m. Every person intending to offer himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials and the fee at the office of the Beadle, where attendance is given every day, except Sunday, from 10 to 4 o'clock; Saturdays, 10 to 2.

The examination of candidates is divided into two parts, and is conducted partly in writing and partly *viva voce*.

The written examination will take place on Wednesdays, and the viva voce *examination on Thursdays.*

Those students *only* who have to undergo the writing will have to attend on Wednesday, at half-past 4 p.m.

The first examination, which may be passed after the second winter session, embraces the following subjects:—The British Pharmacopœia; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany; and Materia Medica.

Second or pass examination, after the third winter session (the five years' pupilage being completed):—Principles and Practice of Medicine; Pathology; Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

All graduates in Medicine of British universities will be admitted to a practical examination in Medicine and Midwifery only.

Licentiates of the Royal College of Physicians, London; of the Royal College of Physicians, Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall of Dublin, will be admitted to a *viva voce* examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.

Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland, possessing a surgical qualification only, will be admitted to a first and second examination on one evening. The first or *viva voce* examination will include the subjects of Physicians' Prescriptions, Visceral Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Pharmacy; the second, which is partly written and partly *viva voce*, will include the subjects of Practice of Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicological Chemistry.

Any candidate who has passed his first examination for the licence of the Royal College of Physicians, London; the licence of the King and Queen's College of Physicians, Ireland; the joint licence of the Royal College of Physicians and Surgeons, Edinburgh, or for the single licence of the College of Physicians, Edinburgh; the licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrews, and Glasgow; or the first examination for the medical and surgical degrees in the Irish Universities; or the first examination for the licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica, Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, part of which examination will be conducted in writing.

The examination of candidates for certificates of qualification to act as Assistant in compounding and dispensing medicines, is as follows:—In translating physicians' prescriptions, in the British Pharmacopœia, in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany.

By the 22nd section of the Act of Parliament, no rejected candidate for the licence can be re-examined until the expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after the expiration of three months. No rejected candidate as an Assistant can be re-examined until the expiration of three months.

Fees.—For a certificate of qualification to practise, six guineas, the half to be paid at the first examination; for an Assistant's certificate, two guineas.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and of a silver medal and a book to the candidate who does so in the next degree.

The examination in Botany will be held at the Hall of the Society on the second Wednesday in June, at 10 a.m., and will be conducted by printed papers and *vivâ voce* questions.

The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday, and on the following Friday, in October, from ten in the forenoon to one in the afternoon of each day; by printed papers on the Wednesday, and by *vivâ voce* questions on the Friday.

The Society's Botanic Garden at Chelsea is open daily (except Sunday) from ten till five o'clock p.m., and on Saturdays from ten till two o'clock. Tickets of admission may be had on application at the Beadle's office, Apothecaries' Hall, Blackfriars, E.C.

ARMY MEDICAL DEPARTMENT,

WHITEHALL-YARD.

QUALIFICATIONS OF CANDIDATES FOR COMMISSIONS IN THE ARMY MEDICAL SERVICE, WITH A SUMMARY OF THE RULES BY WHICH THE PAY, PROMOTION, AND RETIREMENT OF MEDICAL OFFICERS ARE REGULATED AND DETERMINED.

1. Every candidate desirous of presenting himself for admission to the Army Medical Service must be unmarried, and not under 21 nor over 28 years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or if this cannot be obtained, an affidavit from one of the parents or other near relative who can attest the date of birth will be accepted. He must also produce a certificate of moral character from the parochial minister, if possible.

2. The candidate must make a declaration that his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical Officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed. The Board must also certify that he is free from organic or other disease, and from constitutional weakness or other disability likely to unfit him for military service in any climate.

3. The candidate must possess two diplomas or licences, one to practise Medicine, and the other Surgery in Great Britain or Ireland, and must be registered under the Medical Act in force at the time of his appointment.

4. Certificates of registration, character, and age must accompany the declaration when filled up and returned.

5. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a.* Anatomy and Physiology, 1000 marks; *b.* Surgery, 1000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100. N.B. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of each candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximun number of marks will be—French and German (150 each), 300 marks; Natural Sciences, 300. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction at the Army Medical School on:—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

7. At its conclusion the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Army Medical School each candidate will receive an allowance of 5s. per diem with quarters, or 7s. per diem without quarters, to cover all cost of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a Surgeon, but without the sword).

9. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

The daily rates of pay of Medical Officers of the Army are as follows:—Pay daily: Director-General special; Surgeon-General £2, after twenty-five years' service £2 5s., after thirty years' service £2 7s., after thirty-five years' service £2 10s.; Deputy Surgeon-General £1 10s., after twenty-five years' service £1 12s., after thirty years' service £1 15s., after thirty-five years' service £1 17s.; Surgeon-Major 17s. 6d., after fifteen years' service £1, after twenty years' service £1 4s., after twenty-five years' service £1 7s.; Surgeon, on appointment 10s., after five years' service 12s. 6d., after ten years' service 15s. Charge pay: The principal Medical Officer of an army in the field, of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. Or, the principal Medical Officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

A Surgeon must pass such examination as the Secretary of State for War may require before he can be promoted to the rank of Surgeon-Major.

Medical officers shall have a right to retire on half-pay after twenty years' service; medical officers of the rank of Surgeon-Major, or Surgeon, shall be placed on the retired list at the age of 55, and all Surgeons-General and Deputy Surgeons-General at the age of 65 years.

A medical officer placed on half-pay by reduction of establishment, or on the report of a medical board, in conse-

quence of wounds or ill-health caused in and by discharge of his duties, or on account of age (under Rule 11), shall be entitled to half-pay at the following daily rates:—Surgeon-General, after thirty years' service, £1 17s. 6d.; after twenty-five years' service, £1 13s. 6d.; after twenty years' service, £1 10s. Deputy Surgeon-General, after thirty years' service, £1 5s. 6d.; after twenty-five years' service, £1 2s. 6d.; after twenty years' service, £1 1s. Surgeon-Major, after twenty-five years' service, £1; after twenty years' service, 16s. 6d.; after fifteen years' service, 13s. 6d.; after ten years' service, 11s. Surgeons, after ten years' service, 10s.; after five years' service, 8s.; under five years' service, 6s.

The rate of half-pay awarded to officers retiring for their own convenience after twenty years' service on full-pay shall not exceed one-half of their full-pay at the time of retirement.

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir T. Galbraith Logan, K.C.B., M.D., Director-General of the Army Medical Department.

Members of the Senate.—Sir Ranald Martin, C.B., Physician to the Indian Council; Surgeon-General T. G. Balfour, M.D., Principal Medical Officer Royal Victoria Hospital; Surgeon-General T. Longmore, C.B., Professor of Military Surgery; Surgeon-General W.C. Maclean, Professor of Military Medicine; William Aitkin, M.D., Professor of Pathology; E. A. Parkes, M.D., F.R.S., Professor of Military Hygiene.

Assistant Professors.—Surgeon-Majors T. H. Porter, W. H. Webb, and F. S. B. F. De Chaumont, M.D.; and Surgeon F. H. Welch.

Candidates for Commissions in the Army and in the Queen's Indian Service proceed to Netley after passing the examination in London. At Netley they attend the medical and surgical practice of the Royal Victoria Hospital, and learn the system and arrangements of military hospitals. During four months they attend the lectures given by the professors and assistant-professors, and go through a course of practical instruction in the hygienic laboratory and microscopical room.

NAVAL MEDICAL DEPARTMENT, ADMIRALTY.

QUALIFICATIONS AND EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL SERVICE OF THE ROYAL NAVY.

The Lords Commissioners of the Admiralty are pleased to direct that the following regulations, relative to the examination of candidates for the appointment of Surgeon in the Royal Navy, shall in future be adopted:—

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under 21 nor over 28 years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character.

2. The candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate.(a) He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. The candidate must be registered under the Medical Act of 1858, as licensed to practise Medicine and Surgery in Great Britain or Ireland, and he must have performed the capital and minor operations of Surgery under a recognised teacher.

4. Certificates of registration, character, and age must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics, the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only.

(a) His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. Every candidate must also be free from organic disease of other organs, and from constitutional weakness or other disability likely to unfit him for naval service in any climate.

Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica; also in French and German; and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley, on—(1) Hygiene; (2) Clinical and Naval and Military Medicine; (3) Clinical and Naval and Military Surgery; (4) Pathology of Diseases and Injuries incidental to Naval and Military Service.

7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the School. If he give satisfactory evidence of being qualified for the practical duties of a Naval Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Netley Medical School, each candidate will receive an allowance of 5s. per diem with quarters, or 7s. per diem without quarters, to cover all cost of maintenance; and he will be required to provide himself with uniform—viz., the regulation undress uniform of a Surgeon, but without the sword.

The full- and half-pay of Naval Medical Officers is in accordance with the following scale:—Full-pay: Inspector-General of Hospitals and Fleets—On promotion or under twenty-five years' service, £2 5s.; ditto or above twenty-five years' service, £2 6s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £2 10s. Deputy Inspector-General of Hospitals and Fleets—On promotion or under twenty-two years' service, £1 11s.; ditto or above twenty-two years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s. Staff Surgeon—On promotion or under twenty years' service, £1 3s.; ditto or above twenty years' service, £1 4s.; and for each additional year of service 1s. a day more until the maximum is reached—namely £1 10s. Staff Surgeon 2nd Class—On promotion or under fourteen years' service, 18s.; ditto or under seventeen years' service, £1; and for each additional year of service 1s. a day more until the maximum is reached—namely £1 2s. Surgeon—Under five years' service,(b) 11s.; under eight years' service, 12s. 6d.; under eleven years' service, 14s.; under fourteen years' service, provided he passed his examination for Staff Surgeon 2nd Class while under ten years' service, 15s. 6d.; above fourteen years' service, ditto, 17s. Half-pay: Surgeon—Under five years' service, 6s.; under eight years' service, 8s.; under eleven years' service, 10s.; above eleven years' service, provided he passed his examination for Surgeon while under ten years' service, 11s. Staff Surgeon 2nd Class—On promotion or under fourteen years' service, 11s.; ditto or under seventeen years' service, 13s.; ditto or above seventeen years' service, 14s. Staff Surgeon—On promotion or under twenty years' service, 16s.; ditto or above twenty years' service, 16s. 6d.; and for each additional year of service 6d. a day more until the maximum is reached—namely, 18s. 6d. Deputy Inspector-General of Hospitals and Fleets—On promotion or under twenty-two years' service, £1 1s.; ditto or above twenty-two years' service, £1 2s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 7s. Inspector-General of Hospitals and Fleets—On promotion or under twenty-five years' service, £1 11s.; ditto or above twenty-five years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s.

RULES AND REGULATIONS OF THE EXAMINING MEDICAL BODIES IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

The Session 1873-74 will be publicly opened on Monday, November 3, with an address by the Principal.

GRADUATION IN MEDICINE—STATUTES OF THE UNIVERSITY OF EDINBURGH RELATIVE TO GRADUATION IN MEDICINE AND SURGERY.

Three medical degrees are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine.

I. The preliminary branches of extra-professional education are—English, Latin, Arithmetic, the elements of Mathematics, and the elements of Mechanics; and the proficiency of students in these branches is ascertained by examination prior to the commencement of their medical study.

II. No candidate is admitted to a professional examination who has not passed a satisfactory examination on at least two

(b) Except during session at Netley. *See* Regulations.

of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place before the candidate has entered on his medical curriculum.

III. A degree in Arts (not being an honorary degree) in any one of the universities of England, Scotland, or Ireland, or in any colonial or foreign university, specially recognised for this purpose by the University Court, exempts from all preliminary examination; and an examination in Arts by any corporate body whose examination has been recognised as qualifying for entrance on medical study by resolution of the General Medical Council of the United Kingdom, provided the said examination by the said corporate body shall be also approved by the University Court, shall exempt from preliminary examination in Arts, on all subjects comprised in the said examination of the said corporate body.

IV. No one is admitted to the degree of Bachelor of Medicine or Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session for each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week during the prescribed periods.

V. Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of medical science—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children (two courses of Midwifery of three months each being reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses), General Pathology (or, in schools where there is no such course, a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine, or Clinical Medicine), during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures above prescribed; Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery, courses of the same duration as those of not less than one hundred lectures above prescribed, or two courses of three months, lectures being given at least twice a week; Medical Jurisprudence, Botany, Natural History, including Zoology, during courses including not less than fifty lectures.(a *and* b)

2. That he has attended for at least two years the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons.

3. That he has been engaged for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of an hospital, dispensary, member of a surgical college or faculty, licentiate of the London or Dublin Society of Apothecaries, or a member of the Pharmaceutical Society of Great Britain.

4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of an hospital, or the practice of a dispensary, physician, surgeon, or member of the London or Dublin Society of Apothecaries.(b)

VI. The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations:—

1. One of the four years of medical and surgical study required by Section IV. must be in the University of Edinburgh.

2. Another of such four years of medical and surgical study must be either in the University of Edinburgh or in some other university entitled to give the degree of Doctor of Medicine.

3. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on courses of lectures as above prescribed.

4. One year's attendance on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on courses of lectures, as above prescribed.

5. Candidates may, to the extent of four of the departments of medical study required by Section V., Sub-section 1, attend, in such year or years of their medical and surgical studies as may be most convenient to them, the lectures of the teachers of Medicine specified in the foregoing Sub-section 4.

6. All candidates, not students of the University, availing themselves of the permission to attend the lectures of extra-academical teachers in Edinburgh, must at the commencement of each year of such attendance enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

7. The fee for attendance on the lectures of an extra-academical teacher in Edinburgh, with a view to graduation, must be of the same amount as that exigible by medical professors in the University.(c)

8. No teacher is recognised who is at the same time a teacher of more than one of the prescribed branches of study, except in those cases where professors in the University are at liberty to teach two branches.

VII. Every candidate must deliver, before March 31 of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration in his own handwriting that he has completed his 21st year,(d) and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

2. A statement of his studies, as well in literature and philosophy as in Medicine, accompanied with proper certificates.

VIII. Each candidate is examined, both in writing and *viva voce*—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, Materia Medica,(e) and Pathology; thirdly, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; fourthly, Clinically on Medicine and on Surgery in an hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, and Natural History are conducted, as far as possible, by demonstrations of objects placed before the candidates.

IX. Students who profess themselves ready to submit to an examination on the first division of these subjects, at the end of their second year, may be admitted to examination at that time.(f)

X. Students who have passed their examination on the first division of these subjects may be admitted to examination on the second division at the end of their third year.

XI. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *annus medicus*.

XII. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

XIII. If any candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied, during another year, two of the prescribed subjects, either in the University or in some other school of Medicine.

XIV., XV., XVI. * * * * *

XVII. The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of

(a) Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the carefulness with which the dissections have been made. Students are recommended not to appear for an examination in Anatomy, with a view to a degree, until they have dissected the human body at least once.

(b) The Medical Faculty recommend that medical students should not attend Clinical Surgery during their first six months' attendance on Clinical Medicine. *See* Note as to vaccination, appended to Section XX.

(c) The fee must be paid at the commencement of the course.

(d) Or that he will have done so on or before the day of graduation.

(e) Including Practical Pharmacy.

(f) Students who commence their medical studies in May may appear for this examination on the second October after the commencement of their studies, provided they have complete certificates for two qualifying summer sessions, and one qualifying winter session, two courses having been attended during each of the three sessions.

Medicine, and is of the age of 24 years, and has been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on an hospital, or in the Military or Naval Medical Services, or in medical and surgical practice.(g) Provided always that the degree of Doctor of Medicine shall not be conferred on any person unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified, or unless he shall, before or at the time of his obtaining the degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects,—namely, French, German, Higher Mathematics, and Natural Philosophy. And provided also that the candidate for the degree of Doctor of Medicine shall, on or before the 31st day of March in the year in which he proposes to graduate, submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received the degree.(h)

XVIII. The medical examiners for all candidates for graduation in Medicine are the Professors in the Faculty of Medicine, and, in addition, three persons appointed annually by the University Court.

XIX. The provisions of these statutes came into operation on the 4th of February, 1861.

XX. Persons who began their medical studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

Note.—In conformity with the desire expressed by the Privy Council, it has been resolved that any candidate for a degree in Medicine must produce, at his final examination, a certificate from a dispensary or other public institution where vaccination is practised, attesting that he has been practically instructed in the operation, and is acquainted with the appearances which follow its performance.

Notice to Candidates for Graduation in Medicine.—Candidates who commenced their medical studies by attendance on qualifying classes before February 4, 1861, are entitled to appear for examination for the degree of Doctor of Medicine, after four years' study, on completing their twenty-first year, and without having taken the degree of Bachelor of Medicine. They are also exempted from the preliminary examinations mentioned in Sections I. and II., and require only to undergo an examination in Latin. They are also exempted from attendance on Practical Chemistry and Practical Midwifery, and require only three months of Clinical Surgery, and eighteen months of hospital attendance.

An *Annus Medicus* is constituted by at least two winter courses of one hundred lectures each, or by one such course, and two summer courses of fifty lectures each, all being duly certified.

Four *Anni Medici* are required for Graduates in Medicine. Two at least of these years must be passed at a university which grants degrees in Medicine, one of the two being at Edinburgh.

One or two of the *Anni Medici* may be taken at qualified extra-academical schools, in the manner stated in the succeeding paragraph:

In University College, in King's College, in the hospital schools of London, in the extra-academical School of Edinburgh, in the School of the College of Surgeons of Dublin, and in certain medical schools where at least two lecturers have been qualified by the University Court, a candidate may make *two Anni Medici*—one of which must be constituted by hospital attendance and Practical Anatomy, and the other by at least two courses of one hundred lectures, or one such course, and two courses of fifty lectures. The classes at these schools only qualify to the extent of four, and one of the four must be Practical Anatomy.

In provincial schools where there are no lecturers qualified by the University Court, a candidate can make *one Annus Medicus only*, and this is constituted by attendance on a qualified hospital, along with a course of Practical Anatomy.

The Edinburgh extra-academical classes only qualify if the fee paid at the commencement of the session is the same as that paid to the professors in the University.

All classes must be taken at a university, except *four* selected by the candidate. The classes so selected must be qualifying courses, as regards the subjects and extent.

Three months' courses of Materia Medica, Pathology, and Midwifery do not qualify. For each of these subjects *one* course of one hundred lectures is required.

No teacher is qualified who lectures on more than one of the required subjects, as specified in Section VI., 8.

Every candidate for a degree in Medicine must be a matriculated student of the University for the year in which he appears for examination or graduation.

The dates of the examinations for 1873-74 have been fixed as follows; and candidates for each of them are required to assemble in the upper Library Hall a quarter of an hour before the time fixed for examination:—Preliminary examination in Arts, October 14 and 15, 1873; March 17 and 18, 1874, at 10.30 a.m. each day. First professional examination, October 24 and 25, 1873; April 1 and 2, 1874, at 11 o'clock each day. Second professional examination, April 9 and 10, 1874, at 12 o'clock each day. Final professional examination, June, 1874, at 12 o'clock. Graduation, August 1, at 10 o'clock.

The names of candidates for the foregoing examinations must be given in, and the fees paid, etc., as follows:—For the final examination in June, 1874, on or before May 24; for graduation on August 1, on or before July 15; for second professional examination in April, 1874, on or before March 28; for preliminary examination in October, 1873, on or before October 4; for preliminary examination in March, 1874, on or before March 7; for first professional examination in October, 1873, on or before October 11; for first professional examination in April, 1874, on or before March 21; theses for M.D. on or before April 30, 1874. Specimens of the examination papers for 1872-73 are given in the Calendar.

The preliminary examinations in Arts accepted by the General Council are recognised *pro tanto*—that is to say, they exempt from examination in Arts on the subjects comprised in them, in so far as the examinations are of the same extent as those required by this University. Any subjects required by the statutes, and not included in these examinations, or not carried out to the requisite extent, must be passed at the University. In all cases candidates must produce certificates of having passed such examinations, with an official notice of the subjects in which they have passed.

The fees for the examinations must be deposited with the Registrar at least ten days before the day of examination. The fees are—For the preliminary examination, each non-matriculated student pays a fee of 10s. (candidates who paid the fee in March may obtain admission to the examination in October without further payment); for the degree of M.B., three Examinations, £5 5s. each, £15 15s.; for the degree of C.M., £5 5s. additional; for the degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp. The graduation fees must all be paid on or before July 15 in the year in which candidates propose to graduate.

Note.—Total fees and stamp for graduating as M.D. only, by Regulations, for students who commenced their medical education before February, 1861, £25.

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect by production of sufficient official testimonials, have the degree conferred on them in absence.

Students are recommended to commence their medical studies by attending a summer session.

MEDICAL DEGREES.—PRELIMINARY EXAMINATION IN ARTS.

PROGRAMME FOR 1873-74.

I. In conformity with Section I. of the Statutes (see p. 3), examinations on the preliminary branches of extra-professional education will take place on Tuesday and Wednesday, October 14 and 15, 1873, and on Tuesday and Wednesday, March 17 and 18, 1874, at 10.30 o'clock a.m. Examination on Tuesdays.—English, Arithmetic, Mechanics, Greek, Higher Mathematics, and German. Examination on Wednesdays.—Latin, Elements of Mathematics, Natural Philosophy, French, Logic, and Moral Philosophy. 1. English.—The Examination will include (1) Writing a passage of English from dictation; (2) English Composition, with the correction of sentences of bad English; (3) Questions in English Grammar, with analyses of sentences, and the derivation and definition of some common English words; (4) General questions in History and Geography. 2. Latin.—"Livy," Book ix., an easy passage from a Latin prose author, and a single passage of English (translated from a Latin author) to be retranslated into Latin, the more difficult Latin words being given. 3. Arithmetic.—The common rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics.—Euclid, Books i. ii., and iii., and the ordinary rules of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. Elements of Mechanics.—Elementary Mechanics and Hydrostatics. (*See* "Tomlinson's Rudimentary Mechanics," Weale's series.

II. At the same dates examinations will take place in conformity with Section II. of the same Statutes, which enacts that no candidate shall be admitted to a professional examination who has not passed a satisfactory examination on at least *two* of the following subjects (in addition to the subjects mentioned above):—1. Greek.—Xenophon, "Memorabilia," Book i. 2. French.—Molière, "Le Fourberies de Scapin." 3. German.—Schiller's "Thirty Years' War," Book i. 4. Higher Mathematics.—Euclid, Books i. to vi.—Algebra, Trigonometry, and Conic Sections. 5. Natural Philosophy.—Text-book recommended—Balfour Stewart's "Elementary Physics." 6. Logic.—Jevon's "Elementary Lessons in Logic." 7. Moral Philosophy.—Professor Calderwood's "Handbook." The working of the questions in Arithmetic, Mathematics, Mechanics, and Natural Philosophy, as well as the answers, must be exhibited. As regards Latin, Greek, French, and German, mere translation is not sufficient. Candidates must answer questions in grammar, and must be prepared to translate a passage of English into these languages.

In Section XVII. of the said Statutes it is enacted that the degree of Doctor of Medicine shall not be conferred on any person unless he be a graduate in Arts, or unless he shall, before or at the time of his obtaining the degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. Two of these must be Greek and Logic or Moral Philosophy, and the *third* may be any one of the following subjects—namely, French, German, Higher Mathematics, Natural Philosophy.

Examinations of the same extent, and on the same subjects, at other British Universities granting the degree of M.D. will exempt from these Preliminary Examinations. Certificates of having passed such examinations must be produced, with an official notice of the subjects on which the candidate has passed an examination.

Students who come under the old statutes, in consequence of having commenced their medical curriculum by attendance on classes before February 4, 1861, will be examined in Latin on Wednesday, October 22, 1873, and Wednesday, March 18, 1874, at 10.30 a.m. For nature of examination, see Section I. of this programme.

(g) Certificates for at least two years' practice must be produced on or before July 15 of the year in which the candidate proposes to graduate.

(h) The candidate must lodge his thesis with the Dean on or before April 30 of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations in practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

UNIVERSITY OF ABERDEEN.

The regulations for granting medical degrees are framed in conformity with an Ordinance of the Universities (Scotland) Commissioners, dated March 16, 1861, and approved by her Majesty in Council.

The following are the degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum, and examination for the degrees of M.B., C.M., and M.D. being in conformity with the Ordinances of the Scotch Universities Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of medical and surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other University entitled to give the degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each candidate for the degree of M.B. shall pay a fee of £5 5s. in respect of each of the three professional examinations.

2. If the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the £15 15s. so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of £5 5s.

3. And every candidate for the degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the degree of Bachelor of Medicine, a fee of £5 5s., exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the degree of M.D. after four years study, one of which must have been at the University of Aberdeen.

Further information may be obtained from the Dean of the Medical Faculty, Professor Macrobin, M.D.

UNIVERSITY OF ST. ANDREWS.

The regulations for granting medical degrees are framed in conformity with an ordinance of the Universities (Scotland) Commissioners; they therefore generally correspond with those of the Universities of Edinburgh, Aberdeen, and Glasgow.

The degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.)

The preliminary examination and professional curriculum and examinations for these degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for candidates for the degrees of Bachelor of Medicine and Master in Surgery present some difference:—

No one shall be received as a candidate for the degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities and colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of Medicine as may from time to time receive recognition from the University Court.

Attendance on the lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen shall not be reckoned for graduation in St. Andrews if the fee for such lectures be of less amount than is charged for the like course of lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

FEES FOR GRADUATION.

For the degree of Bachelor of Medicine five guineas in respect of each of the three divisions of the examination on professional subjects; and if the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of five guineas; and every candidate for the degree of Doctor of Medicine, who has previously obtained the degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a candidate for the degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

N.B.—The degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred under this section to a greater number than ten in any one year. Fee £52 10s.

UNIVERSITY OF GLASGOW.

Three degrees in Medicine are granted, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). [The preliminary examination, curriculum, and professional examinations for these degrees, being in conformity with the ordinance of the Scottish Universities Commissioners, are the same as for the Universities of Edinburgh, St. Andrews, and Aberdeen.]

Of the four years constituting the curriculum, one at least shall have been passed in the University of Glasgow, and another either in that university or in some other university entitled to give degrees in Medicine.

The fees for the degrees are as follows:—For the degree of M.B. (for each of three examinations, £5 5s.), £15 15s.; for that of C.M. (in addition to the fee for M.B.), £5 5s.; for the degree of M.D. (in addition to the fee for M.B.), £5 5s.; and the Government stamp for the diploma, etc., £10 3s.

The preliminary examinations of medical students in branches of general education take place at the beginning and at the end of the winter session.

The regulations under which the above degrees are granted, and the notices of the subjects of examination, will be obtained by application to the Registrar of the University.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

ABSTRACT OF REGULATIONS FOR THE LICENCE.

No one can obtain the licence of the College until he has completed the age of 21 years.

Every applicant for the licence must produce evidence that he has been engaged in the study of Medicine during a period of at least four years subsequently to his registration as a medical student, which period shall include attendance during not less than four winter sessions, or three winter and two summer sessions, at a recognised medical school.

The applicant must produce certificates that he has attended the following courses at a university, or at some medical school recognised by the college:—Anatomy, one course, six months; Practical Anatomy, six months; Chemistry, one course, six months; Practical Chemistry, three months; Materia Medica and Pharmacy, one course, three months; Physiology or Institutes of Medicine, one course, three months; Practice of Medicine, one course, six months; Clinical Medicine, six months; Principles and Practice of Surgery, one course, six months; Clinical Surgery, three months; Midwifery, one course, three months; Medical Jurisprudence, one course, three months; Pathological Anatomy, one course, three months; or General Pathology, one course, three months; Practical Pharmacy, three months.

The applicant must also produce evidence of having attended the practice of a public hospital (containing not fewer than eighty beds) during a period of not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as a clinical clerk or dresser in a hospital, or have been engaged for six months as visiting assistant to a registered practitioner.

The applicant must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner, and must produce a certificate to that effect.

The applicant will also be required to produce a certificate that he has studied vaccination under a competent and recognised teacher, and that he is thoroughly informed in every necessary part of the subject.

Every applicant for the licence must have passed the preliminary examination in Literature and Science, and have had his name inscribed in the Register of Medical Students, instituted by the General Medical Council, previous to the commencement of his medical studies.

The examination will embrace the following subjects:—1. English: Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First two Books of Euclid. 4. Latin: Translation into English, Cicero de Senectute et de Amicitia, *or* Horatii Carmina, Lib. II. et III.—Parsing: Translation from English into Latin, the Latin words being supplied. 5. One of the following subjects, at the option of the candidate:—1. Greek: Herodotus' History, Book I., and Homer's Iliad, Book II. 2. French: Voltaire's "Henriade." 3. German: Schiller's "Wilhelm Tell." 4. Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

The professional examination will be divided into two parts, according to the following arrangements of subjects:—(1) Anatomy, Physiology, Chemistry; (2) Materia Medica and Pharmacy, Pathology, and Pathological Anatomy, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, including the examination of patients, as well as of various morbid products. No candidate will be admitted to the first examination until he has completed two, or to the second until he has completed four, years of professional study. The examinations will be conducted partly *viva voce*, partly by written papers.

The following will be the periods of examination up to October, 1874:—(1.) Preliminary examinations in Literature and Science—Tuesday and Wednesday, October 21 and 22, 1873; Tuesday and Wednesday, April 21 and 22, 1874; Saturday and Monday, July 25 and 27, 1874. (2.) First professional examinations—Wednesday, October 15, 1873; Wednesday, January 21, 1874; Wednesday, April 22, 1874; Wednesday, July 29, 1874; Wednesday, October 14, 1874. (3.) Second professional examinations will be held on the Thursdays and Fridays following the first professional, and will occupy both days.

The fee payable by a Licentiate is ten guineas. In the event of a candidate being unsuccessful at his examination, the sum of two guineas will be retained to defray expenses.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR THE DIPLOMA.

These are the same as those given below for the conjoined qualification in Medicine and Surgery conferred by the Colleges of Physicians and Surgeons, with the following exceptions in professional education:—

No third course of Medicine and no course of Pathological Anatomy are required.

A certificate of three months' instruction in Pathological Anatomy at the post-mortem room of a recognised hospital will be required from candidates commencing professional study after October 1, 1861.

The regulations for the preliminary examination in general education generally correspond with those to be observed by candidates for the joint qualification of the Royal Colleges of Physicians and Surgeons, Edinburgh.

PROFESSIONAL EXAMINATIONS FOR THE DIPLOMA OF THE COLLEGE.

The regulations are generally the same as those for the professional examinations for the joint diploma of the two Colleges, with the following exceptions:—

The sum of £4 must be paid to the Treasurer of the College for the first examination, not latter than 10 a.m. of the day preceding it. The sum will be considered as paid to account of the entire fee of £10 payable for the diploma.

In the case of a candidate being unsuccessful at this examination, £2 will be returned to him, the remaining £2 being retained to meet the expenses of the examination.

The second examination embraces Surgery and Surgical Anatomy, also Medicine, Midwifery, Materia Medica, and Medical Jurisprudence; and shall not take place before the termination of the winter session of the last year of study. In the case of candidates who began their course of study after September 16, 1866, it will not take place till four years after the examination in general education. Applications for examination must be made to the Secretary not later than the Tuesday previous to the day of the examination. Every candidate must produce to the Secretary—1. Satisfactory evidence of his having attained the age of twenty-one years, and of having been duly registered; 2. Certificates of having attended the prescribed classes, together with the certificates enumerated; 3. The certificate of his having passed the first professional examination; and 4. A tabular statement (for which a printed form will be furnished by the officer) exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, and dispensaries attended during each session of his studies. If he have been an apprentice he must also insert the name of his master, the date of his indenture, and the length of time for which he was bound. This statement, accurately filled up, must be attested by his signature, and will be preserved by the College as a record.

If the candidate have been an apprentice to a Fellow of the College, he must also produce his discharged indenture.

The remaining fee payable to the College (being £6), together with the receipt for the fee paid for the first professional examination, must be lodged not later than 10 a.m. of the day preceding the examination day, in the hands of the Treasurer, who will certify this upon the Secretary's letter. The sum of £4 will be returned to unsuccessful candidates.

Periods of examination for the year 1873-74:—I. Preliminary Examinations in General Education: On Tuesday and Wednesday, October 21 and 22, 1873; on Tuesday and Wednesday, April 21 and 22, 1874; on Saturday and Monday, July 25 and 27, 1874. II. First Professional Examinations: On Tuesday, October 28, 1873; on Tuesday, January 27, 1874; on Tuesday, April 7, 1874; on Tuesday, April 28, 1874; on Tuesday, July 28, 1874. III. Second Professional Examinations: These will take place immediately after the conclusion of the first professional examinations, at each of the above-mentioned periods.

THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain the diplomas of both Colleges.

The general principle of this joint examination is, that it shall be conducted by a Board, in which each body is represented in those branches which are common to both Medicine and Surgery; but that the College of Physicians shall take exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery.

The object of the joint examination is to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in Medicine and a qualification in Surgery.

Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

The arrangement for thus conferring a double qualification by the co-operation of the two Colleges is in conformity with Section XIX. of the Medical Act, and received the special sanction of the General Council of Medical Education and Registration, at a meeting held on August 7, 1859.

SCHOOLS OF MEDICINE.

1. Every candidate must have followed his course of study in a *University*, or in an *established School of Medicine*, as defined below, or in a *Provincial School* specially recognised by the Colleges of Physicians and Surgeons of that division of the United Kingdom in which it is situate.

2. Under the title *established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which diplomas in Medicine and Surgery are granted, and such colonial and foreign schools as are similarly circumstanced in the countries in which they exist.

PROFESSIONAL EDUCATION.

1. Candidates commencing professional study after September 16, 1866, must have been engaged during four years after the examination in general education, in professional study, which shall include not less than four winter sessions, or three

winter and two summer sessions' attendance at a recognised medical school.(a)

2. The candidate must produce certificates of having attended the following separate and distinct courses of lectures:—

Anatomy, two courses,(b) six months each; Practical Anatomy, twelve months. Or, in the option of the candidate, Anatomy, one course, six months; Practical Anatomy, eighteen months. Chemistry, one course, six months. Practical or Analytical Chemistry, one course, three months. Materia Medica, one course, three months. Physiology, not less than fifty lectures.(c) Practice of Medicine, one course, six months. Clinical Medicine, six months.(d) Medicine—a third course, which may either be Practice of Medicine or Clinical Medicine, at the option of the student, one course, six months.(d) Principles and Practice of Surgery, one course, six months. Clinical Surgery, one course, six months.(d) Surgery—a third course, which may either be Principles and Practice of Surgery or Clinical Surgery, at the option of the student, one course, six months.(d) Midwifery and the Diseases of Women and Children, one course, three months. Medical Jurisprudence, one course, three months. Pathological Anatomy, one course, three months.(e) The six months' courses delivered in Scotland must consist of not fewer than one hundred lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' courses must consist of not fewer than fifty lectures.

3. The candidate must also produce the following certificates:—(*a.*) Of having attended six cases of labour under the superintendence of the practitioner who signs the certificate, who must be a registered medical practitioner. (*b.*) Of having attended for three months instruction in Practical Pharmacy. The certificate to be signed by the teacher, who must be a member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College, on special application, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicines to his patients. (*c.*) Of having attended for twenty-four months a public general hospital containing, on an average, at least eighty patients. (*d.*) Of having attended for six months the practice of a public dispensary specially recognised by either College; or of having been engaged for six months as visiting assistant to a registered practitioner. (*e.*) Of having been instructed in vaccination. The certificate to be signed by the teacher, who must be a registered practitioner.(f)

4. The following order of study is recommended as a guide to the student, though not enjoined:—First year: Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second year: Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the third year), Hospital. Third year: Practice of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital. Fourth year: Surgery or Clinical Surgery, Midwifery and the Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

5. It is strongly recommended to students to avail themselves of any opportunities which they may possess of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the microscope, in addition to the courses of instruction which are absolutely required.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

1. All students who intend becoming candidates for the diplomas of the Colleges must have passed the complete examination in general education, and have had their names inscribed in the Register of Medical Students instituted by the General Medical Council, at the commencement of their professional studies.

2. The following will be the preliminary examination in general education for the double qualification in Medicine and in Surgery conferred conjointly by the Royal Colleges of Physicians and Surgeons, and also for the separate diploma of each College, for 1873-74:—1. English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. 3. Algebra, including Simple Equations. 4. Geometry: First Two Books of Euclid. 5. Latin: Translation from one of the two following books at the option of the candidate—viz., Cicero de Senectute et de Amicitia, or Horatii Carmina, Lib. II. et III.; and of an easy passage from a book not prescribed; Exercises in Parsing, and in rendering English correctly into Latin, the Latin words being supplied. 6. One of the following subjects at the option of the candidate:—(1.) Greek: Herodotus' History, Book I., and Homer's Iliad, Book II. (2.) French: Voltaire's "Henriade." (3.) German: Schiller's "Wilhelm Tell." (4.) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. N.B.—In Greek, French, and German, parsing of words from the passages given to be translated will be required; also translation of short sentences from English into their respective languages.

3. Testimonials of proficiency granted by certain educational bodies will be accepted as sufficient evidence of general education, and will exempt from the preliminary examination.

4. The preliminary examinations shall take place at stated periods, and shall be conducted by a special board of examiners in Arts, to be chosen from time to time by the Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh.

5. Students who intend to undergo the preliminary examination shall give in their names, addresses, and places of birth to the officer of either College, not later than three days before the day of examination, and shall pay a fee of 10s., not to be returned in case of rejection, but will be admissible to re-examination at a future period without paying another fee.

6. Candidates, the commencement of whose professional studies was prior to September 17, 1866, may pass the preliminary examination in general education at any of the periods previous to the first professional examination, but are recommended to do so at the earliest possible period. Candidates under this regulation who have not passed a preliminary examination in general education will be admitted to a special examination in general education previously to their first professional examination. For this they shall pay a fee of £1.

PROFESSIONAL EXAMINATION.

1. Candidates for the double qualifications shall be subjected to two professional examinations, to be conducted at separate times, partly in writing and partly orally.

2. Opportunities for both examinations will be presented six times in each year. On each of these occasions the candidates shall assemble for the purpose of writing answers to the questions proposed. The oral examinations will be conducted on the days immediately succeeding.

3. Unsuccessful candidates at either the first or second examination shall be remitted to their studies for a period to be determined by the judgment of the examiners, but not in any case less than three months.

4. The first examination shall embrace Anatomy, Physiology, and Chemistry, and shall take place not sooner than the end of the second winter session.

5. Candidates who desire to pass the first professional examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination, (g) and must produce certificates of attendance in regard to all those of the required courses of lectures which have reference to the subjects of that examination. They must also produce a certificate of having passed the preliminary examination.

6. The sum of £6 must be paid to the Inspector of Certificates for this examination, not later than 10 a.m. of the day preceding it. This sum will be considered as paid to account of the entire fee of £16 payable for the two diplomas.

7. In the case of a candidate being unsuccessful at this

(a) Candidates commencing study prior to the above date will be admitted to examination after four winter sessions', or three winter and two summer sessions' attendance on classes at a regular medical school.

(b) The two courses must not be attended in the same session.

(c) In those schools of England and Ireland in which two separate courses of lectures are delivered at separate hours—one on Anatomy, the other on Anatomy and Physiology—the former of these courses will be received as a course of Anatomy, and the other as a course of Physiology.

(d) Two courses of Clinical Medicine, of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the period of attendance at the hospital where they are delivered. The same rules will apply to Clinical Surgery.

(e) A certificate of attendance on the post-mortem examinations at a general hospital will be accepted in lieu of this course.

(f) By a Regulation of the Privy Council, of date December 1, 1859, no one can be appointed as a contractor for vaccination under the English Poor-law who does not produce a certificate of proficiency in vaccination from a person authorised by the Privy Council to grant the same.

(g) Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters; as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents.

examination, £4 will be returned to him; the remaining £2 being retained to meet the expense of examination.

8. The second examination shall embrace Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and shall not take place before the termination of the winter session of the last year of study. In the case of candidates who began their course of study after September 16, 1866, it will not take place till four years after the examination on general education.

9. Applications for examinations must be made to the Inspector of Certificates not later than the Tuesday previous to the day of examination.(g)

10. Every candidate must produce to the Inspector—1st. Satisfactory evidence of his having attained the age of 21 years; 2nd. A certificate of his having passed the preliminary examination, unless this certificate have already been seen by the Inspector of the Colleges; 3rd. A certificate of his registration in the books of the General Medical Council; 4th. A certificate of his having passed the first professional examination; 5th. The certificates of his classes, and the other certificates required; and 6th. A tabular statement (for which a printed form will be furnished by the Inspector), exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, and dispensaries attended during each session of his studies. The tabular statement accurately filled up must be attested by his signature, and will be preserved by the Colleges as a record.

11. The fee payable for this examination, which shall be £10, must be lodged with the Inspector not later than 10 a.m. of the day preceding the examination day.

12. On the production of the above documents, and after receiving the fees, the Inspector shall give the candidate a letter authorising the examiners to take him on trial.

13. In case of a candidate being unsuccessful at the second examination, £8 will be returned to him; the remaining £2 being retained to meet the expense of the examination.

14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the licensing boards recognised by the Medical Act, will be admissible to the second professional examination, on producing certificates of the whole course of study prescribed, and of having passed their preliminary and first professional examinations. If any of the three subjects of the first examination have been omitted, such candidates will have to undergo an examination on the omitted subjects; and none of the subjects will be omitted at the second examination, even if some of them should have formed part of the first examination by another board. The fee payable by such candidates is £16, and unsuccessful candidates will receive back £14.

15. In addition to the written and oral examinations, all candidates shall be subjected to a practical clinical examination in Medicine and Surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, surgical appliances, bandages, etc.

16. Candidates desirous of special examinations on other days than those fixed by the regulations, must prepare a case to be submitted for the consideration of the authorities of the College with evidence to show why it was and is impossible for them to avail themselves of the ordinary examinations past and future. They must *at the same time* produce certificates of the whole of the prescribed course of study and of the preliminary examination, and state the earliest and the latest days within which they can present themselves. It is very desirable that all such candidates, and especially those who are at a distance from Edinburgh, should present their applications as long beforehand as possible.

The fees for special examinations are as follows:—£28 for first and second examinations, of which £22 will be returned to candidates remitted on the first examination, and £10 to candidates successful in the first, but unsuccessful in the second examination. £25 for second examination, when the candidate has passed the first under the conditions of Section 14. Of this £16 will be returned to the candidate if unsuccessful. £19 for second examination, when the candidate has passed the first before the examiners of the Colleges. Of this £10 will be returned to the candidate if unsuccessful.

17. No candidate shall be admissible to examination who has been rejected by any other licensing board within the three months preceding his examination.

(g) See note (g) on previous page.

I. *Preliminary Examinations in General Education.*—On Tuesday and Wednesday, October 21 and 22, 1873; on Tuesday and Wednesday, April 21 and 22, 1874; on Saturday and Monday, July 25 and 27, 1874.

II. *First Professional Examinations.*—On Tuesday, November 4, 1873; on Tuesday, February 3, 1874; on Tuesday, April 14, 1874; on Tuesday, May 5, 1874; on Tuesday, July 21, 1874; on Tuesday, August 4, 1874.

III. *Second Professional Examinations.*—These will take place immediately after the conclusion of the first professional examination, at each of the above-mentioned periods.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

ABSTRACT OF REGULATIONS FOR THE LICENCE, 1873-74.

Course of Study.—(1.) Anatomy, two courses, six months each. (2.) Practical Anatomy, twelve months. (3.) Chemistry, one course, six months. (4.) Practical or Analytical Chemistry, one course, three months. (5.) Physiology, not less than fifty lectures. (6.) Practice of Medicine, one course, six months. (7.) Clinical Medicine, one course, six months. (8.) Principles and Practice of Surgery, one course, six months. (9.) Clinical Surgery, one course, six months. (10.) In addition to the above courses of Surgery and Clinical Surgery, one six months' course of either of these at the option of the student; Materia Medica, one course, three months. (11.) Midwifery and the Diseases of Women and Children, one course, three months. (12.) Medical Jurisprudence, one course, three months. (13.) Practical Midwifery, attendance on at least six cases of labour. (14.) Pathological Anatomy, three months' instruction in the post-mortem room of a recognised hospital. (15.) Practical Pharmacy, three months' practical instruction. (16.) Hospital and Dispensary Practice, twenty-four months' attendance on the practice of a public general hospital containing on the average at least eighty patients.

A certificate of proficiency in vaccination, from a vaccine institution recognised by the Faculty, will be required of every candidate. Candidates (not exempted from registration) must have been engaged in professional study during four years from the date of registration, which shall include not less than four winter sessions' or three winter and two summer sessions' attendance at a recognised medical school.

Candidates are subjected to two professional examinations. The first examination embraces Anatomy, Physiology, and Chemistry, and cannot be undergone before the end of the second winter session of study.

The second examination embraces Surgery and Surgical Anatomy, Medicine, Materia Medica, Midwifery, and Medical Jurisprudence, and cannot be undergone before the termination of the full period of study.

Intending candidates for the second examination must produce evidence—1st, of being 21 years of age; and 2nd, of having passed the first examination. They will also present to the Secretary for inspection their class and hospital certificates, and write out a tabulated statement of their whole course of study, for which the Secretary, on application, will supply candidates with printed forms.

The fee for the diploma is £10—£4 for the first, and £6 for the second examination.

Candidates who possess a qualification to practise, or who have passed the examination in Anatomy, Physiology, and Chemistry before any of the licensing boards, will be admitted to the second examination on producing evidence of having attended the full curriculum, and paying the fee of £10.

DOUBLE QUALIFICATION.

The Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, while they still continue to give their diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain two separate licences—one in Medicine and one in Surgery.

The fee for the two diplomas granted conjointly is £16—£6 for the first, and £10 for the second examination.

The first examination for the double qualification will be held in the Faculty Hall, Glasgow, on October 2, 1873, January 15, April 2, May 7, and July 23, 1874, and on each occasion it will be continued on the succeeding day. The second examination will be held, the written part on each the above days, and the oral part on the succeeding day. Applications to be admitted, either to the first or second examination, must be made to the Secretary of the Faculty not later than the Monday preceding the examination.

PRELIMINARY EXAMINATIONS CONDUCTED BY THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW, SESSION 1873-74.

1. Preliminuary examinatious in general literature, in accordance with the regulations of the General Medical Council, will be held in the Faculty Hall during the session 1873-74, on the following days, commencing at 11 o'clock, viz.:—Friday, October 17, aud Friday, October 31, 1873; Friday, April 24, aud Friday, July 24, 1874; aud on each occasion the examination will be continued on the succeeding day.

The examination will embrace the following subjects:—1. English language. 2. Latin. 3. Arithmetic; Algebra. 4. Geometry. 5. One of the following subjects at the optiou of the candidate:—(1.) Natural Philosophy — Mechanics, Hydrostatics, and Pneumatics. (2.) Greek. (3.) French. (4.) German.

The fee for the examination and certificate is 10s., payable to the Secretary previous to the examination.

FACULTY OF MEDICINE IN IRELAND.

UNIVERSITIES, COLLEGES, COURSES OF STUDY, DEGREES, AND LICENCES TO PRACTISE.

The following bodies grant one or more degrees or licences to practise Medicine or Surgery, and provide courses of instruction in the Medical Sciences:—The University of Dublin grants the degrees of M.B. or Bachelor of Medicine; M.D. or Doctor of Medicine; aud M.Ch. or Master of Surgery; also licences in Medicine (L.M.) and Surgery (L.S.). In connexion with the University, Trinity College gives a diploma in State Medicine, after examination, to Doctors of Medicine of Dublin, Oxford, or Cambridge. The Queen's University in Ireland, with its Provincial Colleges at Belfast, Cork, and Galway: This University confers the degrees of M.D. and M.Ch. The King and Queen's College of Physicians in Ireland grants a licence and a Fellowship. This institution, in connexion with the Medical Faculty of the University of Dublin, constitutes the School of Physic in Ireland. The Royal College of Surgeons in Ireland grants letters testimonial qualifying to practise Surgery as a Licentiate, and also confers a Fellowship. Fellows and Licentiates of the Colleges of Physicians and Surgeons may obtain from their respective colleges a diploma in Midwifery. The Rotundo and Coombe Lying-in Hospitals grant diplomas in Midwifery, which are, however, not recognised under the Medical Act. The Governor and Company of the Apothecaries' Hall of Ireland also confer a diploma.

The medical session in Ireland commences about the first week in November.

UNIVERSITY OF DUBLIN.

SCHOOL OF PHYSIC.

The School of Physic in the University of Dublin is under the joint control of the Board of Trinity College and of the President and Fellows of the College of Physicians.

MATRICULATION.

All students of the School of Physic must be matriculated by the Senior Lecturer of Trinity College, for which a fee of 5s. is payable. No student can be admitted for the winter courses after November 25.

DEGREES AND LICENCES IN MEDICINE AND SURGERY.

The Act 21 and 22 Vic., c. 99, recognises, as qualifications for medical and surgical practitioners, the degrees and licences in Medicine and Surgery granted by the University. The degrees are—1. Bachelor of Medicine. 2. Doctor of Medicine. 3. Master in Surgery.

UNIVERSITY DEGREES.

1. *Bachelor in Medicine.*—A candidate for the degree of Bachelor in Medicine must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on the following courses of lectures, viz.:—Courses of five months' duration (November to April)—Anatomy, Practical Anatomy (with Dissections), Surgery, Chemistry, Practice of Medicine, Midwifery. Courses of three months' duration (April to July)—Botany, Practical Chemistry, Medical Jurisprudence, Materia Medica and Pharmacy, Institutes of Medicine.

Hospital Attendance.—1. Nine months' attendance on the clinical lectures of Sir Patrick Dun's Hospital. 2. Nine months' additional attendance on the clinical lectures of any hospital recognised by the Board. 3. Instruction in practical midwifery, including not less than six deliveries. 4. Certificate of personal attendance on fever cases, stating name and date of each case.

Any of the above-named six or three months' courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows (and three of them, at the discretion of the candidate, may be attended in the University of Edinburgh), provided the candidate have kept an *Annus Medicus* in the School of Physic.

The Schools recognised are:—1. The School of the Royal College of Surgeons in Ireland. 2. The Carmichael School. 3. The School of Dr. Steevens' Hospital. 4. The St. Peter-street School. 5. The School of the Catholic University.

An *Annus Medicus*, or a year's attendance, in the School of Physic may be kept in three ways:—1. By attending at least two, or not more than three, of the foregoing courses which are of six months' duration. 2. By attending one course of six months' and two of three months' duration. 3. By nine months' attendance on Sir Patrick Dun's Hospital and clinical lectures; together with one course of six months', or, in lieu thereof, two courses of three months' duration.

The fees for nine mouths' attendance at Sir Patrick Dun's Hospital is £12 12s. The fees for each course of lectures is £3 3s. The fee for the *Liceat ad Examinandum* is £5. The fee for the degree of M.B. is £11.

2. *Doctor in Medicine.*—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

3. *Master in Surgery.*—The degree of Master in Surgery can only be obtained by students who are Bachelors of Arts, and who have completed the professional curriculum and passed the examinations required. The curriculum extends over a period of four years, and comprises attendance upon the following courses of lectures:—viz., Anatomy, one course; Demonstrations, three courses; Dissections, three courses; Theory and Practice of Surgery, two courses; Practice of Medicine, one course; Chemistry, one course; Materia Medica, one course; Midwifery, one course; Practical Chemistry, one course; Botany, one course; Medical Jurisprudence, one course. After the year 1874, the Mastership in Surgery will be conferred upon those candidates only who are of Masters in Arts standing.

Hospital Attendance.—Three sessions, each of nine consecutive months' duration, in any recognised hospital, together with attendance on the clinical lectures on Medicine and Surgery there delivered. Any of the above-named courses may be attended at any of the medical schools of Dublin recognised by the Board, provided the candidate has kept an *Annus Medicus* in the School of Physic. The following hospitals are recognised by the Board:—1, Sir Patrick's Dun's School of Physic Hospital; 2, Meath Hospital; 3, Richmond, Whitworth, and Hardwicke Hospitals; 4, Dr. Steevens' Hospital; 5, Jervis-street Infirmary; 6, City of Dublin Hospital; 7, Mercer's Hospital; 8, St. Vincent's Hospital; 9, Adelaide Hospital; 10, Mater Misericordiæ Hospital. Of the courses of lectures, which are of five months' duration, not more than three can be attended during any one session. Candidates will also be required to perform surgical operations on the dead subject. Candidates for the degree of Master in Surgery, who have already passed the examination for the degree of Bachelor of Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the degree of M.Ch., £11.

UNIVERSITY LICENCES.

Candidates for the licences in Medicine or Surgery must be matriculated in Medicine, and must have completed four years in medical studies. Candidates for the licences in Medicine or Surgery must pass the following examination in Arts, unless they be students in the Senior Freshman or some higher class:—Homer's Iliad, Books I., II., (omitting catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra to the end of Simple Equations; Euclid,

Books, I., II., III. Students who have passed the foregoing examination will be required to pay the admission fee of £15.

1. *Licentiate in Medicine.*—The medical course and examination necessary for the licence in Medicine is the same as for the degree of M.B., with the exception that any general hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, or Members of the College of Surgeons of England, on passing the foregoing Arts examination, will be admitted to examination for the licence in Medicine. Fee for the *Liceat ad Examinandum*, £5. Fee for the licence in Medicine, £5.

2. *Licentiate in Surgery.*—The surgical course and examination necessary for the licence in Surgery are the same as for the degree of Master in Surgery. Fee for the *Liceat ad Examinandum*, £5. Fee for the licence in Surgery, £5.

Total Expenses of obtaining the Degrees of Bachelor in Medicine and Master in Surgery.—I. Lectures: 1. Anatomy (one course), £3 3s. 2. Practical Anatomy (three courses), £9 9s. 3. Dissections (three courses), £15 15s. 4. Surgery (two courses), £4 4s. 5. Practice of Medicine, £3 3s. 6. Chemistry (two courses), £4 4s. 7. Materia Medica and Pharmacy, £3 3s. 8. Midwifery, £3 3s. 9. Botany. 10. Medical Jurisprudence, £3 3s. 11. Institutes of Medicine, £3 3s. Matriculation fee, 5s.—II. Hospitals: Sir P. Dun's (first year), £9 9s.; ditto (second year), £9 9s.; ditto (third year), £9 9s.; Practical Midwifery, £3 3s.; Ophthalmic Surgery, £2 2s.—III. Degrees: 1. *Liceat ad Examinandum in Medicinâ*, £5. 2. *Liceat ad Examinandum in Chirurgiâ*, £5. 3. M.B. degree, £11. 4. M.Ch. degree, £11.—Total Expenses: 1. Lectures, £52 15s. 2. Hospitals, £33 12s. 3. Degrees, £32. Total, £118 7s.—N.B.—As no degrees in Medicine or Surgery are conferred except upon graduates in Arts, the expense of the degree of Bachelor in Arts, amounting altogether to £83 4s., should be added to the foregoing, making the total £281 11s.

THE QUEEN'S UNIVERSITY IN IRELAND,

Granting the degrees of Doctor in Medicine and Master in Surgery, and diplomas in Midwifery, includes three colleges—the Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica, and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any university, college, or school recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the colleges of the Queen's University lectures on Experimental Physics and on one Modern Language, and to have passed the matriculation examination. They are further required to attend, during the first period, Practical Chemistry in a recognised laboratory, and the practice during six months of a recognised medico-chirurgical hospital, containing at least sixty beds, together with the clinical lectures delivered therein; and to attend, during the second period, a recognised midwifery hospital, with the clinical lectures therein delivered, for a period of three months; or a midwifery dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated: and eighteen months' practice of a recognised medico-chirurgical hospital containing at least sixty beds, and in which clinical instruction is delivered. There are two University examinations; one comprising the subjects of study in the first period, the other the subjects of the second period. The degree of Master in Surgery and the diploma in Midwifery are only conferred upon candidates who already hold the degree of Doctor in Medicine, and who have also passed a special examination in Surgery or Midwifery. The University examinations are held twice in each year—in June and September. Candidates who commenced their medical studies elsewhere are admitted to the first University examination before proceeding to college. Further information will be found in the "Queen's University Calendar," or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RELATIVE TO THE LICENCE IN MEDICINE.

Examinations for the licence in Medicine are statedly held on the second Tuesday and Wednesday in each month (except August and September).

The name of every candidate, together with his schedule and the documents hereafter mentioned, must first be submitted to the College at one of its meetings. These are held regularly on the first Friday in each month (except August and September).

CURRICULUM.

A candidate who has not, previous to entering his name, obtained any medical or surgical qualification recognised by the College, must produce—1. Evidence of having been engaged in the study of Medicine for four years. 2. A certificate of having passed the preliminary examination of one of the recognised licensing corporations before the termination of the second year of medical study. 3. Certificates of having studied, at a school or schools recognised by the College, the following subjects, viz.:—Practical Anatomy; Antomy and Physiology, or Institutes of Medicine; Botany; Chemistry; Practical Chemistry; Materia Medica; Practice of Medicine and Pathology; Surgery; Midwifery; Medical Jurisprudence. 4. Certificates of having attended a medico-chirurgical hospital in which regular courses of clinical lectures are delivered, together with clinical instruction, for twenty-seven months; or such hospital for eighteen months, with nine months' attendance on a medical hospital, and similar courses of clinical lectures and instruction. 5. A certificate of having attended practical midwifery for six months at a recognised lying-in hospital, or evidence satisfactory to the College in each individual case of having attended practical midwifery. 6. Certificates of character from two registered physicians or surgeons.

A candidate who has already obtained a medical or surgical qualification recognised by the College is only required to produce his diploma or certificate of registration, and the certificate of practical midwifery, and testimonials as to character.

EXAMINATION FOR THE LICENCE IN MEDICINE.

The examination consists of two parts. The subjects of the first part or previous examination are—Anatomy, Physiology, Botany, Chemistry. The subjects of the second part or final examination are—Materia Medica, Practice of Medicine, Medical Jurisprudence, Midwifery.

All candidates for the second or final examination (with the exception below specified)(a) are examined in the practice of Medicine at the bedside in one of the hospitals of Dublin.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only*, viz.:—1. Graduates in Medicine of a university in the United Kingdom, or of any foreign university approved by the College. 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous examination of any of the licensing corporations in the United Kingdom.

DIPLOMA IN MIDWIFERY.

Candidates already qualified in Medicine or Surgery may apply for permission to be examined for the diploma in Midwifery. The certificates required to be lodged are the same as those required from *qualified* candidates for the licence to practise Medicine.

Fees.—Fee for the licence in Medicine, £15 15s. Fee for licence in Medicine and diploma in Midwifery (for which latter there is a separate examination), if taken out within an interval of a month, £16. Fee for the diploma in Midwifery, £3 3s.

Further information can be obtained from the Registrar, College of Physicians, Kildare-street, Dublin.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

I.—REGISTRATION OF PUPILS.

Every person requiring to be registered as a pupil on the

(a) Candidates who are physicians or surgeons of five years' standing are exempted from the clinical and written portions of the final examination.

College books shall, if the Council think fit, be so registered if he shall have laid before the Council a receipt showing that he has lodged, to the credit of the President and for the use of the College, in the Bank of Ireland, a registry fee of five guineas.

II.—QUALIFICATIONS OF CANDIDATES FOR LETTERS TESTIMONIAL.

Every registered pupil shall be admitted to an examination for letters testimonial if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged a sum of twenty guineas in the Bank of Ireland to the credit of the President and for the use of the College.

b. A certificate that he has passed an examination as to his acquaintance with the Greek and Latin languages.

c. Certificates showing that he has been engaged in the study of his profession for not less than four years.

d. Certificates of attendance on an hospital recognised by the Council, where clinical instruction is given during three years.

e. Certificates of attendance on three courses of lectures on Anatomy and Physiology; three courses of lectures on the Theory and Practice of Surgery, and of the performance of three courses of dissections, accompanied by demonstrations; also, certificates of attendance on two courses of lectures on Chemistry, or one course of lectures on General and one on Practical Chemistry; one course of lectures on Materia Medica; one course of lectures on the Practice of Medicine; one course of lectures on Midwifery; one course of lectures on Medical Jurisprudence; and one course of lectures on Botany.

QUARTERLY EXAMINATION.

1. Examinations are held quarterly, on the second Tuesday in February, May, August, and November, at which candidates shall be divided into two classes—junior and senior.

2. The junior class shall produce certificates of having attended three courses of lectures on Anatomy and Physiology; three courses of lectures on Practical Anatomy, with dissections; two courses of lectures on Chemistry; one course of lectures on Materia Medica; one course of lectures on Botany; and one course of lectures on Forensic Medicine.

3. This class shall be examined in Anatomy, Physiology, and Materia Medica.

4. The fee for this examination shall be five guineas; not to be returned in case of rejection, but to be allowed in the fee for the second examination.

5. The senior class shall produce certificates of having attended three courses of lectures on the Theory and Practice of Surgery, one course of lectures on the Practice of Medicine, and one course of lectures on Midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions.

6. This class shall be examined in Surgery, Operative Surgery, the Practice of Medicine, and form of prescription.

7. Both these examinations shall be partly written and partly oral.

8. The fee for this examination shall be fifteen guineas.

Fees to be paid by Candidates for Letters Testimonial.

1. The candidate pays ten shillings for his preliminary examination.

2. Five guineas as registered pupil of the College.

3. Five guineas for the junior class examination, which is not returned in case of rejection, but is allowed in the fee for his second examination.

4. Fifteen guineas for the senior class examination—total £26 15s.

5. In addition to the foregoing, a fee of one guinea is to be paid to the Registrar on handing each licentiate his diploma.

6. Every candidate rejected at the quarterly examination shall be required to pay to the College the sum of two guineas on applying for re-examination, so as to recompense the College for the necessary expense.

III.—QUALIFICATIONS OF CANDIDATES FOR THE FELLOWSHIP.

Every registered pupil or licentiate shall be admitted to examination for the Fellowship if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged in the Bank of Ireland, for the use of the College, if he be a licentiate, the sum of twenty guineas, or thirty-five in case he be a registered pupil, provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he shall lodge, if he is a licentiate, thirty guineas; or, if he be a registered pupil, forty-five guineas. Fellows entering on the country list, who may subsequently settle as practitioners in Dublin, or within ten miles thereof, shall pay ten guineas to the College.

b. A certificate that he is 25 years of age.

c. A certificate that he is a Bachelor of Arts of some university, or that he has been examined in such manner as the Council may from time to time direct, with a view to ascertain that he has obtained a liberal preliminary education.

d. A certificate, signed by two or more Fellows of the College, of good general conduct during his professional education.

e. Certificates that he has been engaged in the acquisition of professional knowledge for a period of not less than six years, during three of which he must have studied in one or more of the schools or hospitals recognised by the Council. He may have studied for the other three years in any school or schools of the United Kingdom which shall be approved by the Council, or in any foreign school of repute. It is also required that the candidate shall have had opportunities of practical instruction as house-surgeon or dresser in a recognised hospital.

f. Certificates of attendance on the several courses of lectures required to be attended by candidates for letters testimonial, together with one course of lectures on Comparative Anatomy and one course on Natural Philosophy.

g. A thesis on some medical subject, or clinical reports, with observations, of six or more medical or surgical cases, taken by himself.

h. Candidates of the required age, who shall have taken the degree of Bachelor of Arts in a British or Irish university, and have complied with the foregoing regulations in other respects, will be admitted to examination at the end of five years of professional study, of which three years must have been passed in one or more of the recognised schools or hospitals.

i. Licentiates of the College, who may not be able to show that they have followed the course of study specified in the preceding regulations, may, at the expiration of ten years from the date of their diploma, be admitted to the examination required for the Fellowship, provided they produce such evidence as shall be satisfactory to the Council that they have conducted themselves honourably in the practice of their profession.

PRELIMINARY EXAMINATION, REGISTRATION, AND MATRICULATION.

Registered pupils are admitted to answer the preliminary examination at any period previous to the final examination for letters testimonial.

Students who are not registered pupils are also admitted to answer the preliminary examination at any period previous to the examination for letters testimonial, upon payment of a matriculation fee of ten shillings.

The following are the subjects upon which each candidate for the preliminary examination will be examined, viz.:—The English language, including grammar and composition. Arithmetic, including vulgar and decimal fractions. Algebra, including simple equations. Geometry, first two books of Euclid. Latin and Greek, including translations and grammar. In Greek—the Gospel of St. John, the Menippus of Lucian, or the First Book of Xenophon's Anabasis. In Latin—the First and Second Books of the Æneid of Virgil, the Jugurthine War of Sallust, or the Third Book of Livy. These examinations are held quarterly, viz.:—On the third Wednesday in January, April, July, and October in each year. Fee, ten shillings.

Candidates are requested to enter their names, and pay the fee to the Registrar, at least three days previous to the day of examination.

THE APOTHECARIES' HALL OF IRELAND.

BY-LAWS AND REGULATIONS.

Every candidate for the licence to practise is required to undergo a preliminary and a professional education and examination.

THE PRELIMINARY EDUCATION AND EXAMINATION IN ARTS.

Compulsory.—1. English Grammar, Composition, Writing from Dictation, and the leading events of Roman and English History. 2. Arithmetic and Algebra, to Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: The Twenty-first Book of Livy or the first Three Books of the

Æneid of Virgil. 5. Greek: The first Two Books of the Anabasis of Xenophon or the Ninth Book of the Iliad of Homer. 6. French: Charles XII., or "Voyage en Orient" of Lamartine. 7. German: "Wilhelm Tell" or "Die Rauber" of Schiller. Candidates will be examined in French or German, as they may select.

Optional.—1. Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. 2. Natural History: The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

THE ARTS EXAMINATIONS

will be held at the Hall four times in the year—viz., the third Thursday in the months of January, April, July, and October, at the hour of 12 o'clock noon. It will be conducted by means of printed papers and by special examiners (Graduates in Arts of the University of Dublin), with assessors from the Court of the Hall. The answers to the papers will be required in writing.

Unsuccessful candidates will be remitted to their studies for a period of six months.

THE PROFESSIONAL EDUCATION AND EXAMINATIONS.

Every candidate for the licence to practise must produce certificates to the following effect:—

1. Of having passed an examination in Arts previously to entering on professional study.

2. Of being at least 21 years of age, and of good moral character.

3. Of apprenticeship to a qualified apothecary, or of having been engaged in practical pharmacy with an apothecary for a period of three years subsequent to having passed the examination in Arts.

4. Of having spent four years in professional study.

5. Of having attended the following courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (in a recognised laboratory), during three months; Materia Medica, during three months; Principles and Practice of Medicine and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the practice of vaccination.

6. Of having attended, at a recognised hospital or hospitals, the practice of Medicine and clinical lectures on Medicine, during two winter and two summer sessions; also the practice of Surgery and clinical lectures on Surgery, during one winter and one summer session.

7. Of having performed the operation of vaccination successfully under a recognised vaccinator.

The Court of Examiners require lecturers and teachers to hold weekly class examinations.

The examination for the licence to practise is divided into two parts:—The first part comprehends Chemistry, Botany, Anatomy, Physiology, and Pharmacy; the second—Medicine Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

The professional examinations will be held quarterly, and will commence on the first and second Mondays in the months of January, April, July, and October.

Candidates for the licence must lodge their testimonials, and enrol their names and addresses, with the Clerk, at the Hall, in Dublin, a week prior to the day of examination.

ROYAL SCHOOL OF MINES (GOVERNMENTAL).—During the twenty-third session (1873-74), which will commence on October 1, courses of lectures and practical demonstrations will be given by the Professors. The fee for students desirous of becoming Associates is £30 in one sum on entrance, or two annual payments of £20, exclusive of the laboratories. Pupils are received in the chemical laboratory under the direction of Dr. Frankland, and in the metallurgical laboratory under the direction of Dr. Percy. These laboratories will be re-opened on October 1. By order of the Lords of the Committee of Council on Education, the instruction in Chemistry, Physics, Applied Mechanics, and Natural History will be given in the new buildings in the Exhibition-road, South Kensington.

THE HARTLEY INSTITUTION, SOUTHAMPTON.—Principal, C. G. Blackader, M.A., Trinity Coll., Cantab. In the department of preliminary medical education, which is recognised by the Royal Colleges of Surgeons and Physicians, students are prepared for the regular curriculum of the medical schools, one winter and two summer sessions thus passed counting towards the four years' professional study required of all candidates for a diploma. Students in this department also receive instruction in dressing, taking notes of cases, etc., at the Southampton Royal Infirmary. For further information address the Principal.

TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

In order to confine the whole of this week's Number to information specially important to Students, we are compelled to defer answers to several Correspondents, together with all notices of passing events, until next week.

Medical Times and Gazette.

SATURDAY, SEPTEMBER 13, 1873.

TO STUDENTS.

THE saying, "All men think all men mortal but themselves," is a terse and happy expression of the difficulty and slowness with which immortal man recognises the mortality of his material and earthly part. In the pride of youth and strength and health, he does not *feel* that any part of him is mortal. He sees change and decay all around him, he may live in the daily and hourly sight of the churchyard; but he has had no personal knowledge of weakness and decay, and so in his lusty vitality and vigour, though he may theoretically acknowledge that man is mortal, he does not personally and practically feel that he himself is so. But let sickness or accident bring down his pride of strength and lower his sense of vitality, and then he *feels* and knows that he too may die. In a somewhat like way may we explain, perhaps, the difficulty a youth has in learning the value of time. His seniors may preach to him on the text, "*Ars longa, vita brevis est*," but he does not feel it; he believes he has ever plenty of time before him, and that to-morrow will be time enough for work. It is only education, properly so called, that will make him feel the paramount value of to-day. Education with others, the emulation so excited, and the experience gained in the little world of school, will make him practically recognise that, in order to fight successfully and well the battle of life, each and every day must be utilised, that each day must see "something attempted, and something done." To a youth who comes up to London to study Medicine, the four years that stretch out before him may seem a very eternity of time, and he can hardly be made to believe that they are all too short for what he has to do. But happily the Medical Students of the present day are a better trained and more educated race than were those of former years, and we may well expect that they will more readily and more truly appreciate the necessity of buckling well and at once to their work. It is therefore with better courage and heart that we attempt to give them a few words of advice as to how to work during their four years of studentship.

It would be a waste of words, we imagine, to say much about the choice of a Medical School. If Paterfamilias is in the profession, he most likely will send any son whom he may destine to a medical career to the school he himself was educated at; or the advice of any near or trusted relation who may be a medical man, or of the family medical adviser and friend, is sought on the subject. If, however, the choice is really to be made by a comparison of the Medical Schools with each other, we recommend attention to be paid to the strength of the tutorial as well as of the professional staff; and particularly that inquiry be made as to the care given to provide clinical teaching,—not merely clinical lecturing, but to the provision made for clinical teaching in the wards. Select the school that seems to be the most complete in all departments, so that it shall be the fault of the Student, not of the school, if

he is not able, by means of a well-ordered out-patients' department, clinical clerkships, surgical dresserships, and clinical instruction, to obtain a knowledge of the art and practice of his profession, as well as of the science thereof. And, other things being equal, we are inclined to prefer a large school to a small one. Many reasons might be adduced for such a preference, but we will mention here one only. For success in the medical profession, a knowledge of mankind is especially important and necessary—in all pursuits and callings a quick and accurate comprehension of differences of temper and temperament is important—and in none can the power of readily reading and understanding character, disposition, and temperament be of greater moment than in ours. And certainly a Student will have more opportunity of learning this lore, and of testing his skill in its application, at a large school than at a smaller one.

But suppose that the school has been selected, and that the Student stands on the threshold: let him well consider what he is about to undertake. He will for his own sake, for the sake of achieving success in his life's career, wish to use well his student years; but we would have him enter on his work with also a reverence for his chosen profession, and an earnest, thoughtful determination for its own sake to seek after a true and accurate knowledge of it. He cannot well think too highly of it, nor cherish too great a love and regard for it; for of all callings, dealing with things temporal, there is not one of greater importance to man's well-being and happiness,—to none other are more important issues committed.

We will credit every Student with intending honestly to strive to do his best, and, in order to carry out that intention, we would advise him to especially cultivate some virtues and modes of working. And first we would say, work methodically; follow an orderly course or way; be not like "the man who flutters about in blindness, like the bat, or is carried hither and thither, like the turtle sleeping on the wave, and fancying, because he moves, that he is in progress"; but pursue your studies according to a *method*—that is, "a *progressive transition* from one step in any course to another." And here you are fortunately not left entirely to your own judgment. A course or plan of study is laid down for you, and you *must* follow it more or less fully and exactly. Do so honestly and diligently. We do not say, confine yourself entirely to its limit and exact order, but fulfil it; and then, if you have energy and time left for studies outside of or complementary to it, you may with clear conscience and profit pursue them. But be not persuaded to despise or lightly regard the plan marked out for you. It has been found to work well for the great majority of students, and has been founded and built up on the experience of many generations of teachers and learners. Even in the matter of attendance on lecturers, follow the course marked out. A certain number of lectures you *must* attend; do not listen to those who, it may be, will tell you to attend as few as possible, that lectures are a mistake and a waste of time, that you will learn more from books, and so on. Use your books to supplement and explain the lectures. These are the pith and essence of what your books contain, and though all are not equally good, and some may be positively bad, yet attend them regularly and diligently. From the worst you may learn something, if determined to carry away all that can be gleaned from it, and out of your very attendance, if you attend rightly, you may extract great advantage. One of the worst habits you can fall into is the habit of careless, wandering attention, and it is very easily fallen into; while a habit of close, nice, intent attention is simply invaluable. Never, therefore, go to a lecture in order that your mere bodily presence at it may be noted for the gaining of your certificate; but in this, as in all things, whatever you do, do it with all your might; persist in giving real, steady, watchful attention throughout each lecture. You will thus gain a habit of giving your mind fully and closely to whatever you are about, and you will thus be doing your best to strengthen and improve, or to acquire, quickness and tenacity of memory—a gain of inestimable value and service, and one which will remain with you when the subjects by help of which you acquired it may have faded or passed away. And next we would say, be thorough in all that you do; no kind of work should be done in an easy, half-minded, perfunctory kind of way, but all work of every kind should be done in the best possible way—well, and thoroughly well. Persist in making your knowledge thorough in extent if you can, but at all events thorough in kind and degree. Cherish a reasonable and healthy scepticism—that is, distinguish between assertion and proof, and demand a why and a wherefore for all that you are called on to believe. Much will have to be accepted for the present "on authority," but accept all such things with reservation, with a determination, that is, to test and try them for yourself as the opportunity of so doing may offer.

Seek to make your knowledge of each subject you study full, exact, and ready. And to insure these aims you cannot do better than take for your guidance the Baconian doctrine that "reading makes a full man, writing an exact man, and speaking a ready man." Read and listen, that your knowledge may be full; write on the subjects you study, that it may be exact—not writing your information out from books, but from your own acquired and digested knowledge of a subject, write out such an account of it as will represent it clearly and usefully to another mind; and in order to assure yourself that your knowledge of a subject is ready, be willing to talk of it, and to speak on it, and gladly accept every good opportunity of being examined in it.

When from the lecture-theatre, the dissecting-rooms, the laboratory, and the study you come to the practical work of your profession—in the out-patient rooms and the wards—bring with you still method and thoroughness. Be content at first to observe others at work, and not too ready and eager to examine patients yourself; and when you do arrive at this, be not tempted by showiness and quickness of diagnosis; be on your guard against the formation of hasty and rapid conclusions, but try to have a clear reason for every opinion you form, so that you may be able to justify it to others. Seek eagerly and gladly accept the post of clinical clerk and dresser. These appointments will not merely give you the best opportunities for examining patients, but they will oblige you to do so; and your description of cases, your diagnosis, and proposed treatment will be open to the criticisms of your teachers and your fellow-students—the best stimulus possible to the doing your work well and thoroughly. You will thus gain an invaluable training in the art of examining patients—that is, in "the exercise of common observation, directed by method." What the method shall be, will be dictated probably by the physician or surgeon under whom you work; and it does not greatly matter, so long as it is thorough, taking in the whole ground. You may perhaps, by-and-by, alter it so as to make it suit more perfectly the bent of your own mind; but through it you will gain the habit of always examining each patient thoroughly—the best possible guard against errors in diagnosis through imperfect scrutiny and too hastily drawn conclusions. And do not think that it is enough to be diligent in case-taking; you may accumulate piles of carefully taken cases, and yet get comparatively small good from your labour. You must "read, mark, learn, and inwardly digest" them. "The slothful man," saith the proverb, "roasteth not that which he took in hunting; but the substance of a diligent man is precious." Do not, from indolence or other cause, fall into the like error of letting your recorded cases lie idle. They ought to be very precious. Classify, compare, and constantly ponder them. Next to the examination of living cases of

disease, the study of well-recorded cases ought to be most instructive. Strive constantly to make your own records as full, minute, and graphic pictures of disease as you can, in the fewest possible number of words.

One piece of advice we will here venture to give to our young friends the Students in reference to the treatment of disease: do not forget the last part of the axiom that it is your duty to study to cure disease "*cito, tuto, et jucunde.*" In hospital practice you may not have much opportunity of learning the niceties of dietetics or the niceties of medication; but these *are* of importance, and, in private practice, of great importance. Take every opportunity, then, of learning how to treat disease pleasantly; do not despise what may at first seem to you small things, but cultivate a knowledge of diet and of refinements in medication: seek to make your medicines, your drugging of your patients as elegant, as little nauseous, as little like medicines, as possible.

One thing more. Preventive medicine, the science of preserving health and preventing disease, the polity and practice of hygiene, are daily becoming more recognised and of greater importance in the eyes of the public and the Government. Under lately passed Acts of Parliament, sanitary boards and sanitary medical officers are being appointed all over the kingdom; and though at present the Local Government Board seems, in the working of these Acts, to be ruled by the idea that medical skill is needed only where disease is present, and not to prevent it, and that therefore it is sufficient to appoint amateurs as inspectors under the Acts, yet this state of things is not likely to be allowed to last. The time will come when the public will demand skilled advice in all health matters—central as well as local. Be ready for it. Many valuable health appointments are already open to medical men. Offices of still greater importance and value, under the Public Health Act, will be within their reach. Make yourselves acquainted with the science and practice of hygiene by every means in your power, so that you may be prepared to undertake sanitary appointments, great or small, with the confidence that belongs to skilled knowledge—not the confidence too often born of the ignorance of the amateur.

We have now said as much as space will let us say, and not a few wise and inspired sayings will occur to you as expressing in a few words nearly all that we have written. "Whatsoever thy hand findeth to do, do it with thy might," may well and profitably be taken as your motto; or, "Be strong; quit you like men." Work with a stout heart; and in all you do be honourable English gentlemen. We welcome you heartily to the profession of your choice, and bid you Godspeed.

CHANGES IN THE LONDON MEDICAL SCHOOLS.

The changes in the teaching staffs of the London Medical Schools during the year that has passed have not been so numerous as in some former years. Here and there we have lost by death a well-known name, but some of the chief changes have occurred, we are happy to say, not in consequence of the inexorable demands of the universal creditor, but through the well-earned retirement from the labour of teaching of some who, still in active life amongst us, will continue, we hope, for many years to adorn the profession for which they have long and honourably laboured.

Taking the Schools in alphabetical order, the following are the chief alterations in the staffs to be noted:—At St. Bartholomew's the death of Mr. Holmes Coote made a vacancy in the surgical staff, which was filled by the promotion of Mr. T. Smith to the rank of Surgeon, and the election of Mr. Marsh to an Assistant-Surgeoncy. Mr. Callender quits the chair of Descriptive Anatomy, and shares with Mr. Savory the Surgical chair; the Anatomical chair is now shared by Mr. T. Smith and Mr. Langton; and Mr. Marsh, Mr. Cumberbatch, and Mr. Furner superintend and conduct Anatomical Demonstrations and teach Operative Surgery. Dr. E. Klein delivers the histological part of the Physiological course; Dr. Claye Shaw gives a course of lectures on Mental Diseases; and Mr. Langton a course of demonstrations on Diseases of the Ear. Mr. T. Smith shares with the other Surgeons the teaching of Clinical Surgery.

At the Charing-cross Hospital and School, Mr. Cantlie is now the sole Demonstrator of Anatomy, and Mr. T. Bolas has been appointed Demonstrator of Practical Chemistry. Dr. J. M. Bruce has been elected Assistant-Physician to the Hospital, with a clinical lectureship on Diseases of Children; and Dr. E. Sparks, Physician to the Department of Skin Diseases. Mr. J. A. Bloxam has been elected an Assistant-Surgeon. Mr. Barwell shares with the other Surgeons the teaching of Clinical Surgery, and Mr. Heaton and Dr. G. V. Poore will deliver a course of lectures on Public Health. Lastly, Mr. A. H. Garrod is appointed Lecturer on Comparative Anatomy.

At St. George's Hospital and School, Mr. Ellis and Mr. Blake have been appointed Demonstrators of Anatomy; Dr. Cavafy succeeds Dr. W. Ogle in the chair of Physiology; and Mr. Herbert Watney has undertaken the teaching of Practical Physiology and Histology. Dr. R. J. Lee has been elected an Assistant Obstetrical Physician; Mr. Holmes will deliver lectures on Clinical Surgery; Mr. J. W. Haward will lecture on Morbid Anatomy, and Dr. Barclay on Hygiene. Dr. Whipham lectures on Botany.

At Guy's, Dr. Owen Rees retires from the chair of Medicine, which is now filled by Drs. Wilks and Habershon. Mr. Rendle and Mr. Lucas have been appointed Anatomical Demonstrators. Dr. Pye-Smith shares with Dr. Pavy the teaching of General Anatomy and Physiology. Dr. Owen Rees having also resigned the Physiciancy to the Hospital, has been succeeded by Dr. Moxon, and Dr. F. Taylor has been appointed Assistant-Physician. Mr. Durham has been promoted to a Surgeoncy, and Mr. Higgens has been appointed Assistant Ophthalmic Surgeon. Dr. Goodhart will teach with Dr. Fagge Pathology, and Dr. Moxon has undertaken the chair of Materia Medica; Mr. Durham teaches Operative Surgery; and Dr. F. Taylor shares with Dr. Fagge the department of Cutaneous Diseases.

At King's College, Dr. Curnow has succeeded the late Mr. Partridge in the chair of Anatomy; Dr. Hayes has been appointed Assistant Obstetric Physician to the Hospital; and Dr. Ferrier, Lecturer on Forensic Medicine. Dr. Duffin lectures on Diseases of the Skin.

At the London Hospital, Mr. Hutchinson has resigned his share of the chair of Surgery, which is now filled solely by Mr. Couper; Mr. H. A. Reeves has been appointed Demonstrator of Anatomy; and Mr. McCarthy shares with Dr. Woodman the teaching of Physiology and Histology.

At St. Mary's, Mr. B. Schlesinger has been appointed Assistant Anatomical Demonstrator.

At the Middlesex, Mr. Morris is now the sole occupant of the chair of Descriptive Anatomy; Mr. Hensman lectures on Botany and Comparative Anatomy, and Dr. King on Forensic Medicine. Mr. Turner has been appointed Assistant Dental Surgeon.

At St. Thomas's, Mr. Le Gros Clark has resigned his share of the chair of Surgery, which is now filled by Mr. S. Jones and Mr. MacCormac. He has also resigned his Surgeoncy at the Hospital; Mr. MacCormac has succeeded him. Mr. A. W. Bennett has been appointed to the chair of Botany.

At University College Hospital, Dr. W. R. Gowers has been appointed to an Assistant-Physiciancy, Mr. Marcus Beck to an Assistant-Surgeoncy, and Mr. J. F. Streatfield to an Ophthalmic Surgeoncy.

At the Westminster, Mr. Pearse and Mr. Cowell succeed Mr. Holthouse in the chair of Surgery; Mr. Davy takes the Anatomical chair. Dr. Anstie has succeeded Dr. Radcliffe as Physician to the Hospital, and Dr. Allchin has been appointed Assistant-Physician. The resignation of Mr. Holt left a vacancy in the Surgical staff, which has been filled by the appointment of Mr. Bond as Assistant-Surgeon, and the promotion of Mr. Cowell. Mr. E. M. Holmes has been appointed to the chair of Botany; Dr. Potter and Dr. Dupré teach Forensic Medicine; and Mr. Bond gives a course of lectures on Diseases of the Skin.

EDUCATIONAL VACCINATING STATIONS.

In order to provide for the granting of those special certificates of proficiency in vaccination which are required to be part of the medical qualification for entering into contracts for the performance of public vaccination, or for acting as deputy to a contractor, the following arrangements are made:—

1. The vaccinating stations enumerated in the subjoined list are open, under certain specified conditions, for the purposes of teaching and examination.

2. The public vaccinators officiating at the stations are authorised to give the required certificates of proficiency in vaccination to persons whom they have sufficiently instructed therein; and

3. The public vaccinators, whose names in the subjoined list are printed in italic letters, are also authorised to give such certificates, after satisfactory examination, to persons whom they have not themselves instructed.

London.—Principal Station, Surrey Chapel, Blackfriars-road: *Mr. James Furness Marson*, who attends on Tuesday and Thursday, at 1 p.m. North-west Stations—Marylebone Institution, 15, Lower Seymour-street: Mr. William A. Sumner, on Monday, at 10 a.m.; Albion Hall, Grove-place, Lisson-grove: Mr. William A. Sumner, on Wednesday, at 10 a.m. West Station, 9, St. George's-road, Pimlico, S.W.: Dr. Edward Lowe Webb, on Thursday, at 10 a.m. East Station, Eastern Dispensary, Leman-street: Mr. Charles T. Blackman, on Wednesday, at 11 a.m. North Station, Tottenham-court Chapel, Tottenham-court-road: Mr. William Edwin Grindley Pearse, on Monday and Wednesday, at 1 p.m. South-west Station, 2, Regent-place, Horseferry-road: Mr. William Edwin Grindley Pearse, on Tuesday, at 2 p.m. Strand Station, Charing-cross Hospital: Mr. Robert William Dunn, on Monday, at 10 a.m.

Birmingham.—The School-rooms, 27, Old Meeting-street, on Monday; the rooms occupied by the Working Men's Mutual Improvement Society, in Barr-street, on Tuesday; St. Mark's School-rooms, St. Mark's-street, on Wednesday; and the Islington Assembly-rooms, 42, Broad-street, on Thursday: *Dr. Edmund Robinson*, at 11 o'clock on the days before-mentioned.

Bristol.—The Public Vaccination Station, Peter-street: *Dr. Henry A. P. Robertson*, on Wednesday, at 10 a.m.

Exeter.—Odd Fellows' Hall, Bamfyld-street: *Mr. Charles H. Roper*, on Thursday, at 3 p.m.

Leeds.—Heed-stroet: *Mr. Frederick Holmes*, on Tuesday, at 2.30 p.m.

Liverpool.—4, Oldham-street: *Mr. Arthur Browne Steele*, on Thursday, at 2 p.m.

Manchester.—159, Rochdale-road: *Mr. Ellis Southern Guest*, on Monday, at 2 p.m.

Newcastle-on-Tyne.—The Central Vaccination Station, 21, Nun-street, *Dr. Thomas C. Nesham*, on Thursday, at 3 p.m.

Sheffield.—The Public Vaccination Station, Townhead-street, *Mr. William Skinner*, on Tuesday, at 3 p.m.

Edinburgh.—The Royal Dispensary: *Dr. William Husband*, on Wednesday and Saturday, at 12.

Glasgow.—The Hall of the Faculty of Physicians and Surgeons; *Dr. Hugh Thomson*, on Monday, at 12. The Royal Infirmary: Dr. Robert Dunlop Tannahill, on Monday and Thursday, at 12.

At Downing College, Cambridge, every alternate year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not, if practicable, vacated by marriage, and the Fellows are not required to reside. There are now two vacant Fellowships. Foundation Scholarships of £50 per annum (in some cases with rooms and commons) are offered annually for distinction in Natural Science, tenable until the B.A. degree, and in case of special merit for three years longer. Minor Scholarships of £40 per annum, tenable for two years, are offered each year for competition before entrance, and one or more of these is awarded for proficiency in Natural Science.

Wolverhampton and Staffordshire General Hospital.—Two hundred and ten beds. Attendance recognised by the Examining Boards. Pupils resident and non-resident. The Hospital contains large male and female accident wards, general medical and surgical wards, a children's ward, a ward for diseases of women, and a fever wing. The out-patient department, commodious and convenient, is semi-detached from the main building. Fees for Hospital Practice: One year, Ten Guineas; perpetual, Twenty Guineas. Physicians—Dr. Millington and Dr. Totherick. Surgeons—Mr. Vincent Jackson, Mr. J. O'Brien Kough, Mr. C. A. Newnham. House-Surgeon—Mr. Burton Ravenhill. Physicians' Assistant—Dr. Nankwell. Operations are performed in the theatre every Thursday morning, at eleven o'clock. The practice in the Hospital is very extensive, the number of cases treated being large and important. Practical instruction in Surgery to first-year students, and Dresserships for students after two years' professional education, both in accordance with the Royal College of Surgeons of England, may be obtained at this Hospital; also, Clinical Clerkships. For particulars apply at the Hospital to Vincent Jackson, Honorary Secretary of the Medical Committee. (See Advertisement.)

DAYS AND HOURS OF INTRODUCTORY LECTURES

TO BE DELIVERED AT THE DIFFERENT MEDICAL SCHOOLS.

IN THE METROPOLIS.

	Days and hours, p.m.	
St. Bartholomew's Hospital and Medical School	Oct. 1,	No Introductory Lecture announced.
Charing-cross Hospital and Medical Coll.	„ 1, 8	Mr. Bellamy.
St. George's Hospital Medical School	„ 1, 2	Mr. Brudenell Carter.
Guy's Hospital Medical School	„ 1, 2	Mr. James Hinton.
King's College Medical Department	„ 1, 4	Prof. Edgar Sheppard.
London Hospital Medical College	„ 1, 3	Dr. Prosser James.
St. Mary's Hospital Medical School	„ 1, 8	Dr. Shepherd.
Middlesex Hospital Medical School	„ 1, 3	Mr. Morris.
St. Thomas's Hospital Medical College	„ 1, 2	Dr. J. Harley.
University College Faculty of Medicine	„ 1, 3	Dr. F. F. Roberts.
Westminster Hospital Medical School	„ 1, 8	Mr. Cowell.

IN THE PROVINCES.

	Days and hours, p.m.	
Birmingham Queen's College	Oct. 1, 3	Professor Clay.
Birmingham General and Queen's Hospitals (Introductory Clinical Address)	„ 7, 3½	Dr. Bell Fletcher.
Leeds School of Medicine	„ 1, 4	Mr. T. Scattergood.
Liverpool Royal Infirmary School of Medicine	„ 1, 3	Dr. Caton.
Manchester Royal School of Medicine	„ 1, —	Professor Gamgee.
Newcastle-upon-Tyne Coll. of Medicine	„ 1, 2	Dr. Edwd. Charlton.
Sheffield School of Medicine	„ 1, 4	Mr. Henry Jackson.

The Winter Session of the Bristol Medical School will commence on October 1.

TABLE OF FEES CHARGED IN THE MEDICAL SCHOOLS OF ENGLAND

FOR ALL LECTURES AND HOSPITAL PRACTICE REQUIRED FOR THE LICENTIATE EXAMINATIONS OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE LONDON SOCIETY OF APOTHECARIES, AND FOR THE MEMBERSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

London.	£	s.	d.
St. Bartholomew's, £110 5s. (in three half-yearly instalments of £36 15s., £36 15s., and £36 15s.), or in one sum	105	0	0
Charing-cross, £80 17s. (in three yearly instalments of £34 13s., £31 10s., and £14 14s.); in the case of Matriculated Students (Matriculation fee, £2 2s.), payable in five instalments	74	3	0
St. George's Hospital, perpetual £105 (in yearly instalments of £42, £42, and £10 10s.)—(with the exception of Practical Chemistry)	94	10	0
Guy's Hospital (in three yearly instalments of £40, £40, and £20; £10 each succeeding year)	100	0	0
King's College (in one sum)	100	0	0
„ (in instalments of £52 10s., £42, and £10 10s.)	105	0	0
London Hospital, perpetual £100 (in two instalments of £45)	90	0	0
St. Mary's (£89 5s. in instalments, or in one sum)	84	0	0
Middlesex, unlimited (or in yearly instalments of £35, £35, and £20, and £10 each succeeding year)	90	0	0
St. Thomas's (in yearly instalments of £40, £40, and £20, and £10 each succeeding year), unlimited	105	0	0
University College (payable in yearly instalments of £47 16s., £38 7s., and £18 11s.)	106	16	0
Westminster (in one sum)	78	0	0
„ (in four instalments of £28 7s., £14 14s., £26 5s., and £13 13s.)	82	19	0
The Provinces.			
Birmingham — Queen's College and General and Queen's Hospitals (payable in two instalments)	84	0	0
Bristol Medical School and Bristol Royal Infirmary	109	0	0
Bristol Medical School and Bristol General Hospital	97	15	0
Leeds Medical School and Infirmary (in two yearly instalments)	88	4	0
Liverpool Royal Infirmary School	80	17	0
Liverpool Royal Infirmary School and Northern Hospital	73	10	0
Manchester Medical School and Infirmary	84	0	0
Newcastle School and Infirmary (in one payment)	70	7	0
Sheffield Medical School and Infirmary	78	15	0

TABLE OF FEES CHARGED IN THE MEDICAL SCHOOLS OF ENGLAND

FOR THE LECTURES AND SURGICAL PRACTICE REQUIRED BY CANDIDATES FOR THE DIPLOMA IN DENTAL SURGERY OF THE ROYAL COLLEGE OF SURGEONS IN ENGLAND.

	£	s.	d.
St. Bartholomew's (the "general subjects required") payable in two half-yearly instalments of £26 5s. each	52	10	0
Charing-cross	42	2	0
St. George's Hospital and School (not including Prac. Chem.)	45	0	0
King's College (in one sum)	67	0	0
„ (in two yearly instalments of £50 and £20 7s.)	70	7	0
St. Mary's	52	10	0
Middlesex (in two yearly instalments of £26 5s. and £15 5s.)	42	0	0
St. Thomas's (by instalments of £40 and £10), in one sum	45	0	0
Westminster Hospital (in yearly instalments of £25 4s. and £12 12s.), in one sum	36	0	0

TABLES

GIVING THE NAMES OF LECTURERS, HOURS OF LECTURE, DAYS OF ATTENDANCE, AND FEES IN THE METROPOLITAN MEDICAL SCHOOLS AND HOSPITALS.

LECTURES.	ST. BARTHOLOMEW'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	CHARING CROSS. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	ST. GEORGE'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Black Dr. Andrew	M Tu Th 3.30	5 5	..	7 7	Dr. Headland	MWF12.30	4 4	6 6	..	Dr. Barclay	Tu Th S 9	6 6	..	7 7
SURGERY	Mr. Savory Mr. Callender	M W 2.30 S 9.30	5 5	..	7 7	Mr. Canton	Tu Th S 9	3 3	5 5	..	Mr. Holmes	M W F 9	6 6	..	7 7
PRACTICAL SURGERY	Mr. Willett	M W F 2.30	5 5	..	7 7	..	..	..	..	..	..	..	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. T. Smith Mr. Langton	Tu W Th F 9	7 7	..	10 10	Mr. Barwell	M W F 9 Th 3	4 4	6 6	..	Mr. Rouse	M W F 3	6 6	..	7 7
ANATOMICAL DEMONSTRATIONS	Mr. Marsh Mr. Cumberbatch Mr. Furner	Daily 10.15 till 4	3 3	5 5	..	Mr. Cantlie	Daily, 10 to 1	3 3	5 5	..	Mr. Spitta Mr. Ellis Mr. Blake	Daily 10	3 3	..	..
PHYSIOLOGY	Mr. M. Baker Dr. E. Klein, *Histology*	M Tu F 2.30	7 7	..	10 10	Dr. Silver	M Tu W F 3.30	4 4	6 6	..	Dr. Cavafy	Tu Th 3 F 11	6 6	..	7 7
PRACTICAL PHYSIOLOGY	Mr. Symons	..	5 5	..	7 7	..	..	..	..	..	Mr. H. Watney	Tu Th 8.10	..	..	..
CHEMISTRY	Dr. Russell	M W F 10	5 5	..	7 7	Mr. Heaton	M Th F 11	5 5	..	..	Dr. Noad	Tu Th S 11.30	6 6	..	8 8
HOSPITAL PRACTICE—						Mr. Bolas, *dem.*									
Physicians	Dr. Black Dr. Harris Dr. Andrew Dr. Southey	M Tu Th 1 Tu Th S 1.30 M Tu Th F S 1.30 M W Tu S 1.30	8 8 3 mths	18 18 2 yrs.	26 5	Dr. Headland Dr. Pollock Dr. Silver	M W F 1 Tu Th S 1 Tu Th F Tu F	10 10 6 mths	15 15 12 mths	21 0	Dr. Fuller Dr. Barclay Dr. J. Ogle Dr. Wadham	Tu S 1 M F 1 M F 1 Tu S 1	8 8 6 mths	16 16 3 years	25 4
Assistant-Physicians	Dr. Church Dr. Gee Dr. Duckworth Dr. Hensley	Tu F 11 W S 11 M Th 11 F 1.30	..	..	..	Dr. Green Dr. Powell Dr. Poore Dr. J. M. Bruce Dr. E. Sparks, *skin dis.*	M Th Tu F W S Tu S	..	..	..	Dr. Dickinson Dr. Whipham	Tu S 12 M F 12	..	..	..
Surgeons	Mr. Holden Mr. Savory Mr. Callender Mr. T. Smith	Tu F S 1.30 M Tu W Th F S 1.30 Daily 1.30 Daily 1·30	10 10 3 mths	21 0 1 year	26 5	Mr. Canton Mr. Hird Mr. Barwell	Tu F 1 M Th 1 W S 1	10 10 6 mths	15 15 12 mths	21 0	Mr. P. Hewett Mr. Pollock Mr. H. Lee Mr. Holmes Mr. Brodhurst *orthop.* Mr. B. Carter *oph.*	M F 1 M F 1 Tu S 1 Tu S 1 M W F 2 W S 2	15 15 6 mths	21 0 3 years	42 0
Assistant-Surgeons	Mr. Willett Mr. Langton Mr. M. Baker Mr. Marsh	W S F 12.30 Tu F 12.30 M Th 12.30	..	..	..	Mr. Bellamy Mr. F. Clarke Mr. J. A Bloxam	M Th Tu F W S	..	..	..	Mr. Rouse Mr. Pick	Tu S 12 M F 12	..	..	..
Physician-Accoucheur	Dr Greenhalgh	Th 1.30 S 9	..	..	..	Dr. J. W. Black	M W F	..	..	..	Dr. J. Clarke Dr R J Lee, *asst.*	Tu S 1 Th 12	..	..	..
CLINICAL MEDICINE	Dr. Black Dr. Harris Dr. Andrew Dr. Southey	.. Weekly	..	..	..	Dr. Headland Dr. A. J. Pollock Dr. Silver Dr. Bruce, *dis. of chil.*	.. Weekly	..	..	..	Dr. Fuller Dr. Wadham Dr. Ogle	M 2 M 2 *sum.*	..	..	..
CLINICAL SURGERY	Sir J. Paget Mr. Holden Mr. Savory Mr. Callender Mr. T. Smith	.. Weekly	..	..	..	Mr. Hancock Mr. Canton Mr. Hird Mr. Barwell	.. Weekly	..	..	..	Mr. Hewett Mr. Pollock Mr. Holmes	Tu 2 Tu 2 Tu 2 *sum.*	..	..	..
DISEASES OF WOMEN	Dr Greenhalgh	..	..	..	..	Dr. Black	..	..	..	..	Dr. Clarke		..	..	..
PATHOLOGY AND MORBID ANATOMY	Dr. Gee	Dly 1&2.30 W *sum.* 9·30	2 2	..	3 3	Dr. T. H. Green	Tu F 3 W 4 *sum.*	2 2	..	..	Dr. Dickinson Mr. Haward	Th 3 *sum.* W 12	5 5	..	..
OPHTHALMIC SURGERY	Mr. Power and Mr. Vernon	Tu Th S 2	..	..	..	..	..	..	..	..	Mr. B. Carter	W 10 *win.*	..	..	..
HYGIENE	Dr. Southey	..	..	..	..	Dr. Heaton Dr. Poore	..	..	..	..	Dr. Barclay	..	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Farre Dr. Brunton	Tu Th S 10 W 11.30	5 5	..	6 6	Dr. Powell	Tu Th S 9.45	3 3	..	..	Dr. Dickinson	M W F 3	4 4	..	5 5
BOTANY	Mr. Henslow	M W F 10	3 3	..	4 4	Dr. Dowson	Tu Th S 11	2 2	..	..	Dr. Whipham	T 3 W Th 2	3 3	..	4 4
FORENSIC MEDICINE	Dr. R. Southey	M Th S 9	3 3	..	4 4	Dr. G. V. Poore	M W F 9	2 2	..	..	Dr. Wadham	Tu Th S 9	4 4	..	5 5
MIDWIFERY	Dr. Greenhalgh	Tu W F S 8.30 a.m.	5 5	..	6 6	Dr. J. W. Black	M W Th 3	3 3	..	..	Dr. J. Clarke	M W F 9	5 5	..	6 6
PRACTICAL CHEMISTRY	Dr. Russell	M Tu F 11 to 1	2 2	..	..	Mr. Heaton Mr. Bolas	M F 10—1	2 2	..	..	Dr. Noad	M W Th F 10	4 4	..	..
MICROSCOPIC ANATOMY	Mr. Symons	..	..	..	..	Mr. J. M. Bruce	..	..	..	..	Mr. H. Watney	Tu Th S 10	..	..	..
OPHTHALMIC SURGERY	Mr. Power Mr Vernon *dem*	Tu W 12.45 W *win.* 2	2 2	..	3 3	..	..	..	..	..	Mr. B. Carter	..	..	..	..
COMPARATIVE ANATOMY	Dr. Church	M Th 11	2 2	..	3 3	Mr. Garrod	Tu F 4	..	..	..	Dr. Cavafy	M F 4.30	..	..	..
DISEASES OF BRAIN, ETC.	Dr. Claye Shaw	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ORTHOPÆDIC SURGERY	Mr. Willett	F 12.30	..	..	..	..	..	..	..	..	Mr. Brodhurst	Tu 10	..	..	..
NATURAL PHILOSOPHY	Dr. Hensley	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Coleman	F 9 (3 mths)	2 2	..	3 3	Mr. Fairbank	..	..	..	..	Mr. Vasey	Tu 10	1 1	..	..
PSYCHOLOGICAL MEDICINE	Dr. Claye Shaw	Th 11.45	2 2	..	3 3	Dr. Hunt	M 12	..	..	..	Dr. Blandford	..	..	..	..
OPERATIVE SURGERY	Mr. Marsh *& demons.*	..	4 4	..	..	..	..	..	..	..	Mr. Pick	M W F 3	2 2	..	..
PHYSIOLOGICAL CHEMISTRY	Mr. Symons	..	..	..	..	..	..	..	..	..	Mr. Moore	M W F 10 *(win.*	..	..	..
SKIN DISEASES	Dr. Duckworth	F 1.30	..	..	..	Dr. E. Sparks	Tu 2.30	..	..	..	Dr. Barclay	Th 2	..	..	..
DISEASES OF THE EAR	Mr. Langton	F 2.30	..	..	..	..	..	..	..	..	Mr. Dalby	W 3	..	..	..
Entrance to Lectures and Hosp. Practice for Examinations	..	..	..	..	105 0	..	..	..	..	74 3	Perpetual Fee	..	..	..	105 0
To the Hospital Practice only	..	..	..	..	..	..	..	..	..	31 10	Compounding	..	..	..	94 10
											..	..	..	..	37 16

LECTURES.	GUY'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	KING'S COLLEGE AND HOSPITAL. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	LONDON. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Wilks Dr. Habershon	M W F 3	5 5	..	..	Dr. G. Johnson	Tu 4 Th F 5	7 7	..	7 7	Dr. H. Davies Dr. Ramskill Dr. L. Down	MWTh 9.15 till Xmas, after Th 9.15 Tu F 4	5 5	..	6 6
SURGERY	Mr. Birkett Mr. C. Forster	Tu Th 3.30 F 10.30	5 5	..	..	Mr. Wood	M Tu W 5	7 7	..	7 7	Mr. Couper	Tu F S 9	5 5	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Durham Mr. Howse	Tu W Th F 9	5 5	..	..	Dr. Curnow	Daily except M 9	7 7	..	10 10	Mr. Rivington	M Tu Th F 3	5 5	..	8 8
ANATOMICAL DEMONSTRATIONS	Mr. Davies-Colley Mr. Rendle Mr. Lucas	Daily 9 to 4	5 5	..	..	Dr. Curnow Mr. Perrin	..	..	..	..	Mr. J. Adams Mr. H. Reeves	Daily 10 to 3 exc. W. & S after.	5 5	..	8 8
GENERAL ANATOMY AND PHYSIOLOGY	Dr. Pavy Dr. Pye-Smith	M W F 4.15	5 5	..	..	Dr. Rutherford	M W Th F 4	7 7	..	10 10	Dr. Woodman Mr. M'Carthy	M W Th 4	4 4	..	6 6
CHEMISTRY	Dr. Debus Dr. Stevenson	Tu Th S 11	5 5	..	..	Mr. Bloxam	M W Th S 10.15	7 7	..	10 10	Dr. Letheby Dr. C. M. Tidy	M W F 10.30	7 7	..	7 7
HOSPITAL PRACTICE—															
Physicians	Dr. Habershon Dr. Wilks Dr. Pavy Dr. Moxon Dr. B. Hicks, *obs.*	Tu Th S 1.30 Tu Th S 1.30 M Th 1.30 M F 1.30 W S 1.30	10 10 3 mths	15 15 6 mths	26 5	*In-patients*— Dr. Johnson Dr. Beale Dr. Garrod Dr. Playfair, *obs.* *Out-patients*— Dr. A. Duffin	M Th 2 Tu S 2 W F 2 Tu Th S 1.30 W S 1	10 10 6 mth	15 15 18 mths	21 0	Dr. Davies Dr. A. Clark Dr. Ramskill Dr. Down Dr. H. Jackson Dr. Head, *obs.* Dr. Palfrey, *obs*	M W 8.30 M Th 1.30 W S 1.30 Tu F 1.30 M Th 1.30 Tu F 1.30 W S 1.30	6 6 6 mths	12 12 Period reqd. by Apoth. H.	21 0
Assistant-Physicians ..	Dr. C. H. Fagge Dr. Pye-Smith Dr F. Taylor Dr. J. J. Phillips, *obs.*	M 12 Tu F 12 W 12 M F 1.30 Th S 12	..	..	..	Dr. Yeo Dr. Kelly Dr. Hayes, *obs.*	M Th 1 Tu F 1 Tu Th S 12·30	..	..	..	Dr. Mackenzie Dr. Sutton Dr. Fenwick Dr. Woodman	W S 1.30 M Th 1.30 Tu F 1.30 Tu F 1.30			
Surgeons	Mr. Birkett Mr. C. Forster Mr. Bryant Mr. Durham Mr. Bader, *oph.* Mr. Hinton *aur*	M Th 1.30 M Th 1.30 M Th 1.30 W S 1.30 M Tu F 12 Tu F 12	10 10 3 mths	15 15 6 mths	26 5	Sir W. Fergusson Mr. Wood Mr. Wells, *oph.* Mr. H. Smith	Tu Th S 1.30 M W F 1.30 Tu Th S 1 M W F 1	15 15 6 mths	21 0 21 mths	26 5	Mr. Hutchinson Mr. Maunder Mr. Couper Mr. Rivington	M Th 1.30 Tu F 1.30 W S 1.30 M Th 1.30 S 9.30 *aur.*	8 8 6 mths	18 18 18 mths	26 5 3 years
Assistant-Surgeons	Mr. Howse Mr. D.-Colley Mr. Higgens, *oph.*	Tu Th 12 S 12 W S 1.30	..	..	..	Mr. R. Bell	Tu Th S 1	..	..	..	Mr. J. Adams Mr. W. Tay Mr. M'Carthy Mr Reeves	Tu F 1.30 W S 9 *oph.* M Th 1.30 W S 9 *oph.* M Th 1.30 Tu S 1.30 S 9.30 *aur.*	..	..	..
CLINICAL MEDICINE ..	*Winter*— Dr. Habershon Dr. Wilks Dr. Pavy Dr. Moxon *Summer*— Dr. Fagge Dr. Pye-Smith Dr. F. Taylor	S 1.30	..	..	..	Dr. Johnson Dr. Beale Dr. Garrod Dr. Playfair, *obs.*	Every alt. M 3 p.m. Every alt. Tu 3 Every alt. F 3 p.m. Every alt. Th 3	..	..	..	Dr. A. Clark Dr. Ramskill Dr. Davies Dr. Down Dr. Sutton Dr. Jackson Dr. Mackenzie	M 2 Oct W 3.30 Jan. M 9 Feb. Tu 2 Nov. Tu 2 May M 2 June S 3 July	Nov. Feb. Mar. Dec.	..	..
CLINICAL SURGERY ..	Mr. Birkett Mr. Forster Mr. Bryant Mr. Durham Mr. Howse Mr. D.-Colley	*Winter* W 1.30 *Summer* F 1.30	..	..	..	Sir W. Fergusson Mr. Wood Mr. Wells, *oph.*	Every alt. Th 3 p.m. Every alt. F 3 p.m. Every alt. M 3	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Hicks Dr. Phillips	W 1.30 M 3	..	..	..	Dr. Playfair	..	..	..	..	..	..	..	..	..
PATHOLOGY	Dr. Fagge Dr. Goodhart	2.30 *win.* S 9 *sum.*	..	..	..	Dr. Beale	Tu Th 4 s.	2 2	..	3 3	Dr. Sutton	Th 12.30	3 3	..	6 6
SUMMER SESSION.															
MATERIA MEDICA ..	Dr. Moxon	Tu Th F 3	4 4	..	..	Dr. A. B. Garrod	Tu W Th F 8 a.m.	4 4	..	5 5	Dr. M. P. James	Tu Th F 4	3 3	..	4 4
BOTANY	..	Tu Th S 11.30	4 4	..	..	Mr. Bentley	M Tu W F 12.15	4 4	..	5 5	Mr. Baker	M W F 11	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. A. Taylor	Tu Th S 10	4 4	..	..	Dr. Ferrier	M Tu W F 12.15	4 4	..	5 5	Mr. Rodgers Dr. C. M. Tidy	Daily exc. Sat 10	3 3	..	4 4
MIDWIFERY	Dr. B. Hicks	Tu W Th F 8.45 a.m.	5 5	..	..	Dr. Playfair	Tu W Th F 9	4 4	..	5 5	Dr. E. Head	M W Th F 3	4 4	..	6 6
PRACTICAL CHEMISTRY ..	Dr. Debus	M W F 10 to 1	4 4	..	..	Mr C. L. Bloxam Mr Hartley *dem.*	M W Th 10.15	4 4	..	7 7	Dr. Letheby	M Th S 9	2 2	..	..
COMPARATIVE ANATOMY ..	Dr. Pye-Smith	M F 12.15	4 4	..	..	Mr. T. R. Jones	Tu F S 10.15	3 3	..	4 4	Mr. Sanders	Tu Th 11	3 3	..	4 4
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. Pye-Smith	M F 1	..	..	..	Dr. Rutherford Dr. Pritchard, *dem.*	M W F *win.*	5 5	..	8 8	Dr. Woodman Mr. M'Carthy		3 3	..	4 4
NATURAL PHILOSOPHY ..		W 12 *win.*	4 4	..	..	Mr. Adams	..	..	..	..					
OPERATIVE SURGERY ..	Mr. Durham	..	..	..	..	Mr. Wood	..	..	..	..	Mr. Maunder	..	..	..	..
DENTAL SURGERY ..	Mr. Salter Mr. Moon	..	5 5	..	..	Mr. Cartwright	Tu F 9, alt Tu 10.30 cl.	6	..	8 8	Mr. Barrett	..	2 2	..	..
HYGIENE	Dr. H. Fagge	Th S 12.15	4 4	..	..	Dr. Guy	..	..	..	..					
AURAL SURGERY	Mr. Hinton	..	..	..	..	..	..	..	..	..					
CUTANEOUS DISEASES ..	Dr. H. Fagge Dr. F. Taylor	Tu 12 *win.*	..	..	..	Dr. Duffin	Tu 3	..	..	..					
OPHTHALMIC SURGERY ..	Mr. Bader	M 8.45 a.m	..	..	..	Mr. J. S. Wells	M S 9	3 3	..	..	Mr. J. Hutchinson	Tu F S in June	2 2	..	3 3
DISEASES OF THE THROAT	..	..	..	..	..	Dr. Johnson	W 3	..	..	..					
PSYCHOL. MEDICINE ..	Dr. Dickson	..	..	..	..	Dr E. Sheppard	..	..	..	..					
	Fee for the Lectures and Hospital Practice, Perpetual, £105.					Fees for the Lectures and Hospital Practice, £105; in one sum, £100.					Fees for the Lectures and Hospital Practice, for Licentiate, £90.				

LECTURES.	ST. MARY'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	MIDDLESEX. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	ST. THOMAS'S. Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Chambers, Dr. Broadbent	M W Th 4	4 4	..	6 6	Dr. Greenhow	M W F 9	6 6	..	8 8	Dr. Peacock, Dr. Murchison	M Th S 2	..	..	..
SURGERY	Mr. J. R. Lane, Mr. Gascoyen	Tu F 4 W 3	4 4	..	6 6	Mr. De Morgan	Tu Th S 9	6 6	..	8 8	Mr. S. Jones, Mr. MacCormac	M o Tu, Th F 5	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Norton	M Tu Th F 2.45	6 6	..	8 8	Mr. Morris	M W Th F 10	8 8 / 10 10	..	12 12 / 14 14	Mr. Mason, Mr. Wagstaffe	M Tu Th F 3, W 12.30	..	..	..
ANATOMICAL DEMONSTRATIONS	Mr. E. Owen, Mr. B. Schlesinger, *assist. dem.*	Daily 9 to 5	3 3	..	..	Dr. R. Liveing	Daily 8 to 5	6 6	..	8 8	Mr. Rainey, Mr. R. W. Reid	Daily 9 to 3	..	..	..
PHYSIOLOGY	Dr. Lawson	M W S 12	3 3	..	4 4	Mr. Lowne	M W F 4	6 6	..	8 8	Dr. Ord, Dr. J. Harley	M W F 4	..	..	..
EXPERIMENTAL PHYSIOLOGY	Dr. Shepherd	Tu W F 9	3 3	..	4 4	..	..	..	..	..	..	..	..	..	..
CHEMISTRY	Dr. C. R. A. Wright	M Tu Th F 9	5 5	..	7 7	Mr. Heisch	M Tu F S 11	6 6	..	8 8	Dr. Bernays	Tu Th S 11	..	..	..
HOSPITAL PRACTICE:															
Physicians	Dr. H. Jones, Dr. Sieveking, Dr. Broadbent, Dr. A. Meadows, *obs.*	M Th 1.15, Tu F 1.15, W S 1.15, Tu F 10	7 7 / 6 mths	12 12 / 1 year	21 0	Dr. Thompson, Dr. Greenhow, Dr. R. Liveing, Dr. J. Hall Davis, *obs.*	Tu Th S 1, Tu Th S 1, M W F 1.30, Tu W F S 1.30	5 5 / 6 mths	8 8 / 12 mths	15 15	Dr. Peacock, Dr. Bristowe, Dr. Clapton, Dr. Murchison, Dr. Barnes, *obs.*	From 8.30 to 9.30 a.m.	..	..	..
Assistant-Physicians	Dr. Cheadle, Dr. Lawson, Dr. Shepherd, Dr. Wiltshire, *obs.*	Tu F 1, W S 1, M Th 1	..	..	..	Dr. Cayley, Dr. J. Murray, Dr. R. King	M W 8.30, Tu 8.30 F 4, Th 8.30 S 4	..	..	..	Dr. Stone, Dr. Ord, Dr. J. Harley, Dr. Payne, Dr. Gervis, *obs.*		..	..	..
Surgeons	Mr. Spencer Smith, Mr. H. Walton, Mr. J. Lane, Mr. Gascoyen, Mr. Allen, *aur.*, Mr. H. Walton *oph.*	M Th 1.15, W S 1.15, Tu F 1.15, M Th 1, Tu F 2, M Th 1.30	9 9 / 6 mths	21 0 / 1 year	31 0	Mr. De Morgan, Mr. Nunn, Mr. Hulke, Mr. Lawson, Mr. Hulke, *oph.*	M F 1, Tu F 1, M Th 1, Th S 1, Tu F 8.30	5 5 / 3 mths	8 8 / 1 year	15 15	Mr. Simon, Mr. Syduey Jones, Mr. Croft, Mr. MacCormac, Mr. Liebreich, *oph.*		..	..	..
Assistant-Surgeons	Mr A. T. Norton, Mr. E Owen	W S 1, Tu F 1	..	..	..	Mr. Morris, Mr. A. Clarke	M F 1, Th S 1	..	..	..	Mr. Mason, Mr. H. Arnott		..	..	..
CLINICAL MEDICINE	Dr. H. Jones, Dr. Sieveking, Dr. Broadbent	M 2, Every alt. F 2, Every alt. S	..	..	..	The Physicians	F 3	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY	Mr. Spencer Smith, Mr. H. Walton, Mr. J. R Lane	Every alt. Th 2, Every alt. S 2, Every alt. Tu	..	..	..	The Surgeons	M 3	..	..	..	By the Surgeons	..	..	..	..
CLINICAL MIDWIFERY	Dr. Meadows	Every alt. F	..	..	..	..	..	..	..	..	Dr. Barnes	Tu 4	..	..	..
DISEASES OF WOMEN	..	..	..	..	..	Dr. J. H. Davis	Tu 10	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Cheadle	Tu F 12	3 3	..	..	Dr. Cayley and Dr. J. Murray	M Th 4	3 3	..	4 4	Dr. Payne	Daily 2	..	..	..
SUMMER SESSION.															
MATERIA MEDICA.	Dr. Cheadlo	Tu W F S 12	4 4	..	6 6	Dr Thorowgood	M W F 4	4 4	..	5 5	Dr. Clapton	M W F S	..	..	..
BOTANY	Dr. Trimen	M W F 9	3 3	..	4 4	Mr. Hensman	M W F 10	4 4	..	5 5	Mr. A. W. Bennett	Tu Th S S	..	..	..
FORENSIC MEDICINE	Dr. Randall	M Tu Th 10	3 3	..	4 4	Dr. Kiug	M W F 9	4 4	..	5 5	Dr. Stone and Dr. Gervis	Tu S 12 F S	..	..	..
MIDWIFERY	Dr. Meadows	Daily ex. S 9	4 4	..	6 6	Dr. J. Hall Davis	Tu Th S 9	4 4	..	5 5	Dr. R. Barnes	Tu W Th S 8	..	..	..
PRACTICAL CHEMISTRY	Dr. C. R. A. Wright	Tu F S 9	3 3	..	..	Mr. Heisch	M Tu F 11	3 3	..	..	Dr. Bernays	Tu Th S 11	..	..	..
COMPARATIVE ANATOMY	Mr. S. G. Mivart	Tu Th 11	2 2	..	3 3	Mr. Hensman	Tu Th 4	3 3	..	..	Mr. Stewart	M W 11.30	..	..	..
OPHTHALMIC SURGERY	Mr. H. Walton	Th 2.45	2 2	..	..	Mr. Hulke	Alt. Tu 3	..	..	..	Mr. Liebreich	M 3	..	..	..
MENTAL DISEASES	..	..	..	..	..	Dr. Rayner	..	3 3	..	..	Dr. W R. Williams	F 12	..	..	..
PRACTICAL PHYSIOLOGY AND HISTOLOGY	*See Win. Ses.*	..	..	..	..	Mr. Lowne	Tu W Th 3	4 4	..	..	Dr. Ord, Dr. J. Harley	M Th F, 1.30 to 3.30	..	..	..
AURAL SURGERY	Mr. Allen	F 3	2 2	..	..	Mr. A. Clark	M 1	..	..	..	..	..	..	..	..
PRACTICAL AND MANIPULATIVE SURGERY	Med. Tutor	..	..	..	..	Mr. Hulke, Mr. Lawson, Mr. Morris	*winter*	6 6	..	..	Mr. Croft	Mon Tues *win* Tu Th *sum* 3.30	..	..	..
DENTAL SURGERY	Mr. Hayward	W S 9.30	2 2	..	..	Mr. Tomes, Mr. Turner, *ass.*	Daily 9	5 5	..	..	Mr. Elliott	Tu F 11	..	..	..
DISEASES OF SKIN	Dr. Cheadle	Th 3	..	..	..	Dr. Liveing	Th 4	..	..	..	..	..	..	..	..
PARASITIC DISEASES	..	..	..	..	..	Dr Cobbold	..	..	..	..	..	..	..	..	..
DISEASES OF THROAT	..	..	..	..	..	Dr. J. Murray	Tu 4	..	..	..	..	..	..	..	..
GENERAL PATHOLOGY	*See Win. Ses.*	..	..	..	..	..	..	..	..	..	Dr. Bristowe	Th 4 *win.*	..	..	..
PHYSICS AND NATURAL PHILOSOPHY	Dr C. R. A Wright	..	..	..	..	..	..	..	..	..	Dr. Stone	S 12 *win.*	..	..	..
PRACTICAL PHARMACY	..	..	3 3	6 6	10 10	Mr. Lucas	..	5 5	8 8	..					
Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons	£89 5s.	or in	3 mths one	6 mths sum	12 mths 84 0			6 mths	12 mths						
To the Lectures alone	..	..	..	..	52 10	..	..	..	..	90 0	Fee to Practice and all Lectures: £40 1st year, £40 2nd year, £20 3rd year, and £10 for each succeeding year; or £105 at one payment.				
To the Hospital Practice alone	..	..	..	..	36 15	..	..	..	..	26 5					
Unlimited	£105,	or in	one	sum	99 15	..	..	..	..	..					

LECTURES.	UNIVERSITY COLLEGE AND HOSPITAL.					WESTMINSTER.				
	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	Fees. 1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s. d.	£ s.	£ s			£ s.	£ s.	£ s.
MEDICINE	Dr. J. R. Reynold	Daily ex. M	6 6 0	..	9 9	Dr. Anstie	Tu Th F 3	5 5	..	7 7
SURGERY	Mr. Marshall	Tu W F 4	5 5 0	..	6 6	Mr. Pearse	M 3 Tu 4 *or* W 3	5 5	..	7 7
						Mr. Cowell	Th 4			
DESCRIPTIVE ANATOMY	Mr. Ellis	Daily 12	7 7 0	..	10 10	Mr. Davy	Tu W Th F 9	5 5	..	7 7
DEMONSTRATIONS	Mr. Ellis	Daily				Mr. Davy	Daily 10—1	2 2	..	3 3
	Mr. G. D. Thane					Mr. Cooke				
	Mr. J. A. Pepper					Mr. Ramsay				
PHYSIOLOGY AND GENERAL ANATOMY	Dr. Sharpey	Daily ex. S 10	7 7 0	..	9 9	Dr. Maclure	M W F 4	5 5	..	7 7
HISTOLOGY AND PRACTICAL PHYSIOLOGY	Dr. B. Sanderson	Daily (ex. S) 9 S 11 *win.*	7 7 0	..	9 9	Dr. Allchin	W Th 11-1	4 4	..	..
CHEMISTRY	Dr. Williamson	Daily ex. S 11	7 7 0	..	9 9	Dr. Dupré	Tu Th 3 F 3.30	5 5	..	7 7
HOSPITAL PRACTICE—										
Physicians	Sir W. Jenner, Bart., M.D.		..	..	..	Dr. Basham	M Th 1.30	8 8	12 12	21 0
	Dr. Reynolds	Daily 1 & 2				Dr. Fincham	W S 1 30	6	1	
	Dr. W. Fox					Dr. Anstie	Tu F 1.30	months	year	
	Dr. S. Ringer					Dr. F. Bird, *obs.*	Tu F 3			
	Dr. H. C. Bastian									
	Dr. Graily Hewitt, *obs.*	Three times a week								
	Dr. T. Fox, Skin Infirmary	S 9								
Assistant-Physicians	Dr. F. T. Roberts	..	..	..	..	Dr. Gibb	Tu F 1	..	..	..
	Dr. W. R. Gowers					Dr. Sturges	W S 1			
	Dr. J. Williams, *asst. obs.*					Dr. Allchin	M Th 1			
						Dr. Potter, *asst. obs.*	Tu F 1			
Surgeons	Mr. Erichsen	Daily 1 & 2	..	..	..	Mr. Holthouse	Tu F 1.30	8 8	12 12	21 0
	Mr. Marshall					Mr. Pearse	W S 1.30	6	1	
	Sir H. Thompson					Mr. Cowell	M Th 1	months	year	
	Mr. Berkeley Hill				27 0					
	Mr. C. Heath									
Assistant-Surgeons	Mr. Marcus Beck					Mr. Davy	M Th 1			
	Mr. W. Jones, *oph.*	M W F 1				Mr. Cooke	Tu F 1			
	Mr. J. R. Streatfield, *oph.*					Mr. Bond	W S 1			
CLINICAL MEDICINE	Sir W. Jenner	M Tu Th F 1—3	..	..	..	By the Physicians	W Th F	..	..	..
	Dr. Reynolds					Dr. Basham, *special lect.*				
	Dr. W. Fox									
	Dr. Roberts, *assist. prof.*									
	Dr. T. Fox, *skin dis.*	Once a fortnight								
CLINICAL SURGERY	Mr. Erichsen	M W S 1—3	..	..	..	By the Surgeons	W Th F	..	..	..
	Mr. Marshall					Mr. Holthouse, *special lect.*				
	Sir H. Thompson									
	Mr. W. Jones, *oph.*									
	Mr. Streatfield, *oph.*									
CLINICAL MIDWIFERY	Dr. G. Hewitt	Fortnightly	..	..	..	Dr. Bird	1st & 3rd F	..	..	..
SUMMER SESSION.										
MATERIA MEDICA	Dr. Ringer	Daily exc. S 10	4 4 0	..	6 6	Dr. Sturges	M Th F 3	3 3	..	4 4
BOTANY	Mr. Oliver	Daily exc. S S	3 3 0	..	4 4	Mr. E. M. Holmes	M W F 9.30	3 3	..	4 4
FORENSIC MEDICINE	Dr. Maudsley	Tu W Th F 10	3 3 0	..	4 4	Dr. Potter	Tu W F 3	3 3	..	4 4
						Dr. Dupré				
MORBID ANATOMY & PATHOLOGY	Dr C. Bastian	M Th 9 F 4	4 4 0	..	6 6	Dr. Allchin	Tu W Th 10	3 3	..	..
MIDWIFERY	Dr. Graily Hewitt	Tu W F S	4 4 0	..	6 6	Dr. Bird	Tu Th F 4	4 4	..	5 5
PRACTICAL CHEMISTRY	Dr. Williamson	Tu W Th F 11	4 4 0	..	7 7	Dr. Dupré	M W F 10-12	3 3	..	..
COMPARATIVE ANATOMY	Dr. Grant, *with Zoology*	Daily except S 3, from Oct. to June	8 8 0	..	9 9	Mr. Carter Blake	W S 11	2 2	..	3 3
PRACTICAL AND OPERATIVE SURGERY	Mr. B. Hill	M Th 4 *win.*	4 4 0	..	..	Mr. Davy, *minor surgery*	F 12	..	..	..
	Mr. M. Beck									
	Mr. C. Heath, *oper.*	Daily in April	4 4 0							
DENTAL SURGERY	Mr. Ibbetson	M Th 4 in Jan	2 2 0	..	..	Mr. Walker	W 9.30 *win.*	2 2	..	..
HYGIENE	Mr. Corfield	Tu Th 4	1 1 0	..	3 3	Dr. Potter, *with For.*	*Med.* ..	..	..	..
NATURAL PHILOSOPHY	Prof. Foster	M W F 4 *win.*	6 6 0	..	..	Mr. Brooke	Tu 3 *sum.*	1 1	..	..
OPHTHALMIC SURGERY	Mr. W. Jones	Tu Th	1 1 0	..	..	Mr. Cowell	M 2.45	1 1	..	..
PALÆO-ZOOLOGY	Dr. Grant	Daily except S 3 *sum.*	1 1 0	..	..	..	..	..	..	..
MENTAL DISEASES	Dr. Sankey	M Tu W 4	2 2 0	..	..	Dr. Sutherland	..	1 1	..	..
SKIN DISEASES	..	..	..	..	..	Mr. Bond	W 4	..	..	..
PRACTICAL PHARMACY	Mr. Gerard	..	3 3 0	..	5 5	Mr. Beer.	..	3 3	..	5 5
			3 months		6 months					
Fees for the Lectures and Hospital Practice for the Licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S.	1st year, £43 17s.;	2nd, £39 8s.;	3rd, £18 11s.		106 16	..	In 4 payments, £82 9s.; in 2, £80			
For the Hospital Practice alone	..	..	..	..	27 0	..	..	..	..	29 8
Perpetual to Lectures and Hospital Practice	..	..	..	..	..	..	..	In one sum		78 0

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, BLOOMSBURY-SQUARE, LONDON.—SCHOOL OF PHARMACY.—SESSION 1873-74.—The session will commence on Wednesday, October 1, and extend to the end of July, 1874. Lectures on Chemistry and Pharmacy will be delivered by Professor Redwood on Monday, Tuesday, and Wednesday mornings at nine o'clock, commencing on Monday, October 6. Also lectures on Botany and Materia Medica by Professor Bentley, on Friday and Saturday mornings at nine o'clock, commencing Friday, October 3. A course on Systematic Botany will be delivered at the Royal Botanic Gardens, Regent's-park, during the summer months. Laboratory: The suite of Laboratories for Practical Instruction in General and Pharmaceutical Chemistry will be opened on Wednesday, October 1, under the direction of Professor Attfield. The Laboratories are open from ten a.m. till five p.m. Students can enter at any period during the session.

THE ROYAL COLLEGE OF SCIENCE, established at the late Museum of Irish Industry, in St. Stephen's Green, is a branch of the Science and Art Department at South Kensington. A complete staff of Professors is connected with the institution, and courses of lectures are delivered on all scientific departments, to which the admission charge is moderate. The diploma of Associate is conferred at the end of a three years' course.

QUEEN'S COLLEGE, LIVERPOOL.—The session will commence on Monday, Oct. 6. The College is in connexion with the University of London, and its classes comprise the subjects required for the Matriculation, B.A., B.Sc., and Preliminary Scientific M.B. Examinations of that University. Instruction in Practical Chemistry is given in the College Laboratory by Professor Hamilton. Provincial examinations of the London University are held at Queen's College. Fees: Separate classes, £2 2s. to £3 3s. per session; Practical Chemistry, £5 5s.

ADDITIONAL INFORMATION RESPECTING THE METROPOLITAN SCHOOLS, ETC.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

This Hospital comprises a service of 710 beds, of which 676 are in the Hospital in Smithfield, and 34 are for convalescent patients at Lauderdale House, Highgate.

Whole fee for attendance on lectures and hospital practice 105 guineas, payable by instalments, or a single payment of 100 guineas. Payment in either of these ways cutitles to a perpetual ticket.

Four House-Physicians and four House-Surgeons are appointed annually, on the payment of a nominal fee, and are provided with rooms by the Hospital authorities. The Senior Midwifery Assistant is appointed for twelve months, and is eligible for re-election for a second twelvemonth. The Junior Midwifery Assistant is appointed for six months, and is provided with rooms by the Hospital authorities. The Ophthalmic House-Surgeon, also provided with rooms, is appointed for six months, and is eligible for re-election for a second term of six months. Diligent students are selected to hold these appointments, for which no fee is required.

The Clinical Clerks to the Physicians and to the Physician-Accoucheur, the Clerks to the Assistant-Physicians and Assistant-Surgeons, and the Dressers in the special departments, are chosen from the diligent students without payment of any extra fee. Sixteen Ward Dresserships are annually given to the students of the second year who pass the best examinations in the subjects of study of the first and second years, or who may be otherwise specially recommended. Other Ward Dresserships may be obtained by payment of the usual fees.

Courses of Practical Surgery and of Practical Physiology have been instituted in accordance with recent regulations of the Royal College of Surgeons.

Special Departments:—Diseases of the Skin (Dr. Duckworth, Friday, at 1.30), Diseases of the Eye (Mr. Power and Mr. Vernon, Tuesday, Thursday, and Saturday, at 1.30), Diseases of the Ear (Mr. Langton, Friday, at 2.30), Orthopædic Surgery (Mr. Willett, Friday, at 12.30), Deutal Surgery (Mr. Coleman, Friday, at 9 a.m.).

The following scholarships and prizes are awarded:—Open Scholarship in Science, founded 1873: subjects of examination—Physics, Chemistry, Botany, and Zoology. This Scholarship, of the value of £100, tenable for one year, will be competed for on September 25 and following days. Preliminary Scientific Exhibition, founded 1873: subjects of examination—Physics, Chemistry, Botany, and Zoology. This Exhibition, of the value of £50, is awarded in October. Lawrence Scholarship and Gold Medal, of the value of forty guineas, founded 1873, by the family of the late Sir W. Lawrence. Brackenbury Scholarship in Medicine, and Brackenbury Scholarship in Surgery, founded 1873, by the will of the late Miss Hannah Brackenbury, who left £2000 for this purpose. Senior Scholarship of the value of £50—Anatomy, Physiology, and Chemistry. Junior Scholarships of the value of £50, £30, and £20 are awarded after an examination in the subjects of study of the first year, at the end of the summer and winter sessions. The Jeaffreson Exhibition, of the value of £20, and tenable for two years, is awarded at the commencement of each winter session to the student who passes the best examination in the subjects of preliminary education. The Wix Prize is awarded for the best essay on the following subject—"The Healing Art, so far from tending to Materialism, confirms, by its Induction of Accumulated Evidence of Design, Man's Instincts of Natural Religion; and thus, on St. Paul's showing, prepares his mind for the reception of Revealed Religion." Hichens Prize: subject of examination—Bishop Butler's Analogy. Bentley Prize, for the best report of surgical cases occurring in the wards of the Hospital during the previous year. It is expected that the reports will comprise the histories, progress, treatment, and results of not less than twelve cases, with observations thereupon. Foster Prize: subject of examination—Practical Anatomy; senior. Treasurer's Prize: subject of examination—Practical Anatomy; junior. The Kirkes Gold Medal: subject of examination—Clinical Medicine.

An examination of all students of the first year is held at the close of the first winter and first summer sessions.

A College for resident students exists in connexion with the Hospital. Resident Warden, Mr. Morrant Baker, from whom students will obtain information respecting rooms in the College, or will be advised regarding residence out of the Hospital.

All communications to be addressed to the Warden of the College, St. Bartholomew's Hospital.

CHARING-CROSS HOSPITAL.

Gentleman are received—1st. As matriculated students, or those who enter for their entire medical education at the Charing-cross Hospital Medical College. 2ndly. As occasional students, or those who enter to one or more particular classes. Matriculated students have the privilege of filling the offices of Registrar, Pathological Assistant, Assistant-Demonstrator, Clinical Clerks, Dressers, Dentist's Assistant, Resident Medical Officer, Resident Surgical Officer, and Physician-Accoucheur's Assistant, and they alone are eligible to become candidates for the scholarships, medals, and various general class prizes.

The fee for the courses of lectures and hospital practice required by the University of London, the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries, to non-matriculated students, is £80 17s.; for the hospital practice alone, £31 10s. The fee to matriculated students for the full period of the lecturcs and hospital practice required by the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries, is £76 5s.; for the hospital practice alone, £31 10s. Composition fee for Dental Surgery, £42. The fee for matriculation is £2 2s., to be paid on entering. Payment of fees may be made in five instalments.

The offices of Medical and Surgical Registrar to the Hospital, and Pathological Registrar to the School, tenable for two or three years, for the efficient performance of the duties appertaining to which the Council award an annual stipend, is open to all matriculated students of the Hospital who have obtained their qualifications, as are also the offices of House-Physician, House-Surgeon, and Resident Physician-Accoucheur's Assistant.

Scholarships, Medals, and Prizes. — Scholarships: Two entrance scholarships of the value of £30 and £20 respectively, tenable for one year, will be awarded annually in October after a competitive examination in the following subjects:—Compulsory: English, Latin, Mathematics, French, or German. Optional (only one of which may be selected): Chemistry, Mechanics, German, or French. The Llewellyn Scholarship of £25 is open to all matriculated students who have just completed their second academical year. The Golding Scholarship of £15 a year is open to all matriculated students who have just completed their first academical year. The following medals are awarded anuually:—The gold medal for general proficiency; the governors' clinical silver medal; silver class medals, on all the subjects of the lectures; bronze class medals, on all the subjects of the lectures.

Free Scholarships.—Candidates for free scholarships are required to be sons of professional men of reduced circumstances and position, or of gentlemen in a corresponding station of society, and are to have had a classical education fitting them for the medical profession. They must have already commenced their medical studies, and, from unforeseen circumstances, be unable to complete their professional education without such assistance. They are to send in their applications and testimonials before September 1.

In addition to the ordinary classes, special classes have been established for practical instruction in Morbid Histology, by Dr. Bruce; Auscultation and Physical Diagnosis, by Dr. Green; Instruction and Supervision in Case-taking, by Dr. Powell; and Electro-Therapeutics, by Dr. Poore. The class of Practical Surgery is divided into three sections—viz., Operations, by Mr. Bellamy; Bandaging, by Mr. Fairlie Clarke; and Surgical Pathology, by Mr. Bloxam. By special arrangement the students of Charing-cross Hospital are admitted to the practice of the Royal Westminster Ophthalmic Hospital, which almost immediately adjoins it.

ST. GEORGE'S HOSPITAL.

Perpetual pupils pay at the time of entry a compounding fee of £105. They are admitted to the practice of the Physicians and Surgeons, to all the lectures (except Practical Chemistry), to compete for all prizes and exhibitions, to hold the appointments of House-Physician, House-Surgeon, Assistant House-Physiciau, Assistant House-Surgeon, Ophthalmic and Orthopædic Assistants, and Clinical Clerk and Dresser for two periods of three months each.

Gentlemen are admitted to the hospital practice and lectures required for the licence of the College of Physicians, for the diploma of Member of the College of Surgeons, and for the licence of the Society of Apothecaries (with the exception of Practical Chemistry), on payment of the following fees—viz., £42 for the first year of study, £42 for the second year of study, and £10 10s. for each succeeding year. By payment of these fees pupils are entitled to hold the office of Clinical Clerk and Dresser, and to become candidates for the offices of Medical and Surgical Registrars, and Demonstrator of Anatomy, to each of which offices a salary of £50 is attached. An Obstetric Assistant, with a salary of £100 and board and residence is annually elected from amongst those students who have obtained a legal qualification to practise. Pupils may also enter to the hospital practice and lectures separately.

The appointments of House-Physician and House-Surgeon are made every six months, are four in number, and are tenable for one year. These appointments are awarded after examination, and are given without fee or payment, each officer being lodged and boarded at the expense of the Governors of the Hospital. The whole of the patients are under the charge of these officers in the absence of the Physicians and Surgeons.

Exhibitions and Prizes.—"The William Brown Exhibitions," of £100 per annum, tenable for two years, and of £40 per annum, tenable for three years, are competed for by perpetual pupils who have recently obtained their diploma, or have nearly completed their studies. The examinations embrace all departments of practical knowledge. The Brackenbury prizes of £40 each in Medicine and Surgery are awarded annually after a competitive examination. The Treasurer's Clinical Prize of £10 10s., the gift of A. Shaw Stewart, Esq. Sir Charles Clarke's Prize for good conduct: The interest of £200 Consols, to be awarded annually to the student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A silver medal to be awarded annually for the best clinical report of medical and surgical cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the perpetual pupil of the Hospital who shall have delivered to the Surgeons the best report of not more than twenty surgical cases which have occurred in the Hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine will be awarded to the perpetual pupil of the Hospital who shall produce the best report of not more than twenty medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in practical anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

For further particulars apply to Dr. Wadham, Dean of the School.

GUY'S HOSPITAL.

This Hospital contains nearly 720 beds.

Voluntary Examinations are held at four periods of the students' course, as follows:—1st. At entrance, commencing on October 6, in Elementary Classics, Ancient and Modern History, and Mathematics. The candidate who most distinguished himself receives £25; the second candidate, £20; the third, £15. 2nd. At the end of the first sessional year, in all the subjects of that year—one sum of £30, another of £25, and a third of £10 10s. (presented by one of the Governors). 3rd. At the end of the second sessional year, in the subjects which form the course of study up to that time—£35 and £30. 4th. At the end of the third sessional year, in all the subjects of the curriculum—£40 and £35. Honorary certificates are also given to candidates who pass creditable examinations.

Special Examinations.—Two gold medals are given annually by the Treasurer to students who have completed their third, and not exceeded their fourth, year—the one for Clinical Medicine, the other for Clinical Surgery.

The fees for hospital practice and lectures are as follows:—For the first year, £40; for the second year, £40; and £20 for the third; and £10 for succeeding years of attendance. £105 entitles a student to a perpetual ticket. Materials used in practical courses are charged extra.

Students are selected according to merit for the following appointments:—House-Physicians, House-Surgeons, and Obstetric Residents (Senior and Junior), Surgeon's Dressers, Clinical Assistants, Dressers in the Eye Wards, Post-mortem Clerks, Obstetric Out-patient Clerks, Assistant-Physician's Clerks, Assistant-Surgeon's Dressers, Dressers in the Surgery, Dental Surgeon's Dressers, Aural Surgeon's Dressers, Medical Clinical Clerks, Surgical Clinical Clerks, Extern Obstetric Attendants, Assistant-Surgeon's Clerks, Clerks in the Electrifying-room.

The Registrars and the Demonstrators in Anatomy and Chemistry assist the pupils in their studies.

For further information apply to Mr. Stocker, Apothecary to the Hospital.

KING'S COLLEGE.

The fees, amounting to £100, may be paid either in one sum on matriculation or in three amounts at the commencement of each winter session. Students are, however, recommended to add £2 2s. for a second course of Chemistry, as well as the fee for attendance on the medical tutor's class for one year—viz., £3 3s. All resident students are required to attend the tutor (Dr. E. B. Baxter) during their first year.

Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students who are pupils of the Hospital.

Scholarships.—Warneford Scholarships: The sum of £200 is set apart annually for scholarships in the Medical Department—viz., "For the encouragement of the previous education of medical students," two scholarships of £25 per annum for three years; "For the encouragement of resident medical students," one scholarship of £25 per annum for two years. College Scholarships: The following are given every year to matriculated students of this department:—1. One of £40 for two years, open to students of the third and fourth year: 2. One of £30 for one year, open to students of the second year; 3. One of £20 for one year, open to students of the first year. Daniell Scholarship; £20, tenable for two years, is open to every student of the College who has worked in the laboratory for at least six months. Sambrooke Registrarships. Two of £50 every year.

Prizes.—Leathes Prizes: Bible and prayer-book to two matriculated medical students. Warneford Prizes: £40 is expended in the purchase of medals and books as prizes to two matriculated medical students. Class Prizes are awarded annually for proficiency in each subject of study; these consist of books of the value of £3. Two Medical Clinical Prizes, one of £3 for the winter session and the other of £2 for the summer session; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd. It consists of a bronze medal and books to the value of £4 4s. Tanner Prize: £10, for proficiency in the study of Obstetric Medicine.

Residence of Students.—A limited number may reside within the College.

For further information apply to Professor Bentley, Dean of the Medical Department.

ST. MARY'S HOSPITAL.

The Hospital contains 170 beds—68 medical, and 102 surgical. There are special departments for the Diseases of Women and Children, and for Diseases of the Eye, the Ear, the Skin, and the Throat.

A Medical Tutor assists the students daily in the practical portion of their studies in the wards, and in preparing for the final examinations. Special instruction is given to students preparing for the examinations of the University of London.

Appointments in the Hospital and School.—All these appointments are open to the pupils without additional fee, and are held in succession, so as to secure a complete system of clinical training. Five of these appointments exceed in value an equal number of scholarships of £50 each. All general students are required to perform the duties of Clinical Clerks and Dressers for a period of six months during the last two years of their curriculum. Students of the third year are appointed to assist the Physicians and Surgeons in charge of the out-patients. A Resident Registrarship within the Hospital has been created, with a salary of £100 a year and dispensary fees, tenable for one year *and open to re-election*, preference being given to past House-Surgeons and perpetual pupils. The Demonstrator of Anatomy is appointed annually, with a salary of £50 a year.

The Medical Tutor is also appointed annually, at a salary of £100 a year. The holders of both these appointments are eligible for re-election.

Scholarships, Prizes, etc.—Three scholarships in Natural Science, of the annual value of £40, tenable for three years, and an exhibition in Natural Science of £20, for one year. One of the scholarships and the exhibition are awarded by open competitive examination immediately before the commencement of the winter session. A scholarship in Anatomy, of the annual value of £20 (the holder of which is styled Assistant-Demonstrator, and assists in the teaching of Practical Anatomy), is offered for competition amongst those students who have completed their second winter session; and a scholarship in Pathology, of the value of £20 (the holder of which is styled Assistant-Curator), for those students who have completed their third winter session. Examinations for prizes are held at the termination of each session in the various classes for students of the first, second, and third year. Two Prosectors are appointed annually, who each receive a certificate and £5 for their services in the dissecting-room.

The entrance fee for general students may be paid in instalments by arrangement with the Dean of the School. Students who have kept the two years course at the University of Cambridge are admitted as perpetual pupils on payment of 55 guineas, and those who have kept a portion of the course elsewhere at a proportionate reduction. A fee of £1 1s. is required to be paid to the library and reading-room. Instruction in vaccination can be obtained; fee £1 1s.

Further information may be obtained from Dr. Cheadle, Dean of the School; or from Mr. Knott, the Registrar, at the Hospital.

THE LONDON HOSPITAL.

During the winter session lectures on Anatomy, Physiology, Chemistry, Pathology and Morbid Anatomy, Medicine, Surgery, and Dental Surgery will be given. Clinical lectures and clinical instruction will be regularly and systematically delivered on the cases occurring both in the clinical and in the ordinary medical and surgical wards. There will be clinical lectures on the cases in the wards for diseases of women, and clinical instruction in the obstetric out-patient rooms, as well as in the special departments for diseases of the eye, ear, and skin.

During the summer session, lectures on Midwifery and Diseases of Women, Materia Medica, Botany, Comparative Anatomy, Practical Histology and the Use of the Microscope, Pathology and Morbid Anatomy, Practical Chemistry, Forensic Medicine, Syphilis, Diseases of the Eye and Use of the Ophthalmoscope, Diseases of the Skin, Diseases of the Throat and Use of the Laryngoscope, will be given.

Clinical lectures and clinical instruction will be delivered, as in the winter session, in connexion with every branch of practice.

Table of Fees.—General fee for perpetual attendance on all the lectures, and for attendance on medical and surgical practice, qualifying for examination at most of the medical and surgical boards, £90; composition fee for gentlemen entering at or before the beginning of their second winter session, their first year having been spent elsewhere, £70; perpetual fee for lectures and hospital practice, £100; perpetual fee for lectures alone, £50; perpetual fee for hospital practice alone, £50. Extra Fees: Practical chemistry (for apparatus, etc.), £2 2s.; subscription to the library (compulsory), £1 1s. *Note.*—The general fee and the perpetual fee are payable in two instalments of £45 and £50 each respectively, at the commencement of each of the first two years of attendance. If preferred, the *perpetual* fee can be paid in three instalments—£45 at the commencement of each of the first two years of attendance, and £10 at the commencement of the third year. The composition fee is payable in two instalments of £35.

Scholarships and Prizes.—Seven scholarships will be offered for competition during the ensuing winter session. The two Buxton Scholarships will be awarded in October to the students who distinguish themselves most in the subjects appointed by the General Council of Medical Education and Registration as the subjects of the preliminary examinations. 1. A scholarship, value £30, to the student placed first in the examination. 2. A scholarship, value £20, to the student placed second in the examination. 3. A scholarship, value £20, will be awarded to the first year student who shall pass in April, 1874, the best examination in Human Anatomy. 4. A scholarship, value £25, will be awarded to the first year or second year student who shall pass at the end of the winter session the best examination in Anatomy, Physiology, and Chemistry. 5. A hospital scholarship, value £20, for proficiency and zeal in Clinical Medicine. 6. A hospital scholarship, value £20, for proficiency and zeal in Clinical Surgery. 7. A hospital scholarship, value £20, for proficiency and zeal in Obstetrics. The Duckworth-Nelson Prize, value £10, will be awarded by competition at the end of the winter session, 1874, and will be open to all students who have not completed their education. The subjects of examination will be Practical Medicine and Surgery. Money prizes, to the value of £60 per annum, are awarded by the House Committee to the most meritorious of the dressers in the out-patient rooms. The special conditions may be learnt on inquiry. The offices of Resident Medical Officer, Junior Resident Medical Officer, four Medical Assistants, Clinical Clerks, Resident Accoucheur, Maternity Pupils, four House-Surgeons, Surgical Dressing Pupils, two Medical Clinical Assistants, two Surgical Clinical Assistants, Medical Registrar, Surgical Registrar, Assistant-Dentist, Post-mortem Clerks, and two Prosectors of Anatomy, are open to the students.

Communications addressed to the Dean or Vice-Dean of the School, at the London Hospital Medical College, Turner-street, Mile-end, London, E., will receive immediate attention.

MIDDLESEX HOSPITAL.

This Hospital contains upwards of 300 beds, of which 185 are for surgical, and 120 for medical cases. There is a special department for cancer cases, affording accommodation for thirty-three in-patients, whose period of residence in the Hospital is unlimited. Wards are also appropriated for the reception of cases of uterine disease and of syphilis, and beds are set apart for patients from diseases of the eye. There are special out-patient departments for diseases of the skin, the throat, the eye, and ear.

Special attention is bestowed on the clinical instruction of the students both in the wards and out-patient rooms. Classes, open to all the students, are held for practical instruction in the microscopic examination of healthy and diseased tissues, and also in the application of bandages and other surgical apparatus. Students are allowed to take out to read at their own homes books from the library of the school. Two entrance scholarships of the annual value of £25 and £20, tenable for two years, are offered for competition at the commencement of the winter session. Two Broderip Scholarships of the annual value of £30 and £20, tenable for two years, and two clinical prizes of six and four guineas, are annually awarded to those students who pass the most satisfactory examination at the bedside and in the post-mortem room. The Governors' Prize of twenty guineas is awarded annually to the student who shall have most distinguished himself during his three years' curriculum. Class prizes are also given. The Clinical Clerkships and Dresserships are open to students free of charge, while the Clinical Clerk and Dresser of the Physician and Surgeon of the week dine at the board-room table free of expense. Six resident clinical appointments are annually awarded, after competitive examination, to students who have completed their education, and complied with the regulations of the school. The officers thus appointed reside and board in the Hospital free of expense.

The college tutor assists all general students free of charge, especially those who are preparing for examination, and his daily instruction is arranged with a view to avoid the necessity of students obtaining any private teaching apart from that of the medical school.

The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries is £90, which may be paid by instalments.

Dental students who intend to become Licentiates in Dental Surgery of the Royal College of Surgeons are admitted to attend the requisite courses of lectures and hospital practice on payment of a fee of forty guineas, either in one payment, or by instalments of twenty-five guineas on entrance, and fifteen guineas at the beginning of the second winter session.

ST. THOMAS'S HOSPITAL.

The admission fee to hospital practice and all the lectures is £40 for the first year, and a similar sum for the second, £20 for the third, and £10 for each succeeding year; or £105 at one payment for unlimited attendance. Special entries may be made to any course of lectures, or to the hospital practice.

There are special departments for diseases of the eye, diseases of women and children, vaccination, diseases of the skin, diseases of the teeth, and mental diseases.

Prizes and Appointments.—A scholarship has been founded by Sir W. Tite, M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, on proof of continued residence and good conduct. Preference, in case of equality between students, to be given to the son of a medical man, and more particularly of one who has been educated at St. Thomas's Hospital, or is in practice at Bath. This Scholarship was awarded at the end of last session. To the three most distinguished pupils for general proficiency, the following prizes are awarded:—First year's students—winter, £20, £15, £10; summer, £15, £10, £5. Second year—winter, £20, £15, £10; summer, £15, £10, £5. Clinical and obstetrical clerks and dressers are selected according to merit from among second year's students. The dressers and obstetric clerks are provided with rooms and commons during their period of attendance in the Hospital free of expense. Third year's students—winter, £20, £15, £10. The Cheselden Medal, founded by George Vaughan, Esq., is awarded in respect of a special examination in Surgery and Surgical Anatomy. The Solly Medal, with a prize of £10 10s., will be awarded at the end of the session to third, fourth, fifth, or sixth year's students, for the best report of surgical cases. The Treasurer's Gold Medal is given annually for general proficiency and good conduct. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the third or fourth year's students for a physiological essay, to be illustrated by preparations.

The House-Physicians, the House-Surgeons, and Resident Accoucheur are chosen from gentlemen who have obtained their professional diplomas. All are provided with rooms and commons. The two offices of Medical Registrar and Surgical Registrar are from time to time filled from among gentlemen who have completed their studies in the school. Each Registrar, on completing his annual report to the satisfaction of the Physicians and Surgeons, receives a gratuity of £40.

For further information apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, London, S.E.

UNIVERSITY COLLEGE, LONDON.

The fees for lectures and hospital practice required by the Colleges of Physicians and Surgeons and the Society of Apothecaries during the student's entire course amount to £106 16s., which may be paid as follows:—First winter, £37 6s.; first summer, £11 11s. Second winter, £32 1s.; second summer, £7 7s. Third winter, £11 4s.; third summer, £7 7s.

Entrance Exhibitions.—Three Entrance Exhibitions, of the respective values of £32, £20, and £10 per annum, tenable for two years, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter's attendance in a medical school. The subjects of the examinations are—Classics, Elementary Mathematics, Natural Philosophy, and either French or German at the option of the candidate. The next examination will take place at the College on September 25 and 26. Notice of intention to compete, with a statement of the modern language in which the candidate wishes to be examined, must be left addressed to the Secretary, not later than 2 p.m. on Saturday, September 17, at the office of the College, where the Regulations may be obtained.

Scholarships and Exhibitions.—The Atkinson Morley Surgical Scholarship, of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the theory and practice of Surgery. The Sharpey Physiological Scholarship, of about £95 per annum, tenable for three years, for proficiency in Biological Science. Filliter Exhibition: A prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy.

Medals and Prizes.—Dr. Fellowes' Clinical Medals, one gold and one silver, awarded at the end of the winter and of the summer session to pupils who have most distinguished themselves by reports and observations on the medical cases in the Hospital. The Liston Gold Medal is awarded at the end of the summer session to the pupil who has most distinguished himself by reports and observations on the surgical cases in the Hospital. The Alexander Bruce Gold Medal will be awarded for proficiency in Pathology and Surgery. The Cluff Memorial Prize is awarded every other year for proficiency in Anatomy, Physiology, and Chemistry.

Class Medals and Prizes.—Besides the above, gold and silver medals or other prizes are awarded in each class.

The appointment of Assistant-Curator to the Museum of Anatomy and Pathology, of Demonstrators of Anatomy, of Resident Medical Officer to the Hospital, and of Surgical Registrar—all of which have emoluments attached to them—are almost invariably conferred upon students of the College.

Offices in the Hospital tenable by Students.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, Ward Clerks, and Ophthalmic Surgeons' Assistants are selected from the pupils, without additional fees.

Further information and detailed prospectuses may be obtained at the office of University College, Gower-street, W.C.

WESTMINSTER HOSPITAL.

The entry fee to lectures and hospital practice required by the College of Physicians and Surgeons and the Society of Apothecaries may be paid in one sum of £78, which is perpetual, in two payments of £40 each, at the commencement of the first two years, or in four payments of 27, 14, 25, and 13 guineas respectively, at the commencement of the first four sessions.

In addition to the practice of the Hospital, which contains 191 beds, the general students of this school are admitted to the practice of the Royal Westminster Ophthalmic Hospital, and to that of the National Hospital for Epilepsy and Paralysis.

Prize Appointments.—A House-Physician, House-Surgeon, and Resident Obstetric Assistant are appointed annually, by examination, from amongst the senior students, without the payment of any fee. The Medical and Surgical Registrars, each of whom receives a salary of £40, are also appointed annually. The Assistant House-Surgeon and the Clinical Clerks and Dressers are open to the diligent students, as are also the posts of Physician's Assistant, Surgeon's Assistant, and Ophthalmic Assistant.

Prizes.—In addition to the appointments above enumerated, there are two entrance scholarships of £20 and £10, each tenable for two years, an exhibition in Anatomy and Physiology for first year's men, a scholarship of twenty guineas in Anatomy and Physiology for second year's men, a prize of the value of £20 for general proficiency, and two clinical prizes of the value of five guineas each. Certificates of honour are also awarded to the most meritorious students.

Full particulars as to courses of lectures and mode of instruction will be found in the annual prospectus of this School, and any further information may be obtained by personal application to Mr. Cowell, the Dean of the School, or the Secretary of the Hospital.

ENGLISH PROVINCIAL SCHOOLS AND HOSPITALS.

THE QUEEN'S COLLEGE, BIRMINGHAM.

Professors in the Medical Faculty.—Winter Courses: Medicine, Dr. Russell, Dr. Balthazar Foster. Surgery, Mr. Pemberton, Mr. Furneaux Jordan. Anatomy, Mr. Charles J. Bracey, M.B., Mr. W. Thomas, M.B. Physiology, Dr. Norris, Mr. T. H. Bartleet, M.B. Chemistry, Dr. Alfred Hill. Demonstrators of Anatomy, Dr. Robert Jolly, Mr. H. Campbell Pope. Summer Courses: Midwifery, Mr. John Clay, Dr. John Bassett. Diseases of Women and Children, Mr. Samuel Berry, Dr. R. C. R. Jordan. Forensic Medicine and Toxicology, Mr. Thomas Swain, Dr. Alfred Hill. Practical Chemistry, Mr. Anderson. Botany, Dr. William Hinds. Materia Medica and Therapeutics, Mr. J. St. S. Wilders, Dr. Edward Mackey. Ophthalmic Surgery, Mr. J. Vose Solomon. Dental Surgery, Mr. Thomas Howkins. Comparative Anatomy, Dr. Thomas Savage. Medical Tutor and Registrar, H. Campell Pope, M.R.C.S.

Resident Students.—Students may reside within the College, where they will be provided with rooms and board, and will be under the supervision of the Warden, Sub-Warden, and Resident Tutors. Resident students are expected to attend the College Chapel, unless specially exempted by the Warden.

Resident Tutors.—The Professor of Classics, the Professor of Mathematics, and the Medical Tutor.

Hospital Practice.—At the General and Queen's Hospitals.

Scholarships and Prizes.—The Sands Cox Prize.—A prize of

the value of £20 is given annually in the Medical department. The Warden's Prize, of the value of £5 5s., offered by the Rev. Canon Espin to the most proficient student of the first year. Class Prizes.—Medals and certificates of honour are awarded annually in each class after examination.

The composition fee for all the lectures required by the Examining Boards is fifty guineas, payable by two equal instalments. Fees for rooms and board of resident students £50 per annum.

THE GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM.

These Hospitals are now amalgamated under the direction of a Clinical Board. Students are required to attend both Hospitals.

The General Hospital, Birmingham.—Physicians: Dr. Bell Fletcher, Dr. Russell, Dr. Wade, Dr. Foster. Surgeons: Mr. Alfred Baker, Mr. Oliver Pemberton, Mr. T. H. Bartleet, Mr. W. P. Goodall, Mr. Robert Jolly. Resident-Physician and Medical Tutor: Mr. Edwin Rickards, M.A., B.A. Oxon., F.R.C.S. Resident-Surgeon and Surgical Tutor: Mr. Bennett May. Registrar and Pathologist: (Vacant.)

The Queen's Hospital, Birmingham.—Physicians: Dr. Fleming, Dr. Johnston, Dr. Heslop, Dr. Sawyer. Surgeons: Mr. West, Mr. Gamgee, Mr. Furneaux Jordan, Mr. J. St. S. Wilders. Obstetric Surgeon: Mr. John Clay. Dental Surgeon: Mr. Charles Sims. Resident-Physician and Medical Tutor: Dr. Leeson. Resident-Surgeon and Surgical Tutor: Mr. Gilbert Smith.

The Lying-in Department is under the charge of Mr. John Clay, and the Dental under Mr. C. Sims.

Special instruction is given at the Hospitals in the use of the Microscope, Laryngoscope, and Ophthalmoscope, also in case-taking and the art of prescribing. Practical Pharmacy is taught in the dispensaries of the Hospitals.

Appointments.—At the General Hospital: Resident Medical Assistant, Resident Surgical Assistant, and two Resident Dressers, tenable for six months. At the Queen's Hospital: Resident Medical Assistant, Resident Surgical Assistant, and Resident Obstetric Assistant, tenable for six months.

Clinical Prizes.—The following prizes will be given annually: Senior Medical Prize, for 3rd or 4th year students—1st prize, £6 6s.; 2nd prize, £4 4s. Senior Surgical Prize, for 3rd or 4th year students—1st prize, £6 6s.; 2nd prize, £4 4s. Junior Medical Prize, for 2nd year students—1st prize, £5 5s.; 2nd prize, £3 3s. Junior Surgical Prize, for 2nd year students—1st prize, £5 5s.; 2nd prize, £3 3s. Midwifery Prize, £2 2s.

A special prize, value £4 4s., will be given for regularity of attendance and general good conduct.

Scale of Fees.—Fees for attendance for four years, £31 10s.: this payment may be made in two equal sums. One year's attendance, £15 15s.; six months' attendance, £10 10s.

Notice.—Further particulars may be obtained by application to the Rev. the Warden, at the College.

BRISTOL MEDICAL SCHOOL.

The winter session will commence on Wednesday, October 1, 1873. Medicine, Dr. Martyn and Dr. Fox. Surgery, Mr. Coe and Mr. Tibbits. General Anatomy and Physiology, Mr. Atchley and Dr. Spencer. Descriptive and Surgical Anatomy, Mr. Board and Mr. Dobson. Superintendence and Dissections, Messrs. Chute, Lawrence, and Elliott. Chemistry, Mr. Coomber.

The summer session will commence on May, 1, 1874. Midwifery and Diseases of Women, Dr. J. G. Swayne. Forensic Medicine, Mr. W. P. Keall. Materia Medica and Therapeutics, Dr. G. F. Burder. Botany, Mr. A. Leipner. Practical Chemistry, Mr. Coomber. Pathological Anatomy, Dr. Martyn and Dr. Fox. Comparative Anatomy, Mr. Atchley.

Fee for perpetual attendance on all the above courses, except Comparative Anatomy, £57 15s.

Competitive examinations are held amongst students of the first, second, and third years respectively; and prizes of money, instruments, and books are annually awarded.

Medical and Surgical Hospital Practice and Clinical Lectures are attended at the Royal Infirmary or at the General Hospital.

Further information may be obtained on application to the Honorary Secretary, Dr. G. F. Burder.

BRISTOL ROYAL INFIRMARY.

This Infirmary contains 242 beds. Physicians: Dr. Brittan, Dr. Fairbrother, Dr. Beddoe, Dr. Fox. Surgeons: Mr. Leonard, Mr. Clark, Mr. Tibbits, Mr. Steele, and Mr. Board. House-Surgeon: Dr. Shingleton Smith. Secretary: Wm. Trenerry.

Fees.—For one year, Surgeon's pupil, £12 12s.; Dresser (extra fee), £12 12s. For two years (at one payment), Surgeon's pupil, £21; Dresser (extra fee), £21. For three years (at one payment), Surgeon's pupil, £26 5s.; Dresser (extra fee), £26 5s. Dressers reside in the house in weekly rotation. Physician's pupil, for six months, £8; one year, £15; eighteen months, £20; perpetual, £25. Clinical Clerks are appointed without extra fee. A gold medal and other prizes are awarded annually.

BRISTOL GENERAL HOSPITAL.

The Hospital contains 140 beds. Physicians: Dr. Martyn Dr. Burder, Dr. Fripp. Surgeons: Mr. Coe, Mr. Lansdown, Mr. G. F. Atchley, Mr. N. C. Dobson. Physician-Accoucheur: Dr. Swayne. Two scholarships of £15 each are awarded annually. Also a scholarship, called the Sanders Scholarship, for the study of Medicine and Surgery, being the interest of £500 (to be given annually) bequeathed to the Hospital by the late J. N. Sanders, Esq.

Fees.—Medical or Surgical practice, for six months, £6; one year, £10; perpetual, £20. Extra fee for clinical clerk or dresser, £5 5s. for six months. Library fee, £1 1s. per annum. Dressers reside in the Hospital by rotation and free of expense.

Resident pupils (including board, lodging, and washing), £100 for the first year, £60 for each subsequent year; or for five years, with apprenticeship to the Hospital, £260.

Further information will be afforded by Lieut. H. Fox, Secretary to the Hospital.

CAMBRIDGE UNIVERSITY MEDICAL SCHOOL.

The winter session will commence on October 8. Winter Courses.—Anatomy: Professor Humphry and Dr. Wilson. Anatomy and Physiology: Professor Humphry. Practical Physiology: Dr. Michael Foster. Superintendence of Dissections: Dr. Wilson and Mr. Williams. Medicine: Professor Paget. Chemistry: Professor Liveing. Practical Chemistry: Professor Liveing and Mr. Hicks. Physics: Professor Maxwell. Zoology and Comparative Anatomy: Professor Newton. Demonstrator of Comparative Anatomy: Mr. Bridge. Materia Medica: Professor Fisher. Summer Courses.—Practical Physiology: Dr. Michael Foster. Osteology: Professor Humphry and Dr. Wilson. Practical Histology: Dr. Wilson and Mr. Yule. Chemistry and Practical Chemistry: Professor Liveing and Mr. Hicks. Comparative Anatomy, Dissections: Mr. Bridge. Pathology: Dr. Bradbury. Botany: Professor Babington.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The Hospital contains 120 beds. Physicians: Dr. Paget, Dr. Latham, Dr. Bradbury. Surgeons: Mr. Lestourgeon, Dr. Humphry, Mr. Carver. Clinical lectures are given weekly by the Physicians and Surgeons, and practical instruction is given daily by the Resident Physician and the Resident Surgeon. Fees for attendance upon the practice (Medical and Surgical), £15 15s. for an unlimited period; £10 10s. for one year; £8 8s. for six months.

UNIVERSITY OF DURHAM.—COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

Winter Session, commencing October 1, 1873.—Physiology, Dr. Hume. Anatomy, Dr. Nesham, Dr. Armstrong, and Mr. Russell. Medicine, Dr. Charlton and Dr. Philipson. Surgery, Dr. Heath. Chemistry, Professor Marreco, M.A. Practical Physiology, Dr. Reoch. Mental Diseases, Dr. T. O. Wood.

Summer Session.—Midwifery, Dr. Gibson. Botany, Mr. H. E. Armstrong. Medical Jurisprudence, Dr. B. Bramwell. Materia Medica, Dr. Arnison. Therapeutics, Dr. Humble. Practical Chemistry, Professor Marreco, M.A. Operative Surgery, Dr. Heath. Pathological Anatomy, Dr. Gibb. Pharmacy, Mr. Proctor.

Fees for Lectures.—Composition fee for all the lectures qualifying for the Licence in Medicine and the Mastership

in Surgery of the University of Dublin, the Licence and Membership of the Royal College of Physicians, the Diploma of the College of Surgeons, and the Licence of the Apothecaries' Society, payable on entering to the first winter session, £52 10s. Perpetual ticket for Pharmacy curriculum, £12 12s. Separate courses of lectures, each £4 4s. The composition fee entitles the holder to attend the lectures on Botany, Chemistry, Materia Medica, and Pharmacy, and to use the Museum of Materia Medica in the library of the College.

Hospital Practice.—This can be attended at the Newcastle Infirmary, which contains 230 beds.

Fees for Hospital Practice.—Twelve months, £7 7s.; six months, £5 5s.; three months, £4 4s.; perpetual fee, £17 17s.; or, if paid by instalments, first year £7 7s., second year £6 6s., third year £5 5s. These fees also are payable in advance.

Medical Scholarships in the University of Durham.—Four scholarships, of £25 a year each, tenable each for four years. Dickinson Memorial Scholarship, £15, tenable for one year, for general proficiency. By a recent Act of Convocation, students may now proceed to the degrees of M.D. and C.M. of the University of Durham by keeping the necessary terms in Arts either at Durham or Newcastle. Four Resident Dressers, who also act as Physicians' Clinical Clerks, are chosen every six months from the senior students. Fee for six months' board and residence, £10 10s.

College Medals.—At the end of each session a silver medal and certificates of honour will be awarded in each of the required classes.

Further particulars may be obtained from Dr. Luke Armstrong, Registrar, or of Dr. Arnison, Secretary.

T. O. Wood, L.R.C.P., Medical Superintendent of the Dunston Lodge Lunatic Asylum, will deliver a course of lectures on Psychological Medicine, illustrated by cases in the Asylum, to students in their third and fourth years, during the latter half of the winter season. Due notice will be given of the time.

Medical Tutor and Demonstrator, J. Reoch, M.A., M.B., M.C., who will superintend and assist the students in their studies, and during the summer session will give a complete course of Practical Physiology.

LEEDS SCHOOL OF MEDICINE.

The winter session will commence on Wednesday, October 1, 1873. Anatomy, by Mr. James Seaton, Dr. Robert T. Land, and Mr. John A. Nunneley. Physiology, by Messrs. C. J. Wright and James Walker. Principles and Practice of Medicine, by Dr. John D. Heaton and Dr. T. C. Allbutt. Principles and Practice of Surgery, by Messrs. Clandins G. Wheelhouse, T. Pridgin Teale, and T. R. Jessop. Chemistry by Mr. Thomas Fairley. Materia Medica, by Dr. John E. Eddison. Midwifery, by Mr. W. Hall. Forensic Medicine, by Mr. Thomas Scattergood. Pathology, by Dr. Eddison. Botany, by Mr. Edward Atkinson. Comparative Anatomy, by Mr. C. G. Wheelhouse and Dr. T. C. Allbutt. Demonstrators of Anatomy, Messrs. Robert Parr Oglesby, Edmund Robinson, and J. A. F. McGill. Demonstrations in Operative Surgery, by Messrs. C. G. Wheelhouse, Pridgin Teale, and T. R. Jessop. Demonstrations of Skin Diseases are given at the Infirmary. Ophthalmoscopic Demonstrations, by the Surgeons of the Eye and Ear Department of the Infirmary. Total fees, entitling to all the lectures and hospital practice required by the licensing boards, £88 4s. These fees may be paid at once, or in two instalments at the commencement of the first and second years. Entrance fee to library and reading-room, £1 1s., to be paid by all students on entrance. Class prizes, two clinical prizes of £10 each, a Forensic Medicine Prize of £10, and two chemical scholarships are awarded to students. House-Surgeoncies, Clinical Clerkships, and Dresserships are open to the students.

Honorary Medical Officers of the Hospital.—Consulting Physician: Charles Chadwick, M.D. Consulting Surgeons: William Hey, F.R.C.S., and Samuel Hay, F.R.C.S. Physicians: John Deakin Heaton, M.D., T. Clifford Allbutt, M.D., and John Edwin Eddison, M.D. Surgeons: C. G. Wheelhouse, F.R.C.S.; T. Pridgin Teale, M.A., F.R.C.S.; T. R. Jessop, F.R.C.S.; and James Seaton, L.R.C.S.

Terms of Attendance upon the Hospital Practice.—The fees for attendance upon the medical practice alone, or upon the surgical practice alone, are as follows, being the same in each case:—One winter session, £7 7s.; one summer session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21. Applications for medical practice are to be made to Dr. Heaton, Claremont, between 9 and 10 a.m. Applications for surgical practice are to be made to Mr. T. Pridgin Teale, Cookridge-street, between 10 and 12 a.m.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The introductory address will be delivered on October 1, 1873, at 3 p.m., by Dr. Richard Caton.

Hospital Practice, Royal Infirmary.—Physicians: Dr. Turnbull, Dr. Waters, Dr. Glynn. Surgeons: Mr. Stubbs, Mr. Bickersteth, Mr. Hakes. Assistant-Surgeon: Mr. Harrison. Pathologist: Mr. Banks. Dental Surgeon: Mr. Snape.

Terms for Hospital Attendance and Clinical Lectures:—For six months' medical practice, £5 5s.; one year, £6 6s. For six months' surgical practice, £6 6s.; one year, £8 8s.

Lectures, Winter Session.—Medicine, Dr. Waters. Surgery, Mr. Harrison. Physiology, Dr. Caton. Anatomy, Mr. W. M. Banks. Dissection, vacant. Pathology, Dr. Davidson. Chemistry, Dr. Brown. Practical Physiology, Rushton Parker, M.B.

Lectures, Summer Session.—Midwifery, Dr. Steel. Diseases of Children, Dr. Gee. Materia Medica, Dr. Nevins. Medical Jurisprudence, Dr. E. Whittle. Toxicology and Practical Chemistry, Dr. Brown. Botany, Dr. W. Carter. Comparative Anatomy and Zoology, Dr. Dickinson.

Exhibitions.—Four exhibitions (value £31 10s. each), consisting of six months' free board and residence in the Royal Infirmary.

The fee for all the lectures required by the Colleges of Surgeons and Physicians and the Apothecaries' Hall is forty-five guineas (exclusive of Practical Chemistry).

LIVERPOOL NORTHERN HOSPITAL.

The winter session will commence on Monday, October 2 Physicians: Dr. Davidson and Dr. Dickinson. Surgeons: Mr. Manifold and Mr. Lowndes. Dental Surgeon: Mr. Jame. Lloyd.

The Hospital contains 146 beds. Clinical clerkships and dresserships are open to all the students, without additional fee. Clinical prizes will be awarded at the termination of the winter session.

Fees for Hospital Practice and Clinical Lectures.—Perpetual, 25 guineas; one year, 10 guineas; six months, 7 guineas; three months, 4 guineas. Students can enter to the medical or surgical practice separately, on payment of half the above fees. The Hospital receives one resident pupil, fee 60 guineas per annum. Attendance on the practice of this Hospital qualifies for all the Examining Boards.

For further particulars apply to the House-Surgeon, Mr. Vasey.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

Two hundred beds. Clinical Lectures, with special instruction in the employment of medical and surgical instruments, in bandaging, and in minor surgery, are regularly given during winter and summer sessions. Accommodation for resident pupils. The lectures and practice are recognised by all the examining boards.

Fees for Practice and Lectures.—Perpetual, twenty-five guineas; one year, ten guineas; six months, seven guineas; three months, four guineas.

For further particulars, apply to the House-Surgeons.

MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY (INCORPORATED WITH OWENS COLLEGE.)

The winter session will commence October 1.

Director of Medical Studies, Mr. G. Southam.

Lecturers.—Physiology, Mr. Smith. Practical Physiology and Histology, Dr. A. Gamgee. Descriptive Anatomy, Mr. Bradley. Practical Anatomy, Mr. T. Beswick Perrin. Comparative Anatomy and Botany, Mr. W. C. Williamson. Chemistry, Mr. Henry E. Roscoe, Ph.D. Medicine, Dr. Roberts and Dr. Morgan. Surgery, Mr. Southam and Mr. Lund. The Eye, Mr. Hunt. General Pathology, Dr. H. Simpson. Midwifery, Dr. Thorburn. Materia Medica, Mr. Somers. Forensic Medicine, Mr. Harrison. Hygiene, Dr. A. Ransome. Clinical Medicine, by the Physicians; and Clinical Surgery by the Surgeons to the Royal Infirmary.

Perpetual fee to the whole of the lectures required, except Practical Physiology, £42.

Hospital practice at the Royal Infirmary, where clinical lectures are regularly delivered by the Physicians and Surgeons of the institution; composition fee £42.

Three scholarships, of the value respectively of £20, £15, and £10; the Platt Physiological Scholarship of £50, tenable for two years; and the Dumville Surgical Prize, value £20, are offered for competition. Prizes are also awarded at the end of the session.

Further particulars may be obtained from Mr. Southam, Director of the School, and prospectuses may be obtained from the Registrar at the College, Oxford-street, or the School.

MANCHESTER ROYAL INFIRMARY AND DISPENSARY.—BARNES HOUSE OF RECOVERY, MONSALL.—BARNES CONVALESCENT HOME, CHEADLE.

The Manchester Royal Infirmary contains 296 beds; the Barnes House of Recovery, 92 beds; and the Convalescent Home, 35 beds. Consulting Physicians: Sir J. L. Bardsley, M.D., Drs. P. Wood, R. F. Ainsworth, and F. Renaud. Physicians: Drs. M. A. E. Wilkinson, T. H. Watts, H. Browne, W. Roberts, H. Simpson, and J. C. Morgan. Assistant-Physicians: D. J. Leech, M.B. Consulting-Surgeons: Messrs. T. Turner and J. Jordan. Surgeons: Messrs. W. Smith, G. Southam, F. A. Heath, E. Lund, and Geo. Bowring. Assistant-Surgeons: Mr. S. M. Bradley and Mr. Walter Whitehead. Obstetric Physician: John Thorburn, M.D. Ophthalmic Surgeon: Mr. Thos. Windsor. Visiting Apothecaries: Messrs. T. Standring and J. P. Bateman. Resident Medical Officer: G. Reed, M.D. Senior House-Surgeon: T. Jones, M.B. Junior House-Surgeon: R. W. Lyell, M.D. Physicians' Assistants: Messrs. Richard Hughes, S. H. Owen, M.D., and Mr. B. Addy. Secretary: Mr. B. Brown.

NEWCASTLE-UPON-TYNE INFIRMARY.

This Infirmary contains 230 beds. Medical and Surgical clinical lectures are delivered, and clinical instruction is given in the wards. There are special wards for the treatment of children, ophthalmic and syphilitic diseases. Physicians: Dr. Charlton, Dr. Embleton, and Dr. Phillipson. Surgeons: Dr. Heath, Mr. Russell, Dr. Arnison, and Dr. Armstrong. Assistant-Surgeons: Mr. A. Bell, Dr. Hume, Mr. J. Hawthorn, and Mr. C. S. Jeaffreson. Senior House-Surgeon: Dr. Page. Junior House-Surgeon: Mr. G. Rowell. Fees for hospital practice and clinical lectures: twelve months, seven guineas; six months, five guineas; three months, four guineas. Perpetual fee, seventeen guineas; or, if paid by instalments, first year seven guineas; second year, six guineas; third year, five guineas. Four resident clinical clerks and four non-resident dressers are nominated by the Medical Board half-yearly.

SHEFFIELD SCHOOL OF MEDICINE.

The winter session will commence on October 1. Anatomy, Descriptive and Surgical, Mr. Skinner and (vacant). Demonstrations of Anatomy, Messrs. Clarke, Skinner, and T. H. Morton. Physiology, Mr. Thos. Leeds and Mr. S. Morton. Principles and Practice of Medicine, Dr. Frank-Smith. Principles and Practice of Surgery, Mr. W. F. Favell, Mr. Parker, and Mr. A. Jackson. Chemistry, Mr. Allen. Dental Mechanics, Mr. G. Mosely. Clinical Medicine, Dr. De Bartolomé, Dr. Law, and Dr. Frank-Smith. Clinical Surgery, Mr. Barber, Mr. W. F. Favell, and Mr. Parker.

Summer session, commencing May 1, 1873.—Midwifery and Diseases of Women, Dr. Hime. Materia Medica and Therapeutics, Dr. Young. Medical Jurisprudence and Toxicology, Mr. Baker and Mr. Harrison. Botany, Mr. Birks. Practical Chemistry, Mr. Allen. Dental Surgery, Dr. Merryweather. Demonstrations of Pathology and Microscopy, Mr. Hallam (at the Infirmary). Demonstrations of Operative Surgery, Mr. Favell and Mr. Parker, F.R.C.S. Demonstrations of Practical Histology and Physiology, Dr. Thomas. Practical Surgery, Mr. Hallam.

Medical and Surgical Practice.—Sheffield General Infirmary.—Physicians, Dr. De Bartolomé, Dr. Law, Dr. Frank-Smith. Surgeons, Mr. Barber, Mr. Favell, Mr. Parker. House-Surgeon, Mr. Hallam.

The Infirmary contains 200 beds for in-patients.

The fees for perpetual attendance at the Infirmary are £15 15s. for Medical, £21 for Surgical, practice. For twelve months' practice: Medical, £10 10s.; Surgical, £6 6s. Six months': Medical, £6 6s.; Surgical, £4 4s.

Public Hospital and Dispensary.—100 beds. Physicians, Dr. J. Hall, Dr. Law, and Dr. H. J. Brandon. Surgeons, Mr. Chesman, Mr. A. Jackson, and Dr. Keeling.

Sheffield Hospital for Diseases of Women.—Medical Officers: Dr. Jackson, Dr. Keeling, Dr. Hime, and Mr. Woolhouse.

Table of Fees, including Demonstrations.—Anatomy and Physiology, first course, £6 6s., second course, £4 4s.; Practice of Medicine, first course, £4 4s., second course, £2 2s.; Practice of Surgery, first course, £4 4s., second course, £2 2s.; Chemistry, first course, £4 4s.; Midwifery and Diseases of Women, first course, £3 3s.; Materia Medica, first course, £3 3s.; Medical Jurisprudence, first course, £3 3s.; Botany, first course, £3 3s.; Practical Chemistry, first course, £3 3s.; Practical Physiology, £3 3s.; Practical Surgery, £3 3s.

For further information apply to the staff of the institution.

Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £42.

All further information may be obtained on application to the Hon. Secretary, Dr. A. Jackson, St. James's-row, Sheffield.

MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.—1873-74.

Principal—Sir Alex. Grant, Bart., LL.D.

The session will be publicly opened with an introductory address by the Principal, on Monday, November 3, 1873. The classes for the different branches of study will be opened as follows, and will meet daily (Saturdays excepted) unless otherwise stated:

Faculty of Medicine.—Materia Medica, Professor Sir Robert Christison, Bart, M.D.; Chemistry, Professor Crum-Brown, M.D., D.Sc.; Surgery, Professor Spence; Institutes of Medicine or Physiology, Professor Bennett, M.D.; Midwifery and Diseases of Women and Children, Professor Simpson, M.D.; Clinical Surgery, Professor Lister; Clinical Medicine, Professors Bennett, Laycock, Maclagan, and Sanders; Anatomy, Professor Turner, M.B.; Natural History, Professor Wyville Thomson; Practice of Physic, Professor Laycock, M.D.; General Pathology, Professor Sanders, M.D.; Anatomical Demonstrations, Professor Turner; Botany, Professor Balfour, M.D.; Medical Jurisprudence, Professor Maclagan, M.D. The lectures on Botany, Natural History, and Medical Jurisprudence are given in the summer session.

Royal Infirmary, at noon, daily. Practical Anatomy, Wednesday, October 1, under the superintendence of Professor Turner. Practical Chemistry, under the superintendence of Professor Crum-Brown. Practical Physiology, under the superintendence of Professor Bennett.

During the summer session, lectures will be given on the following subjects:—Botany, Professor Balfour; Practical Physiology, including Histology, Professor Bennett; Medical Jurisprudence, Professor Maclagan; Clinical Medicine, Professors Bennett, Laycock, Maclagan, and Sanders; Clinical Surgery, Professor Lister; Anatomical Demonstrations, Professor Turner; Practical Chemistry, under the direction of Professor Crum-Brown; Practical Anatomy, under the superintendence of Professor Turner; Natural History, Dr. Carus for Professor Wyville Thomson; Medical Psychology and Mental Diseases, with practical instruction at an asylum, Professor Laycock; Operative Surgery, Professor Spence; Practical Pathology and Morbid Anatomy, Professor Sanders; Clinical Gynæcology, Professor Simpson.

A table of fees may be seen in the Matriculation Office and in the Reading-room of the Library.

SCHOOL OF MEDICINE, EDINBURGH.

The practical anatomy rooms and chemical laboratories open on October 1. The introductory address will be delivered by Dr. George W. Balfour, on Monday, November 3, at eleven o'clock. Lectures commence on Tuesday, November 4.

Winter Session, 1873-74.—Surgery, Dr. P. H. Watson, Dr. Joseph Bell, Dr. Chiene, and Dr. John Duncan; Chemistry (lectures, Practical Chemistry and Analytical Chemistry), Dr. Stevenson Macadam; Midwifery and Diseases of Women and Children, Dr. Matthews Duncan; Physiology, Dr. Bell

Pettigrew and Dr. McKendrick (Royal Infirmary); Clinical Medicine (Royal Infirmary), Drs. Rntherford Haldane, George W. Balfonr, and Grainger Stewart, and Dr. Matthews Duncan (for Diseases of Women); Clinical Surgery (Royal Infirmary), Dr. P. H. Watson and Mr. Annandale; Anatomy (lectnres, Anatomical Demonstrations and Practical Anatomy), Dr. P. D. Handyside; Medical Jurisprudence, Dr. Littlejohn; Practice of Physic, Dr. Rntherford Haldane, Dr. Cland Muirhead, and Dr. Grainger Stewart; General Pathology, Dr. John Wyllie; Vaccination, Dr. Husband.

Summer Session, 1874.—Classes open on Thursday, May 4.—Materia Medica and Therapeutics, Dr. Thomas R. Fraser; Midwifery and Diseases of Women and Children, Dr. Keiller and Dr. Angus Macdonald; Medical Jurisprudence, Dr. Littlejohn; Anatomy (Practical Anatomy, Surgical Anatomy—demonstrations and examinations), Dr. P. D. Handyside; Chemistry (Practical Chemistry, Analytical Chemistry), Dr. Stevenson Macadam (Royal Infirmary); Clinical Medicine (Royal Infirmary), Drs. Rntherford Haldane, G. W. Balfour, and Grainger Stewart, and Dr. Matthews Duncan (for Diseases of Women); Clinical Surgery (Royal Infirmary), Dr. P. H. Watson, Mr. Annandale; Vaccination, Dr. Husband; Diseases of the Eye (with practical instrnction in the nse of the ophthalmoscope), Dr. Argyll Robertson; Diseases of Children, Dr. Stephenson; Insanity, Dr. J. Batty Tnke; Surgical Appliances and Operative Surgery, Dr. Joseph Bell; Operative Snrgery and Surgical Anatomy, Dr. Chiene; Practical Surgery, Dr. Duncan.

Fees.—For a first course of lectnres, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To thiose who have already attended a first conrse in Edinburgh the perpetual fee is £2 4s. Second course of Midwifery, £1 3s. Practical Anatomy (six months' course), £3 3s. Anatomical Demonstrations, £2 2s.; with Practical Anatomy, £1 1s.; perpetual, £4 4s. Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for the session of six months. Vaccination, £1 1s. For snmmer courses of Clinical Snrgery and Clinical Medicine, each £2 4s.; Practical Anatomy (inclnding Anatomical Demonstrations, Operative Surgery, Diseases of the Eye) and Insanity, each £2 2s.

The minimum cost of the education in this School of Medicine for the donble qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, inclnding the fees for the joint examination, is £90 4s., which is payable by yearly instalments during the period of study; whilst the minimum cost for the single qnalification of either Physician or Surgeon, including the fee for examination, is £80.

ROYAL INFIRMARY, EDINBURGH.

In this Hospital a portion of the beds is set apart for Clinical Instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the Ordinary Physicians and Surgeons. Special instruction is given on Diseases of Women, Physical Diagnosis, etc., and on Diseases of the Eye. Separate wards are devoted to fever, venereal diseases, diseases of women, diseases of the eye; also to cases of incidental delirium or insanity. Professors of Clinical Medicine, Dr. Bennett, Dr. Laycock, Dr. Maclagan, Dr. Sanders. Extra Physicians and Lecturers on Diseases Peculiar to Women, Dr. J. Matthews Duncan, Dr. Alex. R. Simpson. Ordinary Physicians and Lectnrers on Clinical Medicine, Dr. Rntherford Haldane, Dr. Geo. W. Balfonr, Dr. T. Grainger Stewart. Assistant-Physicians, Dr. Clande Mnirhead, Dr. Thos. R. Fraser. Consulting Surgeons, Dr. Dunsmure, Dr. J. D. Gillespie. Professor of Snrgery, Mr. Spence. Ordinary Acting Snrgeons, Dr. P. H. Watson, Mr. Thos. Annandale (Lecturers on Clinical Surgery), Dr. Joseph Bell. Professor of Clinical Surgery, Mr. Lister. Ophthalmic Surgeons, Mr. Walker, Dr. D. A. Robertson. Extra Surgeon for treatment of Ovarian Diseases, Dr. Thomas Keith. Assistant-Surgeons, Dr. John Duncan, Dr. John Chiene. Dental Surgeon, Dr. John Smith. Pathologist, Dr. James B. Pettigrew. Hospital tickets.—Perpetual, in one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the student to a perpetual ticket. *Appointments.*—No fees are payable for any medical or surgical appointments in this Hospital. The following appointments are open to students:—1. Resident Physicians and Surgeons. 2. Non-Resident Clinical Clerks are appointed by the Physicians and Surgeons. 3. Dresserships. Each Surgeon appoints from four to nine Dressers. 4. Assistants in the Pathological Department are appointed by the Pathologist.

UNIVERSITY OF ABERDEEN—FACULTY OF MEDICINE.

Winter Session, commencing on Wednesday, October 29.—Anatomy, Professor Struthers, M.D., £3 3s. Practical Anatomy and Demonstrations, Professor Struthers and the Demonstrator, £2 2s. Chemistry, Professor Brazier, £3 3s. Institutes of Medicine, Professor Ogilvie, £3 3s. Surgery, Professor Pirrie, £3 3s. Practice of Medicine, Professor Macrobin, M.D., £3 3s. Midwifery and Diseases of Women and Children, Professor Inglis, £3 3s. Zoology, with Comparative Anatomy, Professor Nicol, £3 3s. Medical Jurisprudence, Professor Ogston, £3 3s.

Summer Session, commencing on the first Monday in May.—Botany, Professor Dickie, £3 3s. Materia Medica (100 lectnres), Professor Harvey, £3 3s. Practical Anatomy and Histology, Professor Strnthers and the Demonstrator, £2 2s. Practical Chemistry, Professor Brazier, £3 3s. Zoology, with Comparative Anatomy, Professor Nicol, £3 3s.

Matricnlation fee for the winter and summer sessions, £1. For the summer session alone, 10s.

Royal Infirmary: Perpetual fee to hospital practice, £6; or first year, £3 10s., second year, £3. Clinical Medicine, Drs. Smith Beveridge and A. Frazer, £3 3s. Clinical Surgery, Drs. Pirrie, Kerr, and Fiddes, £3 3s. Pathological Anatomy, Dr. Rodger, £2 2s. Practical Ophthalmology, Dr. A. D. Davidson. Dental Surgery, Mr. Williamson.

For further information, apply to Dr. Macrobin, Dean of the Faculty of Medicine.

ABERDEEN ROYAL INFIRMARY.

The Infirmary contains about 300 beds. Consulting Physician: Dr. A. Harvey. Physicians: J. W. F. Smith, R. Beveridge, Angus Fraser. Surgeons: Messrs. W. Pirrie, D. Kerr, D. Fiddes, and A. Ogston. Ophthalmic Surgeon: Dr. Alex. D. Davidson. Pathologist: Dr. James Rodger. Dental Surgeon: Mr. Williamson. Resident Superintendent and Apothecary: Dr. R. Rattray. Resident Assistant-Physician: Mr. A. Craigmyle. Resident Assistant-Surgeon: Mr. J. P. Lumsden. Pathologist and Curator of Museum: Dr. J. Rodger. Treasurer and Secretary: Mr. W. Carnie.

UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

The classes open for the winter session on Monday, October 27, 1873, when an introductory lecture will be given by Professor Macleod, M.D.

Chemistry, Practical Chemistry, and Chemical Laboratory, Dr. Anderson, £3 3s. Practice of Physic, Dr. Gairdner, £3 3s. Anatomy, Anatomical Demonstrations, and Practical Anatomy, Dr. Allen Thomson and Demonstrator, £6 6s. Materia Medica, Dr. Cowan, £3 3s. Forensic Medicine, Dr. P. A. Simpson, £3 3s. Surgery, Dr. Macleod, £3 3s. Midwifery, Dr. Leishman, £3 3s. Institutes of Medicine, Dr. A. Buchanan, £3 3s. Pathology, Dr. J. Coats, £3 3s. Clinical Medicine and Clinical Surgery, Physicians and Surgeons of Royal Infirmary.

Further information may be obtained from the Registrar of the University.

ANDERSON'S UNIVERSITY, GLASGOW.

Anatomy, Professor George Buchanan, M.D.; Demonstrator, Mr. H. E. Clark. Chemistry, Professor Thorpe, Ph.D. Institutes of Medicine (Physiology), Professor E. Watson, M.D. Surgery, Professor Dunlop, M.D. Materia Medica, Professor Morton, M.D. Practice of Medicine, Professor McCall Anderson, M.D. Midwifery (in summer), Professor J. G. Wilson, M.D. Medical Jurisprndence (in summer), Professor A. Lindsay, M.D. Ophthalmic Medicine and Surgery, Dr. Wolfe.

Class Fees.—For each of the above conrses of lectures, first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy Class Fees: For both courses (lectures and demonstrations on Practical Anatomy), first session, £4 4s.; second, session, £4 4s.

The fees for all the lectures in the Medical School required of candidates for the diplomas of Physician and Surgeon amount to £30.

Diploma in Medicine and Surgery.—Gentlemen who have studied in this School are eligible for examination before any of the Royal Colleges, and in Glasgow they may obtain the

diplomas of Physician and Surgeon or General Practitioner, which entitles to registration under the Medical Act, with the right to practise Medicine and Surgery in any part of the kingdom.

A syllabus, with full information, may be obtained by applying to Mr. Arthur Forbes, 146, Buchanan-street, Glasgow, Clerk to the Medical School.

GLASGOW ROYAL INFIRMARY.

The winter session commences on November 1, 1873. Hour of visit and of lectures at 9 a.m. Physicians, Drs. McCall Anderson, Scott Orr, Gairdner, and Perry. Surgeons, Drs. Morton, Watson, Dewar, Macleod, and Buchanan. Pathologist, Dr. Joseph Coats.

Beds, 580. Attendance at Dispensary, 2 p.m.

The valuable pathological museum is open to all students who desire to examine the preparations.

Five Physicians' and five Surgeons' Assistants perform the duties of House-Physicians and House-Surgeons. These offices, held for one year, are open to students who have completed their fourth year of study. They are lodged and boarded in the Hospital for £25 per annum. Dressers to the surgical wards and Clerks to the Dispensary are appointed without fee.

Fees admitting to the medical and surgical practice of the Hospital and Dispensary:—For the first year, £3 3s.; second year, £3 3s.; third and perpetual, £1 1s.; for six months' attendance, £2 2s.; three months', £1 11s. 6d. Practical Pharmacy, six months, £3 3s.

Fees for clinical lectures, on Medicine, £3 3s., on Surgery, £3 3s.

Medical Superintendent, Dr. M. Thomas. Secretary, Mr. H. Lamond, 64, West Regent-street.

SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC, UNIVERSITY OF DUBLIN.

The School is under the joint government of the Board of Trinity College and the King and Queen's College of Physicians.

Institutes of Medicine, Professor Law. Materia Medica and Pharmacy, Professor A. Smith. Surgery, Professor R. Smith. Anatomy and Surgery, Professor M'Dowel. Practical Anatomy, Dr. Bennett. Chemistry, Professor Apjohn. Practice of Medicine, Professor Moore. Midwifery, Professor Sinclair. Botany, Dr. E. Perceval Wright. Medical Jurisprudence, Professor Travers. Comparative Anatomy and Zoology, Professor Alexander Macalister, M.D. Physics, Professor John Leslie, M.A. Hospital practice and clinical lectures at Sir Patrick Dun's Hospital.

SIR PATRICK DUN'S HOSPITAL.

Consulting Physician, William Stokes, M.D., Regius Professor of Physic. Consulting Surgeon, Robert Adams, M.Ch., Regius Professor of Surgery. The clinical lectures in Medicine and Surgery are delivered by—Physicians: Robert Law, M.D., King's Professor of the Institutes of Medicine; William Moore, M.D., King's Professor of the Practice of Medicine; Aquilla Smith, M.D., King's Professor of Materia Medica and Pharmacy; Edward B. Sinclair, M.D., King's Professor of Midwifery. Surgeons: Robert W. Smith, M.Ch., Trinity College, Professor of Surgery; Benjamin G. M'Dowel, Professor of Anatomy; Edward H. Bennett, M.Ch., University Anatomist; Richard G. Butcher, M.D., University Lecturer in Practical Surgery. The Physicians and Surgeons attend for clinical instruction on alternate days.

Hospital fee for twelve months, including nine months' clinical lectures, nine guineas. Attendance on this Hospital is recognised by all licensing bodies.

ST. VINCENT'S HOSPITAL, DUBLIN.

The winter session will commence on Wednesday, October 1, 1873. Physicians: Dr. Francis J. B. Quinlan and Dr. Robert Cryan. Surgeons: Dr. Edward D. Mapother and Mr. William H. O'Leary. Surgeon-Dentist: Mr. William J. Doherty. Apothecary: Mr. Boland.

Further particulars may be learned on application to the Secretary, or at the Hospital during the hours of attendance.

THE QUEEN'S UNIVERSITY IN IRELAND.—QUEEN'S COLLEGE, BELFAST, FACULTY OF MEDICINE.

The lectures will commence on Tuesday, November 4. Anatomy and Physiology, Dr. P. Redfern. Chemistry, Dr. Thomas Andrews. Practice of Medicine, Dr. James Cuming. Practice of Surgery, Dr. A. Gordon. Materia Medica, Dr. J. S. Reid. Midwifery, Dr. R. F. Dill. Medical Jurisprudence, Dr. J. F. Hodges. Natural Philosophy, Dr. Everett. Zoology and Botany, Dr. R. O. Cunningham. The demonstrations in Anatomy are delivered by Dr. Charles. The courses of Botany and Practical Chemistry, and a second course of Experimental Physics, will commence in May. The lectures in Midwifery and in Medical Jurisprudence are also summer courses.

Fees.—Anatomy and Physiology—First course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy—each course, £3. Practical Chemistry, £3. Other medical lectures—first course, £2; each subsequent course, £1.

Two medical scholarships are awarded to the students of each year of the medical course. The examinations commence on October 20.

Belfast General Hospital.—Clinical Instruction—Perpetual Fee, payable in one sum of £10 10s., or in two instalments of £5 5s. each on entering for the first and second years. Hospital fee, 10s. 6d. each session. Four resident pupils are appointed each session.

Belfast Lying-in Hospital.—Fee for the session, £3 3s.

QUEEN'S COLLEGE, CORK, FACULTY OF MEDICINE.—Session 1873-74.

Anatomy, Physiology, and Practical Anatomy, Dr. J. H. Corbett. Practice of Medicine, Dr. D. C. O'Connor. Practice of Surgery, Dr. W. Tanner. Materia Medica, Dr. P. O'Leary. Midwifery, Dr. J. R. Harvey. Natural Philosophy, Mr. John England. Chemistry and Practical Chemistry, Dr. M. Simpson. Zoology and Botany, Dr. J. R. Greene. Clinical Medicine and Clinical Surgery, at the North and South Infirmaries, by the Physicians and Surgeons of these institutions. Clinical Midwifery, at the Lying-in Hospital. The medical session will be opened on Monday, November 3, 1873, and the lectures will commence on the same day.

Eight scholarships, value £25 each, are awarded to students of Medicine.

For further information apply to Mr. Robert John Kenny, Registrar.

QUEEN'S COLLEGE, GALWAY, FACULTY OF MEDICINE.—Session 1873-74.

Anatomy and Physiology, and Practical Anatomy, Dr. Cleland. Practice of Medicine, Dr. N. Colahan. Practice of Surgery, Dr. J. V. Brown. Materia Medica, S. M'Coy, Esq., F.R.C.S.I. Medical Jurisprudence, Dr. J. P. Pye. Midwifery and Diseases of Women and Children, Dr. R. Doherty. Chemistry, Dr. T. H. Rowney. Natural Philosophy, Dr. A. H. Curtis. Botany and Zoology, Dr. A. G. Melville. Logic and Mental Philosophy, Dr. T. W. Moffett. The County Galway Infirmary, Town, and Fever Hospitals are in the immediate vicinity of the Queen's College.

Eight scholarships of the value of £25 each, and exhibitions varying in value from £12 to £16, are appropriated to students pursuing the course for the degree of M.D.

Fees.—Anatomy and Physiology, £3, first session; afterwards, £2. Practical Anatomy, £3; Practical Chemistry, £3; Operative Surgery, £3; other classes, £1 for each course extending over one term only—£2 for each course extending over more than one term—and £1 for each re-attendance on the same. The College session is divided into three terms. The first term commences on October 21, 1873, and ends on December 23, 1873.

For further information, application may be made to Professor Moffett, Registrar.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—SCHOOL OF SURGERY.—Session 1873-74.

The public lectures and the usual winter course will commence on October 30. Anatomy and Physiology, Dr. Mapother. Descriptive Anatomy, Dr. Bevan and Mr. Morgan. Surgery, Dr. Stokes and Dr. J. S. Hughes. Practice of Medicine, Dr. Little. Chemistry, Dr. Barker. Materia Medica, Dr. Macnamara. Midwifery, Dr. Sawyer. Medical

Jurisprudence, Dr. Davy. Practical Chemistry, Dr. Barker. Botany, Dr. Minchin. Hygiene, Dr. Cameron. Dissections, under the direction of the Professors of Anatomy and the Demonstrators, Drs. Croly, Stoney, Stoker, Ormsby, Kilgarriff, and Wheeler, commence on October 1.

The summer session commences in April and terminates in July, including Materia Medica, Medical Jurisprudence, Botany, Practical Chemistry, Midwifery, Ophthalmic and Aural Surgery, and Hygiene.

The fee for each of the above courses is £3 3s., except Comparative Anatomy and Hygiene, which are free.

For further information, application to be made to the Registrar, John Brennen, Esq., at the College.

DR. STEEVENS' HOSPITAL, DUBLIN.

Contains 250 beds. Systematic courses of lectures are delivered during the winter and summer sessions on all subjects required by the Colleges, Halls, and the Public Service. There is accommodation in the Hospital for two medical and six surgical resident pupils as Dressers. Fee, £21, including Hospital certificate. Senior middle and junior exhibitions will be awarded at the end of the session to those whose answering exhibits general proficiency in every branch of their professional studies. Two Midwifery Assistants are each year (month of November) selected by competitive examination, salary £30 per annum. The dissecting-rooms will be opened on the first Monday in October for Practical Anatomy. The sessional courses of lectures will commence on the first Monday in November. Fees—Hospital, £7 7s.; Practical Anatomy, £4 4s.; lectures, £3 3s. each course; Perpetual, to all educational courses required by Colleges, Halls, and Public Service, 78 guineas, payable in two instalments.

Further particulars on application to the Resident Surgeon, at the Hospital; or to E. Hamilton, M.D., Secretary, 120, Stephen's-green.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

Physicians, Dr. Henry H. Head and Dr. James Little. Surgeons, Dr. Albert J. Walsh, Dr. John K. Barton, and Mr. Benjamin Wills Richardson. Obstetric Physician, Dr. Lombe Atthill. Ophthalmic Surgeon, H. Rosborough Swanzy, M.B. Assistant-Physician, Dr. Walter G. Smith. Assistant-Surgeon, Montgomery A. Ward, M.B., M.Ch.

The central position of this Hospital renders it peculiarly convenient to gentlemen attending lectures at the University, College of Surgeons, or Ledwich School. Two resident pupils are selected half-yearly. Prize examinations are held at the termination of the session.

Further particulars can be obtained from Dr. Atthill, 11, Upper Mefrion-street, or any other member of the medical staff.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

Anatomy, Physiology, and Pathology, etc., Mr. E. Ledwich, Mr. T. P. Mason, and Mr. W. H. O'Leary. Theory and Practice of Surgery, Messrs. Wharton and Barton. Surgical and Descriptive Anatomy, Demonstrations, and Dissections, Messrs. Mason, Ledwich, Glanville, Robinson, and O'Leary. Theory and Practice of Medicine, vacant. Midwifery and Diseases of Women and Children, Dr. J. Ringland. Materia Medica and Therapeutics, Dr. M'Dowel. Forensic Medicine and Hygiene, Dr. R. Travers. Theory of Chemistry, Practical Chemistry, and Natural Philosophy, Dr. Cameron. Botany, Dr. Maunsell. A course of operations to be performed by the students, under the superintendence of the lecturers (subjects, etc., included), £5 5s.

Certificates of attendance on these lectures are received by Trinity College, Dublin, and all the examining boards.

The fee for each of the above courses will be £3 3s.

Further information may be obtained from any of the lecturers, or from Edward Ledwich, Secretary, 7, Harcourt-street, Dublin.

CITY OF DUBLIN HOSPITAL.

Physicians: Drs. J. Hawtrey Benson and John M. Purser Surgeons: Messrs. Jolliffe Tuffnell, H. G. Croly, William Thornley Stoker, M.D., and William J. Wheeler, M.D. Ophthalmic and Aural Surgeon, Dr. Loftie Stoney. Consulting Physicians: Professor Apjohn, Charles Benson, M.D. Consulting Surgeon: William Hargrave, F.R.C.S.I. Consulting Ophthalmic Surgeon: Arther Jacob, F.R.C.S.I. and M.D. (Hon. Causâ) Dub. Clinical lectures will be delivered by the Physicians and Surgeons, and special courses on Diseases of the Eye and Ear will be given by Dr. Stoney. The certificates of attendance are received as qualifications by all the Colleges, Halls, and Boards. For further particulars, apply to Dr. Stoker, 43, Harcourt-street.

HOSPITALS, &c., FOR SPECIAL INSTRUCTION.

University of Durham College of Physical Science, Newcastle-on-Tyne.—The College has taken over the laboratories, lecture-room, &c., of the College of Medicine, and provides the full courses in Chemistry required by the licensing boards. It is contemplated to establish a chair of Natural History in connexion with the College as soon as funds will permit.

City of London Hospital for Diseases of the Chest, Victoria-park.—Office, 24, Finsbury-circus, E.C.—Consulting Physicians—T. B. Peacock, M.D.; J. R. Bennett, M.D.; E. L. Birkett, M.D. Consulting Surgeon—J. Hilton, F.R.S. Physicians—S. H. Ward, M.D.; J. Andrew, M.D.; J. C. Thorowgood, M.D.; H. G. Sutton, M.B. Assistant-Physicians—A. B. Shepherd, M.B.; Eustace Smith, M.D.; W. H. Corfield, M.B.; J. B. Berkart, M.D. Resident Medical Officer—G. C. Franklin. The Hospital affords accommodation for 164 in-patients. During the last year 763 cases were under treatment in the wards, and 13,535 were relieved as out-patients. In-patients admitted since the wards were opened in 1855, 9230; out-patients admitted since the establishment of the institution in 1848, 220,300. Information respecting medical instruction at the Hospital may be obtained on application to the Physicians.

Great Northern Hospital, Caledonian-road.—Consulting Surgeon—Le Gros Clark. Physicians—Drs. Leared, Hardinge, Cholmeley, F. C. Webb, Jephson, and Crucknell. Obstetric Physician—Dr. Gustavus C. P. Murray. Diseases of the Eye—Mr. B. J. Vernon. Surgeons—Messrs. Gay, W. Adams, T. Carr Jackson, W. Spencer Watson, and Osman Vincent. Aural Surgeon—Mr. Harvey. Dentists—Messrs. Statham and Chas. J. Fox. Chloroformist—Mr. G. Eastes. House-Surgeon—Mr. A. Young. Junior Resident Medical Officer—Mr. A. J. Sturmer. Dispenser—Mr. Ring.

Hospital for Women, Soho-square.—Established 1842. 68 beds. Physicians—Dr. Protheroe Smith, Dr. Alfred Meadows, Dr. Heywood Smith. Surgeons—Mr. John Scott, Mr. Christopher Heath. Assistant-Physicians—Dr. Arthur W. Edis, Dr. Squarey, and Dr. C. H. Carter. Operations: Saturday mornings, 9.30. Third-year's men and practitioners may attend the practice and operations by presenting their card. Clinical assistantships are tenable for six months without fee. Further particulars may be obtained by application to the House-Physician or to the Secretary.

Royal Infirmary for Children and Women, Waterloo-bridge-road.—Instituted 1810. Consulting Physician—Dr. W. Hughes Willshire. Consulting Surgeon—Mr. J. Cooper Forster. Physicians—Drs. G. V. Poore, Thomas C. Hayes, B.A., M.R.C.P., J. P. Hartree, M.B. Surgeon—Edward Bellamy, Esq., F.R.C.S. Surgeon-Dentist—Mr. Thomas Roberts. Resident Medical Officer—Dr. W. Park. Secretary—Mr. C. J. F. Renton, L.S.A. Advanced students in Medicine, and such practitioners as may desire it, are permitted to attend the practice of this Hospital gratis. If a certificate signifying such attendance be required, the sum of five guineas must be paid to the Physicians and Surgeons in ordinary conjointly.

The Belgrave Hospital for Children, 1, Cumberland-street, Eccleston-square, S.W.—20 beds. President—The Most Noble the Marquis of Westminster. Honorary Medical Staff: Physicians—Dr. Anstie, Dr. Farquharson; Surgeons—Bernard E. Brodhurst, Esq., Thos. P. Pick, Esq.; House-Surgeon—Malcolm McHardy, Esq. New patients last year—In, 111; out, 878. Pupils will be admitted to the practice of the Hospital upon producing a certificate of being duly registered as medical students, and on such other conditions as the Committee may from time to time direct.

The Hospital for Sick Children, 48 and 49, Great Ormond-street, W.C., and Cromwell House, Highgate.—Physicians—Dr. West and Dr. Dickinson. Assistant-Physicians—Dr. Samuel Gee, Dr. W. B. Cheadle, Dr. J. J. Phillips, Dr. John Murray, and Dr. R. J. Lee. Surgeon—Mr. Thomas Smith. Assistant-Surgeons—Mr. Howard Marsh, Mr. J. W. Haward. Surgeon-Dentist—Mr. Thomas Edgelow. 127 beds. In-patients, 1871, 678. Out-patients attending, 12,221. The practice of the Hospital, in both in- and out-patient departments, is open at nine every morning. Fee for six months' attendance, £3 3s.; perpetual, £5 5s. Samuel Whitford, Secretary.

Evelina Hospital for Sick Children, Southwark-bridge-road.—Founded and endowed in 1869 by Baron Ferdinand de Rothschild. 100 beds. Physicians—Drs. C. Hilton Fagge, C. Kelly, E. B. Baxter, and F. Taylor. Surgeons—Messrs. Morrant Baker and H. G. House. Resident Medical Officer—Douglas W. Giffard. Registrar and Chloroformist—Appointment vacant. Clinical Assistants—Mr. J. Brown and Mr. C. Lowe.

Victoria Hospital for Children, Gough House, Queen's-road, Chelsea.—This Hospital contains fifty beds, and has a large Out-patient Department. Physicians: Dr. Evans and Dr. Cavafy; Assistant-Physicians: Dr. Jones, Dr. Grigg, and Dr. Laking. Surgeon: Mr. Cowell. Assistant-Surgeons: Mr. F. Churchill and Mr. Roberts. Dental-Surgeon: Mr. Risdon. The practice of the Hospital is open daily at twelve. Fees for six months, £3 3s. Perpetual, £5 5s. House-Surgeon and Pathologist: Mr. Peregrine. Secretary: Captain Scoones.

Hospital for Diseases of the Skin, 52, Stamford-street, Blackfriars.

The British Hospital for Diseases of the Skin, Great Marlborough-street, W., and Finsbury-square, E.C.—Surgeons—Balmando Squire, M.B., and George Gaskoin, Esq.

Royal Orthopædic Hospital, 315, Oxford-street.—Medical Officers.—Surgeons—Bernard E. Brodhurst, Esq., F.R.C.S., 20, Grosvenor-street; Jno. D. Hill, Esq., F.R.C.S., 17, Guildford-street, Russell-square. Legally qualified practitioners are free to witness the practice of the Hospital. Pupils on the following terms:—For six months, £3 3s.; for twelve months, £5 5s.; perpetual, £10 10s. Operations, Thursdays, 2 p.m. The annual course of lectures will be duly announced.

St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear.—Attending Surgeons—Sir William Wilde, M.D., F.R.C.S., Surgeon-Oculist in Ireland to Her Majesty; Henry Wilson, F.R.C.S., Professor of Ophthalmic and Anral Surgery, R.C.S., Examiner in the University of Dublin; Richard Rainsford, M.B., M.Ch., Demonstrator of Anatomy, Ledwich School of Medicine. Instruction is given on the mornings of Mondays, Tuesdays, Thursdays, and Fridays, from eleven to one o'clock, and operations performed on Wednesdays and Saturdays from eleven to one o'clock. Fee for three months' attendance, £3 3s.

Royal Westminster Ophthalmic Hospital, King William-street, Charing-cross.—The Hospital contains thirty-six beds, and the patients (10,000 annually) are seen and operations performed daily at one. The following are the days of attendance of the Surgical Staff:—Monday and Friday, Mr. Power and Mr. Rouse; Tuesday, Thursday, and Saturday, Mr. Hogg; Wednesday and Saturday, Mr. Cowell. The practice of the Hospital is open to students. Fees for six months, £3 3s. Perpetual, £5 5s. Secretary, Mr. Farrant.

Royal London Ophthalmic Hospital, Blomfield-street, Moorfields, E.C.—Founded 1804. 70 beds. Consulting Physician—Dr. F. J. Farre. Consulting Surgeon—Mr. J. Dixon. Surgeons—Messrs. Critchett, Bowman, Wordsworth, Streatfield, J. W. Hulke, G. Lawson, J. Hutchinson, J. Couper, and J. Soelberg Wells, M.D. House-Surgeon—Mr. F. Buller.

St. Luke's Hospital for Lunatics, Old-street, E.C.—Physicians—Dr. Henry Monro and Dr. William Wood. Surgeon—Mr. Alfred Willett. Resident Medical Superintendent—Reginald Eager, M.R.C.S., L.A.S., and M.D. Univ. Lond. The Visiting Physicians are allowed by the Committee to take pupils. Patients admitted gratuitously, or on payment according to their circumstances. For information address the Secretary, Mr. George Seymour.

National Hospital for the Paralysed and Epileptic, 23 and 24, Queen-square, Bloomsbury.—The Hospital contains 74 beds; the County Convalescent Branch, at Finchley, 25 beds. The Physicians attend every Monday, Tuesday, Wednesday, and Friday, at half-past two o'clock. In- and out-patients' electrical-room and general practice at that hour. Physicians—Drs. Ramskill, Radcliffe, Hughlings-Jackson, and Buzzard. Assistant-Physicians—Dr. Charlton Bastian, Dr. Elam, Dr. Maclure, Dr. Gowers. Medical Superintendent—Dr. Tibbits. Medical Registrar—Dr. Gowers. Medical practitioners and students will be admitted on showing their cards.

Hospital for Diseases of the Throat, Golden-square, W.—Consulting Physicians—Dr. Billing and Sir W. Jenner, Bart., M.D. Consulting Surgeon—Sir W. Fergusson, Bart. Physicians—Drs. Morell-Mackenzie, Semple, and Prosser James. Surgeon—George Evans, Esq. Assistant-Surgeon—Pugin Thornton, Esq.

Royal Free Hospital, Gray's-inn-road.—102 beds. Physicians—Dr. Hassall, Dr. O'Connor, Dr. Cockle, Dr. Rickards. Surgeons—Mr. Victor de Méric, Mr. Frederick Gant, F.R.C.S., Mr. John D. Hill, F.R.C.S. Dentist—Mr. Hasler Harris.

Seamen's Hospital (late *Dreadnought*), Greenwich, S.E.—Visiting Physicians—Drs. Stephen H. Ward and Charles H. Ralfe. Visiting Surgeon—Mr. Richard Rendle. Surgeon—Mr. W. Johnson Smith. House-Physician—Mr. John Lewtas. House-Surgeon—Mr. W. E. Cant.

West London Hospital, Hammersmith-road, W.—Number of beds, 68; in-patients, 407; out-patients, 20,647. Consulting Physician—Dr. Henry Maudsley. Consulting Physician-Accoucheur—Dr. W. O. Priestley. Consulting-Surgeons—Messrs. Samuel Armstrong Lane and William Bird. Physicians—Dr. Goddard Rogers and Dr. Thorowgood. Physician for Diseases of Women—Dr. Wiltshire. Surgeons—Mr. William F. Teevan and Mr. Alfred Cooper. Surgeon for Diseases of the Eye—Mr. B. J. Vernon. Junior Physicians—Dr. Fish and Dr. Ferrier. Junior Surgeons—Mr. J. A. Bloxam and Mr. H. T. Butlin. Surgeon-Dentist—Mr. H. E. Sewill. Analytical Chemist—Mr. William Crookes, F.R.S. Resident Medical Officers—Two House-Surgeons and an Apothecary. The practice of this Hospital is open to all students and members of the medical profession. Gentlemen desirous of acting as clinical clerks or dressers can obtain all information on application to the Secretary at the Hospital.

London School of Dental Surgery and Dental Hospital of London, 32, Soho-square, W.—The winter session will commence on Wednesday, October 1. Mechanical Dentistry, Mr. J. S. Turner; Metallurgy, Mr. G. H. Makins; Dental Surgery and Pathology, Mr. Cartwright; Dental Anatomy and Physiology, Mr. C. S. Tomes. Dental Surgeons to the Hospital—Messrs. Fox, Underwood, Gregson, Coleman, H. Harding, and Hill. Assistant Dental Surgeons—Messrs. Moon, Medwin, C. S. Tomes, Lane, Bartlett, and S. H. Cartwright. Dental House-Surgeon—Mr. Claude Rogers. Treasurer—Mr. Cartwright.

South London School of Chemistry and Pharmacy, 325, Kennington-road, and Central Public Laboratory, Kennington-cross, S.E. Director, Dr. Muter. Daily lectures in Classics, Chemistry, Physics, Botany, Materia Medica, and Pharmacy. Laboratory open for Practical Chemistry from ten till five. Special instruction for Medical Officers of Health in Water, Air, Gas, and Food Analysis.

Addenbrooke's Hospital, Cambridge.—Clinical lectures in Medicine and Surgery in connexion with the Cambridge Medical School are delivered at this Hospital twice a week during the academical year; and practical instruction in Medicine and Surgery, in the wards, is given by the Physicians and Surgeons daily, during the vacations, as well as term time.

Norfolk and Norwich Hospital.—150 beds. One year's attendance recognised by Examining Boards.—Fees: For the Physicians' practice, £10 10s.; for the Surgeons' practice—one year, £20; two years, £30; perpetual, £40. Pupils resident and non-resident. Physicians—Dr. Copeman, Dr. Eade, Dr. Bateman. Honorary Consulting Surgeon—Mr. Nichols. Surgeons—Mr. Firth, Mr. Cadge, Mr. Crosse. Resident Medical Officer—Mr. J. R. Bammgartner. Assistant-Surgeons—Mr. Williams, Dr. Beverley.

New Town Dispensary, 17, Tristle-street, Edinburgh.—Hour of visit, 2 to 3 daily. Medical Officers—Drs. Dyce, Cunynghame, Brakenridge, Affleck, Cadell, Dunsmure, Wyllie, Underhill, and Cumming. Vaccination on Tuesdays and Fridays, at twelve. Midwifery cases attended at their own homes by the pupils under the superintendence of Dr. Angus Macdonald. Practical Pharmacy at two and at seven. Fee for six months, £3 3s.; three months, £2 2s. Secretary to Medical Officers—Dr. R. J. Blair Cunynghame.

Glasgow Royal Asylum for Lunatics.—The Asylum contains nearly 600 patients, including all classes and rates. A limited number of pupils are permitted to witness the practice. Clinical instruction is given. Fee, £2 2s.

Royal Dispensary, Edinburgh.—Consulting Physician—Professor Sanders. Consulting Surgeon—Professor Spence. Consulting Physicians-Accoucheur—Dr. Keiller and Dr. J. Matthews Duncan. Medical Officers—Dr. William Stephenson, F.R.C.S.; Dr. Cairns, F.R.C.S.; Dr. Linton, F.R.C.P.; Professor Spence, F.R.C.S.; Dr. George W. Balfour, F.R.C.P.; Professor Sanders, F.R.C.P.; Dr. W. Husband, F.R.C.S.; Dr. James Andrew, F.R.C.P.; Dr. D. Wilson, F.R.C.S.; Dr. R. P. Ritchie, F.R.C.P.; Dr. F. W. Moinet, F.R.C.P. Midwifery Department—Dr. Wilson, Dr. Andrew, Dr. Cairns, and Dr. Stephenson. Vaccination—Dr. Husband. Apothecary—Mr. R. Urquhart. Secretary to Medical Officers—Dr. Andrew.

Edinburgh Eye Infirmary, 6, Cambridge-street, Lothian-road.—Number of beds, 6. Surgeons—Mr. B. Bell and Dr. Joseph Bell. Three months' attendance fee, £1 1s. Instruction in the use of the Ophthalmoscope is given. Hour of visit, one to two daily. Average number of out-patients, 900 to 1000.

Glasgow Eye Infirmary.—Physician—Dr. Harry Rainy. Consulting Surgeon—Dr. George Buchanan. Surgeons—Drs. William Brown and Thomas Reid. Assistant-Surgeons—Drs. M. Charteris, Robert Watson, Thomas Spence Meighan, and Hector C. Cameron. Secretary—George Black, 88, West Regent-street. Hour of visit, 1 p.m. Students' fee for six months' attendance, £2 2s.; or for one year's attendance, £3 3s. To those attending, or who have attended, the lectures on the Eye in Glasgow University, £1 1s. for six months, or £1 11s. 6d. for twelve months.

Royal Hospital for Sick Children, Meadowside House, Edinburgh.—Consulting-Physicians: Professor Sir Robert Christison, Bart., Drs. Charles Wilson, Graham Weir, and Matthews Duncan. Consulting-Surgeon: Professor Spence. Pathologist: Professor Sanders. Ordinary Physicians: Drs. Stephenson, Ritchie, Linton, and Brakenridge. Extra Physicians: Drs. James Dunsmure, jun., and James Andrew. Assistant-Physician: Dr. James Crawford Renton. Surgeon-Dentist: Dr. Smith. Ophthalmic Surgeon: Dr. Argyll Robertson. Resident Physician: Dr. P. Macpherson Grant. Honorary Secretary: Mr. John Henry, 10, St. Andrew-square. Fees: To hospital, three months, £1 1s.; to dispensary department, three months, £1 1s.

Dispensary for Skin Diseases, 63, John-street, Glasgow.—Physician—Dr. McCall Anderson. House-Physician—Dr. Provan. Number of new cases annually about 1400. Practical courses on Diseases of the Skin are held during the summer session. Fee for the course £1 1s. James Grahame, Hon. Secretary. This Dispensary is in connexion with the cutaneous wards in the University Hospital, which is at present in course of erection.

Glasgow Dispensary for Diseases of the Ear, 241, Buchanan-street.—A course of lectures and clinical instruction is given to the students attending the Dispensary during the months of May, June, and July. Average number of cases treated, 800 annually. Surgeon and Lecturer, James Patterson Cassells, M.D., M.R.C.S. Lond., F.F.P.S. Glasg.

The Aberdeen Royal Lunatic Asylum.—Contains about 450 beds. Physician and Clinical Teacher—Dr. Jamieson.

PRIVATE TEACHERS.

Mr. J. Erle Benham, 20, Deverenx-court, Temple, E.C. (formerly of King's College, London), has commenced to take his classes, and to give private instruction for the various Preliminary Examinations in Arts of the College of Surgeons.

Mr. E. Bellamy, F.R.C.S., 59, Margaret-street, Cavendish-square, W., reads privately with gentlemen preparing for the Fellowship and Membership Examinations of the Royal College of Surgeons.

Dr. Coales, LL.D., M.A., prepares candates in class or by private lessons for the following examinations:—London University: Preliminary, Scientific, and Matriculatiou. College of Surgeons: Preliminary, Fellowship, and Membership. Apothecaries' Hall: Preliminary Membership. Resident pupils received. 119, Gower-street, W.C.

Captain Demangel, B.ès.Sc., B.A. Lond., 5, Colville-road, Notting-hill, W., receives four resident and a few non-resident pupils. Preparation for Matriculation at the London University, and Preliminary Examination at Royal College of Surgeons and Apothecaries' Hall.

Mr. Hanbury, M.A., 24, Old-square, Lincoln's-inn, W.C., reads with his class for the Preliminary Examination in Arts, College of Surgeons, and for the Matriculation Examination of London University. Mr. Hanbury is assisted by efficient lecturers in French and Chemistry. Resident pupils are received in house at Clapham.

Mr. H. M. Hewitt, B.A. Camb. and Lond., double First-classman in Honours, 82, Gower-street, W.C., prepares for the London University examination, First and Second B.A., College of Surgeons, etc.

Mr. Thomas Lyle (of the University of London), Forest House, 89, Forest-road, Dalston, N.E., prepares gentlemen for the Examination in Arts at the Apothecaries' Hall and the College of Surgeons; also for matriculation at the London University. Resident pupils received.

Mr. Moxon (of the Dublin University), 31, Courtney-road, Highbury-hill-park, has vacancies for candidates for the Royal College of Surgeons Preliminary Examination, etc.

Mr. Murray, B.A., Arkteon House, Wray-crescent, Tollington-park, N., prepares for the Preliminary Examinations at Royal College of Surgeons and Apothecaries' Hall, and the Matriculation at University of London.

Mr. J. Pincott, F.R.G.S., Tellham House School, Brixton-hill, S.W., prepares for the Preliminary Medical and Law Examinations, and for the Matriculation Examination of the London University.

Rev. F. Pearce Pocock, M.A. Cantab., A.K.C., 26, Hillmarton-road, Camden-road, London, N., and 61, High-street, Hastings, prepares candidates for the Arts Examinations of the London University, College of Surgeons, and Apothecaries' Hall.

The Drs. Power continue daily their classes preparatory for the various competitive and pass examinations, at the Lecture-rooms, 8, Red Lion-square, Holborn, W.C.

Mr. F. A. White, B.A. (Classical and Mathematical Honours, Cambridge,), 52, Kensington-gardens-square, W., prepares for the Matriculation (London), College of Surgeons, etc.

[For fees, etc., see Advertisements.]

SUPPLEMENT TO THE STUDENTS' NUMBER

OF THE

MEDICAL TIMES AND GAZETTE.

Containing Advertisements of London and Provincial Hospitals and Medical Schools.

LONDON, SATURDAY, SEPTEMBER 13, 1873.

MIDDLESEX HOSPITAL.

The WINTER SESSION 1873-74 will open on WEDNESDAY, OCTOBER 1st, with an INTRODUCTORY ADDRESS, at 3 o'clock, by Mr. HENRY MORRIS, M.A. Lond., F.R.C.S.

LECTURES FOR WINTER SESSION.

Medicine: Dr. Greenhow, F.R.S. Surgery: Mr. De Morgan, F.R.S. Practical Surgery: Mr. Hulke, F.R.S., Mr. Lawson, Mr. Henry Morris, M.A. Lond. Diseases of the Eye: Mr. Hulke. Descriptive and Surgical Anatomy: Mr. H. Morris. Physiology: Mr. Lowne, F.L.S. Chemistry: Mr. Heisch. Pathological Anatomy: Dr. Cayley, Dr. John Murray. Practical Anatomy: Dr. R. Liveing and Mr. Hensman. Parasitic Diseases: Dr. Cobbold, F.R.S. College Tutor: Dr. R. Liveing. Clinical Lectures on Medicine and Surgery: The Physicians and Surgeons. Ditto on Diseases of Women and Children: Dr. J. Hall Davis. Ditto on Diseases of the Eye: Mr. Hulke, F.R.S.

LECTURES FOR SUMMER SESSION, COMMENCING MAY 1ST, 1874.

Midwifery and Diseases of Women and Children: Dr. J. Hall Davis. Materia Medica and Therapeutics: Dr. Thorowgood. Medical Jurisprudence: Dr. R. King, B.A. Cantab. Botany: Mr. Hensman. Practical Chemistry: Mr. Heisch. Practical Physiology and Histology: Mr. Lowne, F.L.S. Comparative Anatomy and Zoology: Mr. Hensman. Psychological Medicine: Dr. Henry Rayner. Clinical Lectures on Medicine and Surgery: The Physicians and Surgeons. Ditto on Diseases of the Eye: Mr. Hulke, F.R.S. Practical Demonstrations on Diseases of the Skin: Dr. R. Liveing. Ditto on Diseases of the Throat: Dr. John Murray.

HOSPITAL STAFF.

Consulting Physicians—Dr. F. Hawkins, Dr. A. P. Stewart, Dr. Goodfellow. Physicians—Dr. H. Thompson, Dr. Greenhow, F.R.S., Dr. R. Liveing. Obstetric Physician—Dr. J. Hall Davis. Assistant-Physicians—Dr. Cayley, Dr. John Murray, Dr. R. King. Consulting Surgeon—Mr. Shaw. Surgeons—Mr. De Morgan, F.R.S., Mr. Nunn, Mr. Hulke, F.R.S., Mr. Lawson. Assistant-Surgeons—Mr. Henry Morris, Mr. Andrew Clark. Dental Surgeon—Mr. Tomes, F.R.S. Assistant Dental Surgeon—Mr. Turner.

The Hospital contains 305 beds. There are special departments for Cancer (36 beds), for Diseases of the Eye, Diseases of Women and Children, and Syphilis. Demonstrations are given in the Out-patient Department on Diseases of the Skin, of the Throat, of the Ear, and of the Eye.

SIX RESIDENT CLINICAL APPOINTMENTS are open to the Students of the Hospital annually.

TWO ENTRANCE SCHOLARSHIPS, of the annual value of £25 and £20 respectively, each tenable for two years, are awarded at the commencement of the Winter Session.

TWO BRODERIP SCHOLARSHIPS, of the annual value of £30 and £20 respectively, each tenable for two years, are also awarded every year for proficiency in Clinical Knowledge.

The GOVERNORS' PRIZE of TWENTY GUINEAS is given annually to the Student who shall most have distinguished himself during his three years' curriculum.

TWO CLINICAL PRIZES, of the value of SIX and FOUR GUINEAS respectively, are awarded to the candidates who stand third and fourth in the competition for the Broderip Scholarships.

NUMEROUS VALUABLE CLASS PRIZES are also given.

ALL CLERKSHIPS and DRESSERSHIPS are awarded without fee.

The Clinical Clerk and Dresser of the Physician and Surgeon of the week dine at the Board Room Table, to have the opportunity of seeing accidents and other fresh cases admitted during the evening. A limited number of General Students are also allowed, under certain regulations, to dine at the Board Room Table.

The COLLEGE TUTOR *superintends and assists the Students, especially those who are preparing for examinations, without extra fee, and thus the necessity of obtaining private instruction is obviated.*

MEDICAL REGISTRAR, SURGICAL REGISTRAR, RESIDENT MEDICAL OFFICER, DEMONSTRATOR of ANATOMY.—These valuable appointments are open to qualified men as they become vacant.

GENERAL FEE for the curriculum required by the Royal College of Physicians and Surgeons and the Society of Apothecaries, £90, which may be paid by instalments.

Fee for DENTAL STUDENTS, Forty Guineas, which may be paid by instalments.

Some Members of the Staff receive Students as boarders.

For further information apply to the Dean or the Resident Medical Officer, at the Hospital.

MIDDLESEX HOSPITAL ENTRANCE SCHOLARSHIPS.—Two Scholarships of the annual value of £25 and £20 respectively will be offered for competition at the commencement of the Winter Session, 1873-74. Each Scholarship is tenable for two years, provided the Scholar conducts himself satisfactorily. These Scholarships are open to all gentlemen who commence their Medical Studies in October, 1873. Successful Candidates will be required to become general Students of the College. The Examination will take place on September 27th and following days, and the result will be declared on October 4th. For full particulars as to subjects of Examination, &c., apply to the Dean.

MIDDLESEX HOSPITAL COLLEGE DINNER.—The Annual Dinner of the Past and Present Students of the Hospital and their Friends will take place at ST. JAMES'S HALL on OCTOBER 1st, at 6.30 p.m., Dr. GREENHOW, F.R.S., in the Chair. The cost of the Dinner will be 7s. 6d., exclusive of Wine. Gentlemen intending to be present are requested to communicate with the Dean on or before September 30th.

JOHN MURRAY, M.D., Dean.

St. Bartholomew's Hospital and COLLEGE.

—The WINTER SESSION will begin on WEDNESDAY, OCTOBER 1st.

The Clinical Practice of the Hospital comprises a service of 710 beds, inclusive of 34 beds for convalescents at Highgate.

Students can reside within the Hospital walls, subject to the College Regulations.

For all particulars concerning either the Hospital or College application may be made, personally or by letter, to the Resident Warden of the College. A handbook will be forwarded on application.

St. Bartholomew's Hospital and COLLEGE.

SCHOLARSHIPS IN SCIENCE.

Two Scholarships in Science have been founded at St. Bartholomew's Hospital:—

1. An Open Scholarship of the value of £100, tenable for one year, to be competed for in September. The subjects of examination are Physics, Chemistry, Botany, and Zoology. The successful candidate will be required to enter at St. Bartholomew's Hospital in October next.

2. Preliminary Scientific Scholarship of the value of £50, tenable for one year, to be competed for in October next by Students of the Hospital of less than six months' standing. The subjects of examination are identical with those of the Open Scholarship.

For further particulars and syllabus of subjects, application may be made, personally or by letter, to the Warden of the College, St. Bartholomew's Hospital.

University of London.

MATRICULATION AND PRELIMINARY SCIENTIFIC EXAMINATIONS.

Two Classes are held at St. Bartholomew's Hospital in each year for the Matriculation Examination at the University of London—from OCTOBER to JANUARY, and from MARCH to JUNE.

(1) Classics, French, English, Modern Geography, & English History.	Malcolm Laing, M.A. Trin. Coll., Cambridge.
(2) Mathematics and Natural Philosophy	The Rev. E. S. Carlos, B.A. Trin. Coll., Cambridge.
(3) Chemistry	T. Eltoft, F.C.S.

Fee for the Course of Three Months ... Ten guineas.
Fee for (1) or (2) ... ... Five guineas.
Fee for (3) ... ... Two guineas.
The Class is not confined to Students of the Hospital.

Mr. Laing is prepared to hold a Class also for the Preliminary Examinations in Arts at the Royal College of Surgeons and Apothecaries' Hall.

PRELIMINARY SCIENTIFIC EXAMINATION.

A Class in the subjects required for the Preliminary Scientific Examination is held from January to July, and includes all the subjects required, as follows:—

Chemistry	H. E. Armstrong, Ph.D.
Botany	The Rev. G. Henslow, M.A. Cantab., Lecturer on Botany to the Hospital.
Zoology and Comparative Anatomy	W. S. Church, M.D. Oxon., Lecturer on Comparative Anatomy to the Hospital; late Lee's Reader in Anatomy at Christ Church, Oxford.
Mechanical and Natural Philosophy	P. J. Hensley, M.D. Cantab., Fellow of Christ's College, Cambridge, Tutor to the Hospital.

Fee to Students of the Hospital ... Six guineas.
To others ... ... Ten guineas.
Fee for any single subject ... ... Three guineas.

For further information application may be made, personally or by letter, to the Warden of the College, St. Bartholomew's Hospital.

Royal School of Mines.—Department of SCIENCE and ART.

—During the Twenty-third Session, 1873-74, which will commence on the 1st of OCTOBER, the following COURSES of LECTURES and PRACTICAL DEMONSTRATIONS will be given:—

1. Chemistry, by E. Frankland, Ph.D., F.R.S.
2. Metallurgy, by John Percy, M.D., F.R.S.
3. Natural History, by T. H. Huxley, LL.D., F.R.S.
4. Mineralogy, } by Warington W. Smyth, M.A., F.R.S., Chairman.
5. Mining, }
6. Geology, by A. C. Ramsay, LL.D., F.R.S.
7. Applied Mechanics, by T. M. Goodeve, M.A.
8. Physics, by Frederick Guthrie, Ph.D., F.R.S.
9. Mechanical Drawing, by Rev. J. H. Edgar, M.A.

The Fee for Students desirous of becoming Associates is £30 in one sum, on entrance, or two annual payments of £20, exclusive of the Laboratories.

Pupils are received in the Chemical Laboratory, under the direction of Dr. Frankland, and in the Metallurgical Laboratory, under the direction of Dr. Percy. These Laboratories will be reopened on October 1st.

Tickets to separate Courses of Lectures are issued at £3 and £4 each.

Officers in the Queen's Service, Her Majesty's Consuls, Acting Mining Agents and Managers may obtain Tickets at reduced prices.

Science Teachers are also admitted to the Lectures at reduced fees.

His Royal Highness the Prince of Wales grants Two Scholarships, and several others have also been established by Government.

For a Prospectus and information apply to the Registrar, Royal School of Mines, Jermyn-street, London, S.W.

TRENHAM REEKS, Registrar.

NOTE.—By order of the Lords of the Committee of Council on Education, the instruction in Chemistry, Physics, Applied Mechanics, and Natural History will be given in the New Buildings, in the Exhibition-road, South Kensington.

St. George's Hospital Medical School.

—The WINTER SESSION will commence on WEDNESDAY, 1st OCTOBER, with an Introductory Address by Mr. Brudenell Carter, at 2 p.m., in the Hospital.

Consulting-Physicians—Dr. Wilson, Dr. Pitman.
Physicians—Dr. Fuller, Dr. Barclay, Dr. Ogle, Dr. Wadham.
Assistant-Physicians—Dr. Dickinson, Dr. Whipham.
Physician-Accoucheur—Dr. John Clarke.
Consulting-Surgeons—Mr. Cæsar Hawkins, Mr. Cutler, Mr. Tatum.
Surgeons—Mr. Hewett, Mr. Pollock, Mr. Henry Lee, Mr. Holmes.
Assistant-Surgeons—Mr. Rouse, Mr. Pick.
Ophthalmic Surgeon—Mr. Brudenell Carter.
Orthopædic Surgeon—Mr. Brodhurst.
Aural Surgeon—Mr. Dalby.
Dentist—Mr. Vasey.

A Maternity Department and Departments for Ophthalmic, Dental, and Aural Surgery are arranged in connexion with the Hospital School.

LECTURERS.

Descriptive and Surgical Anatomy—Mr. Rouse.
Physiology and General Anatomy—Dr. Cavafy.
Physiological Histology—Mr. Herbert Watney.
Chemistry—Dr. Noad, F.R.S.
Physiological Chemistry—Mr. Moore.
Medicine—Dr. Barclay.
Psychological Medicine—Dr. Blandford.
Surgery—Mr. Holmes.
Ophthalmic Surgery—Mr. Brudenell Carter.
Orthopædic Surgery—Mr. Brodhurst.
Operative Surgery—Mr. Pick.
Pathology—Dr. Dickinson.
Midwifery—Dr. John Clarke.
Materia Medica—Dr. Dickinson.
Forensic Medicine—Dr. Wadham.
Aural Surgery—Mr. Dalby.
Dental Surgery - Mr. Vasey.
Botany—Dr. Whipham.
Comparative Anatomy—Dr. Cavafy.
Morbid Anatomy—Mr. Haward.

Clinical Lectures by the Physicians and Surgeons every week.

On payment of one hundred guineas at entrance, a Pupil becomes perpetual to the Hospital Practice and all the Lectures.

Compounders pay forty guineas on admission, forty guineas for the second year, and ten guineas for each subsequent year, until their payments shall have reached one hundred and ten guineas, when they become Perpetual Pupils.

Gentlemen may enter separately to Medical or Surgical Practice, or to any single course of Lectures.

Dental Pupils are admitted on payment of £45.

Special Courses of Physiological Chemistry and Microscopical Anatomy are now added to the Lectures on Physiology.

Demonstrations of Skin Diseases and Lectures on Public Health will form part of the course of Lectures on the Practice of Medicine; and Students will be required also to attend the separate course of Lectures on Pathology.

In connexion with the Lectures on Surgery, a course of Practical Surgery will be given, including the use of the Laryngoscope. A separate course of Lectures on Diseases of the Eye, with Demonstrations of the use of the Ophthalmoscope, will be given, as well as Demonstrations on Operations in Surgery. Attendance on each of these courses will be required of Surgical Pupils.

In the Maternity Department, special Clinical Instruction will be given on Diseases peculiar to Women, and Practical Instruction in Vaccination to those who require certificates of proficiency.

Courses of Lectures on Psychology and Comparative Anatomy are given during the Summer Session.

The appointments of House-Physician and House-Surgeon, which are held for twelve months, are filled up half-yearly from among the Senior Students, according to merit. These Officers now receive their board and lodging free, and no payment is made for the Appointment.

Clinical Clerks and Dressers are also appointed without payment, and provision is made that each Student should have the opportunity of holding these offices during his attendance.

The offices of Obstetric Assistant, Curator of the Museum, Medical and Surgical Registrars, and Demonstrator of Anatomy, with salaries of from £50 to £100 attached to each, are held out for competition annually. The William Brown Exhibitions of £100 per annum, tenable for two years, and of £40 per annum, tenable for three years, are bestowed after a competitive examination. The Brackenbury Prizes in Medicine and in Surgery, of £40 each, are awarded annually. Clinical Prizes are offered by Sir Benjamin Brodie, Dr. Acland, and by the Treasurer of the Hospital. Sir Charles Clarke's "Good Conduct" Prize, the Thompson Medal, and the H. C. Johnson Memorial Prize are also to be competed for each year. A general examination of all the Students is held at the end of the Summer Session, and Prizes and Certificates of General Proficiency are given to the most deserving.

Further information may be obtained from Dr. Barclay, the Treasurer, or Dr. Wadham, the Dean of the Medical School, and from any of the Lecturers and Medical Officers of the Hospital.

St. George's Hospital School Dinner.

—The ANNUAL DINNER of the ST. GEORGE'S HOSPITAL MEDICAL SCHOOL will take place at WILLIS'S ROOMS, King-street, St. James's, on WEDNESDAY, OCTOBER 1st, 1873.

Dr. ACLAND, Regius Professor of Medicine, Oxford, has kindly consented to preside.

Gentlemen desirous of being present are requested to send their names to J. WHIPHAM, M.B., Hon. Sec., St. George's Hospital.

Guy's Hospital.—The Medical Session

commences in October. The Introductory Address will be given by James Hinton, Esq., on WEDNESDAY, the 1st of OCTOBER, at 2 o'clock.

MEDICAL OFFICERS.

Consulting Physicians—Sir W. Gull, Bart., M.D., D.C.L., F.R.S.; G. Owen Rees, M.D., F.R.S.
Physicians—S. O. Habershon, M.D.; S. Wilks, M.D., F.R.S.; F. W. Pavy, M.D., F.R.S.; W. Moxon, M.D.
Assistant-Physicians—C. Hilton Fagge, M.D.; P. H. Pye-Smith, M.D.; Frederick Taylor, M.D.
Consulting Surgeons—J. Hilton, Esq., F.R.S.; E. Cock, Esq.
Surgeons—J. Birkett, Esq.; J. Cooper Forster, Esq.; Thomas Bryant, Esq.; Arthur E. Durham, Esq.
Assistant-Surgeons—H. G. Howse, M.S.; N. Davies-Colley, M.C.
Consulting Obstetric Physician—Henry Oldham, M.D.
Obstetric Physician—J. Braxton Hicks, M.D., F.R.S.
Assistant Obstetric Physician—J. J. Phillips, M.D.
Ophthalmic Surgeon—C. Bader, Esq.
Assistant Ophthalmic Surgeon—C. Higgens, Esq.
Surgeon-Dentist—J. S. A. Salter, M.B., F.R.S.
Assistant-Surgeon-Dentist—H. Moon, Esq.
Anral Surgeon—James Hinton, Esq.
Medical Registrar—Frederick Taylor, M.D.
Surgical Registrar—J. F. Goodhart, M.D.
Apothecary—James Stocker, Esq.

The Hospital now contains 715 beds. Of these, 221 are for Medical cases, 250 for Surgical, 26 for Gynæcological, 48 for Syphilitic, and 50 for Ophthalmic cases. There are also 30 children's cots and 84 reserve beds, with 8 in private rooms.

In connexion with the Lying-in Charity, about 2000 cases are annually attended by the Students.

Number of patients relieved during the year, about 81,000.

WINTER SESSION LECTURES.

Medicine—Dr. Wilks and Dr. Habershon.
Clinical Medicine—Dr. Habershon, Dr. Wilks, Dr. Pavy, and Dr. Moxon.
Surgery (including Demonstrations in Practical Surgery)—Mr. Birkett and Mr. Cooper Forster, assisted by Mr. Rendle.
Clinical Surgery—Mr. Birkett, Mr. Forster, Mr. Bryant, and Mr. Durham.
Anatomy (Descriptive and Surgical)—Mr. Durham and Mr. Howse.
Physiology and General Anatomy—Dr. Pavy and Dr. Pye-Smith.
Clinical Lectures on Midwifery and Diseases of Women—Dr. Braxton Hicks.
Chemistry—Dr. Debus and Dr. Stevenson.
Experimental Philosophy—

DEMONSTRATIONS.

Anatomy—Mr. Davies-Colley, Mr. Rendle, and Mr. Clement Lucas, Demonstrators.
Practical Physiology—Dr. P. H. Pye-Smith.
Morbid Anatomy—Dr. C. Hilton Fagge.
Cutaneous Diseases—Dr. C. Hilton Fagge.

Clinical Lectures in Medicine, Surgery, and Midwifery weekly.

Special Classes are held in the Hospital for Students preparing for the Examinations of the University of London and of the College of Surgeons.

The Museum of Anatomy, Pathology, and Comparative Anatomy (Curator, Dr. Fagge) contains 10,000 specimens, 4000 drawings and diagrams, an unique collection of Anatomical Models, and a series of 400 Models of Skin Diseases.

Gentlemen desirous of becoming Students must give satisfactory testimony as to their education and conduct. Fees:—£40 for the first year; £40 for the second; £20 for the third; and £10 for succeeding years of attendance. 100 Guineas in one payment entitles the Student to a perpetual ticket.

The House-Surgeons and House-Physicians, the Obstetric Residents, the Clinical Assistants, Dressers, Dressers in the Eye Wards, and Clinical Clerks are selected from the Students, according to merit.

Six Scholarships, varying in value from £25 to £40 each, are awarded at the close of each Summer Session for general proficiency.

Two Gold Medals are given by the Treasurer—one in Clinical Medicine, and one in Clinical Surgery.

A Voluntary Examination takes place at entrance, in Elementary Classics and Mathematics. The first three candidates receive respectively Prizes of £25, £20, and £15.

Several of the Lecturers have vacancies for Resident Private Pupils.

For further information apply to Mr. Stocker.

Guy's Hospital, July, 1873.

The London School of Dental Surgery

and DENTAL HOSPITAL of LONDON, 32, SOHO-SQUARE.—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1.

LECTURES.

Mechanical Dentistry—Mr. J. S. Turner, M.R.C.S., L.D.S., on Wednesday, at 7 p.m.
Metallurgy in its Application to Dental Purposes—Mr. G. H. Makins, M.R.C.S., F.C.S., on Friday, at 6.30 p.m.

The SUMMER SESSION will commence in MAY, 1874.

Dental Surgery and Pathology—Mr. Samuel Hamilton Cartwright, M.R.C.S., L.D.S., at 8 a.m.
Dental Anatomy and Physiology (Human and Comparative)—Mr. C. S. Tomes, B.A. Oxon., M.R.C.S., L.D.S., at 8 a.m.

General Fee for Special Lectures required by the Curriculum, £15 15s.

DENTAL HOSPITAL OF LONDON.

		Dental Surgeons.	*Assist.-Dental Surgeons.*
Monday,	9 a.m.	Mr. Fox...	Mr. Moon.
Tuesday,	,,	Mr. Underwood	Mr. Medwin.
Wednesday,	,,	Mr. Gregson	Mr. C. S. Tomes.
Thursday,	,,	Mr. Coleman	Mr. Lane.
Friday,	,,	Mr. H. Harding	Mr. Bartlett.
Saturday,	,,	Mr. A. Hill	Mr. Samuel Hamilton Cartwright.

Dental House-Surgeon, Mr. Claude Rogers, who attends daily from 9 a.m. to 2 p.m.

Fee for Two Years' Hospital Practice required by the Curriculum, £15 15s. Further particulars may be obtained on application to the Dental Officer of the day, or the Treasurer, Mr. S. Cartwright.

King's College, London.—Medical

DEPARTMENT.—The WINTER SESSION will be opened on WEDNESDAY, OCTOBER 1st, with an Introductory Address, at 4 p.m., by Professor Edgar Sheppard, M.D.

LECTURERS.

Anatomy, Descriptive and Surgical—Prof. John Curnow, M.D.
Physiology— } Prof. W. Rutherford, M.D.
Practical Physiology— } Demonstrator: Urban Pritchard, M.D.
Chemistry— } Prof. C. L. Bloxam, F.C.S.
Practical Chemistry— } Demonstrator: W. N. Hartley, F.C.S.
Medicine, Principles and Practice of—Prof. George Johnson, M.D.
Surgery, Principles and Practice of—Prof. John Wood, F.R.S.
Clinical Surgery—Prof. Sir William Fergusson, Bart., F.R.S.
Hygiene—Prof. W. A. Guy, M.B., F.R.S.
Botany—Prof. Robert Bentley, F.L.S.
Materia Medica and Therapeutics—Prof. A. B. Garrod, M.D., F.R.S.
Obstetric Medicine and the Diseases of Women and Children—Prof. W. Playfair, M.D.
Forensic Medicine—Prof. D. Ferrier, M.A., M.D.
Comparative Anatomy—Prof. T. Rymer Jones, F.R.S.
Pathological Anatomy—Prof. L. S. Beale, M.B., F.R.S.
Dental Surgery—Prof. Samuel Cartwright, F.R.C.S.
Ophthalmology—Prof. J. Soelberg Wells, M.D., F.R.C.S.
Practical Surgery—Prof. John Wood, F.R.S.
Psychological Medicine—Prof. Edgar Sheppard, M.D.
Dean of the Faculty—Prof. Bentley, F.L.S.
Medical Tutor—Evan B. Baxter, M.D.

KING'S COLLEGE HOSPITAL.

CLINICAL LECTURES are given five times a week by the Physicians and Surgeons. Clinical Instruction is also given in Diseases of the Throat and in Skin Diseases.

Physicians—Dr. G. Johnson, Dr. L. S. Beale, Dr. A. B. Garrod, Dr. Duffin.
Assistant-Physicians—Dr. Yeo, Dr. Kelly.
Physician for Diseases of Women and Children—Dr. W. Playfair.
Assistant Obstetric Physician—Dr. T. C. Hayes.
Surgeons—Sir W. Fergusson, Bart.; John Wood, F.R.C.S.; H. Smith, F.R.C.S.
Surgeon-Dentist—S. Cartwright, F.R.C.S.
Ophthalmic Surgeon—J. Soelberg Wells, M.D., F.R.C.S.
Assistant-Surgeon—H. Royes Bell, F.R.C.S.
Pathological Registrar—C. Kelly, M.D.
Sambrooke Registrars—R. Birch, M.R.C.S.; W. Rose, M.R.C.S.
Administrator of Chloroform—Charles Moss, M.R.C.S.
Vaccinator—W. Dunn, Esq.

An Ophthalmic Department and a Ward for Children are attached to the Hospital.

The Physician's Assistant, Physician-Accoucheur's Assistant, and House-Surgeon, as also their assistants, clinical clerks, and dressers, are selected by examination from among the Students, without extra fees.

SCHOLARSHIPS, REGISTRARSHIPS, AND PRIZES.

WARNEFORD SCHOLARSHIPS.—Students enter ng the Medical Department of this College in October, 1873, will have the exclusive privilege of contending for two Scholarships of £25 each for three years. These Scholarships are given for proficiency in Divinity, Classics, Mathematics, History, and English. The subjects may be ascertained by applying to the Secretary.

Five Medical Scholarships are awarded at the close of each Winter Session for proficiency in professional subjects—viz., one of £40 for two years, one of £30 for one year, and three of £20 for one year.

A Warneford Scholarship of £25 for two years is also annually awarded for proficiency in Divinity and Hospital Practice.

SAMBROOKE REGISTRARSHIPS.—Two of £50, tenable for two years, are annually awarded to matriculated Students of this department.

DANIELL SCHOLARSHIP.—One of £20, for two years, given for proficiency in Chemistry, is open to Students of the Medical Department.

Endowed Prizes, of the value of £25, £15, £10, and £4 4s. each, and College Prizes of the value of £60 are annually awarded.

For further information apply personally, or by letter marked outside "Prospectus," to J. W. Cunningham, Esq., Secretary.

Westminster Hospital Medical School.

—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st, when an Introductory Address will be delivered by Mr. Cowell. After the Address the Prizes will be distributed, and a Conversazione will be held in the Board-room.

There are numerous Prizes and Scholarships, and all the Resident Appointments, Registrarships, &c., are open to the students without additional fee.

HOSPITAL STAFF.

Physicians—Dr. Basham, Dr. Fincham, Dr. Anstie.
Assistant-Physicians—Dr. Gibb, Dr. Sturges, Dr. Allchin.
Surgeons—Mr. Holthouse, Mr. Pearse, Mr. Cowell.
Assistant-Surgeons—Mr. Davy, Mr. Cooke, Mr. Bond.
Obstetric Physician—Dr. Frederic Bird.
Assistant Obstetric Physician—Dr. Potter.
Surgeon in charge of the Eye Department—Mr. Cowell.
Surgeon in charge of the Skin Department—Mr. Bond.
Dental Surgeon—Mr. Walker.

LECTURERS.

Clinical Medicine and Surgery—Dr. Basham, Mr. Holthouse. Medicine—Dr. Anstie. Surgery and Practical Surgery—Mr. Pearse, Mr. Cowell. Anatomy—Mr. Davy. Dissections—Mr. Cooke, Mr. Ramsay. Physiology—Dr. Maclure. Practical Physiology—Dr. Allchin. Chemistry and Practical Chemistry—Dr. Dupré. Dental Surgery—Mr. Walker. Materia Medica—Dr. Sturges. Botany—Mr. E. M. Holmes. Midwifery—Dr. Bird. Pathology—Dr. Allchin. Forensic Medicine and Hygiene—Dr. Potter, Dr. Dupré. Psychological Medicine—Dr. Sutherland. Ophthalmic Surgery—Mr. Cowell. Skin Diseases—Mr. Bond. Comparative Anatomy—Mr. Carter Blake. Natural Philosophy—Mr. Brooke, F.R.S.

Numerous changes have been made so as to afford increased facilities for clinical and scientific study. Full particulars may be obtained from the published Prospectus, which will be forwarded on application.

The Examination for the Entrance Scholarships will be held on the 25th and 26th of September.

GEORGE COWELL, Dean of the School.

Westminster Hospital, Aug., 1873.

The London Hospital and Medical COLLEGE.

The next WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st, 1873, when the Introductory Lecture will be given, at 3 p.m., by M. Prosser James, M.D., Lecturer on Materia Medica at the College.

General Fee to Lectures and Hospital Practice, £90, payable in two instalments of £45 each. Library Fee, £1 1s. Special entries can be made to Lectures or Practice.

The Hospital contains 600 beds. There are Medical and Surgical Wards for Children, Wards for Syphilis, Special Departments for Diseases of Women, Diseases of the Eye, Diseases of the Ear, Diseases of the Skin, and special arrangements for Diseases of the Throat. A Maternity Department exists for the delivery of lying-in women at their own homes. 775 cases were attended last year by the Students of the Hospital.

For instruction in Mental Diseases, Students can attend, without further fee, the practice of Dr. John Millar, Medical Superintendent of Bethnal House Asylum, a few minutes' walk from the Hospital.

Clinical Lectures, both Medical and Surgical, will be given every week, and practical instruction imparted in all the Departments.

The In-patients during 1872 were 5392, and the Out-patients 64,275—total, 69,667.

At the Medical College, which has been enlarged, Lectures will be given on all the subjects required by the Examining Boards.

Members of the Staff and Lecturers at the College:—

Mr. J. Luke, F.R.S.	Dr. Fenwick.	Mr. Reeves.
Mr. John Adams.	Dr. Woodman.	Dr. Head.
Mr. Curling, F.R.S.	Mr. Jonathan Hutchinson.	Dr. Palfrey.
Dr. Herbert Davies.	Mr. Maunder.	Mr. Barrett.
Dr. Andrew Clark.	Mr. Couper.	Dr. Letheby.
Dr. Ramskill.	Mr. Walter Rivington.	Dr. Meymott Tidy.
Dr. Langdon Down.	Mr. Jas. Adams.	Dr. Prosser James.
Dr. Hughlings-Jackson.	Mr. Waren Tay.	Mr. J. E. D. Rodgers.
Dr. Morell-Mackenzie.	Mr. McCarthy.	Mr. Gilbert Baker.
Dr. Sutton.		Mr. A. Sanders.

The following Prizes and Appointments are offered, without any further payment, to Students paying the general fee of £90:—

Seven Scholarships to be offered for competition in the Winter Session:

1. A Scholarship of £30 to the Student of less than three months' standing who passes in October the best examination in the subjects required at the Preliminary Examinations.
2. A Scholarship of £20 to the Student of less than three months' standing placed second in the above examinations.
3. A Scholarship of £20 in Human Anatomy for first-year Students; to be awarded in April, 1874.
4. A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, for first-year and second-year Students; to be awarded in April, 1874.
5. A Hospital Scholarship, value £20, for Clinical Medicine; to be awarded in April, 1874.
6. A Hospital Scholarship, value £20, for Clinical Surgery; to be awarded in April, 1874.
7. A Hospital Scholarship, value £20, for Clinical Obstetrics; to be awarded in April, 1874.

The Duckworth Nelson Prize, value £10, for Practical Medicine and Surgery (Biennial), 1874.

Money Prizes to the value of £60 given annually by the House Committee for zeal in Dressing Out-patients and knowledge of Minor Surgery.

Certificates of Honour in all the Classes according to the results of the General Examinations at the end of the Session, and Special Certificates to those who have fulfilled with credit the duties of the Hospital Appointments.

Four House-Surgeoncies, tenable for three or six months, and Dresserships to In-patients, open to all.

Dresserships to Out-patients, with the privilege of competing for the Prizes above mentioned.

The office of the Resident Medical Officer, tenable for two years, with a salary of £75 the first year, and £100 the second year.

The office of Junior Resident Medical Officer, tenable for six months.

Four Medical Assistantships, held for three months, with residence and board in the Hospital for three weeks.

The office of Resident Accoucheur, tenable for six months.

N.B.—The holders of all the resident offices are provided with rooms and board free of expense.

Four offices of Clinical Assistants in the Out-patients' Department, each at a salary of £40.

The office of Medical Registrar, salary 25 guineas.

The office of Surgical Registrar, salary 35 guineas.

Prosectors of Anatomy, Ward Clerks, and Post-mortem Clerks.

A prospectus, giving details, will be forwarded on application to the Bedell of the London Hospital Medical College, Turner-street, E.

Further information may also be obtained from Mr. James E. Adams, Treasurer, 10, Finsbury-circus, E.C., or Mr. Waren Tay, Vice-Dean, at the Medical College.

University College, London.—The

SESSION of the FACULTY of MEDICINE will commence on WEDNESDAY, OCTOBER 1st, 1873. Introductory Lecture at 3 p.m., by Dr. F. T. Roberts, B.Sc.

LECTURES IN WINTER SESSION.

Medicine—Professor J. Russell Reynolds, M.D., F.R.S.
Practical Physiology and Histology—Professor Burdon-Sanderson, M.D., F.R.S.
Anatomy and Physiology—Professor Sharpey, M.D., F.R.S.
Chemistry—Professor Williamson, F.R.S.
Anatomy—Professor G. V. Ellis.
Comparative Anatomy—Professor Grant, M.D., F.R.S.
Surgery—Professor Marshall, F.R.S.
Practical Surgery—Mr. Berkeley Hill, M.B., F.R.C.S.; Mr. Christopher Heath, F.R.C.S.; Mr. Marcus Beck, M.S., M.B., F.R.C.S.
Dental Surgery—Mr. Ibbetson, F.R.C.S.

LECTURES IN SUMMER SESSION.

Botany—Professor Oliver, F.R.S., F.L.S.
Midwifery—Professor Graily Hewitt, M.D.
Medical Jurisprudence—Professor Maudsley, M.D.
Practical Chemistry—Professor Williamson, F.R.S.
Mental Diseases—Lecturer, W. H. O. Sankey, M.D.
Hygiene and Public Health—Professor Corfield, M.A., M.D.
Materia Medica and Therapeutics—Professor Ringer, M.D.
Palæozoology—Professor Grant, M.D., F.R.S.
Operative Surgery—Mr. Christopher Heath, F.R.C.S.
Pathological Anatomy—Professor H. Charlton Bastian, M.D., F.R.S.
Ophthalmic Medicine and Surgery—Professor T. W. Jones, F.R.S.
Analytical Chemistry—Professor Williamson, throughout the Session.

UNIVERSITY COLLEGE HOSPITAL.

Physicians—Sir W. Jenner, Bart., K.C.B., M.D., F.R.S.; Dr. Reynolds, F.R.S.; Dr. Wilson Fox, F.R.S.; Dr. Ringer; Dr. H. Charlton Bastian, F.R.S.
Obstetric Physician—Dr. Graily Hewitt.
Physician to the Skin Infirmary—Dr. Tilbury Fox.
Assistant-Physicians—Dr. F. T. Roberts, B.Sc., Dr. W. R. Gowers.
Assistant Obstetric Physician—Dr. John Williams.
Surgeons—Mr. Erichsen, Mr. Marshall, F.R.S., Sir Henry Thompson, Mr. Berkeley Hill, Mr. Christopher Heath.
Assistant-Surgeon—Mr. Marcus Beck, M.S., M.B.
Ophthalmic Surgeons—Mr. Wharton Jones, F.R.S., Mr. J. F. Streatfeild.
Dental Surgeon—Mr. Ibbetson, F.R.C.S.
Surgical Registrar—Mr. R. J. Godlee, M.B., B.S.
Assistant Medical Officer in the Skin Department—Mr. J. Tweedy, M.R.C.S.
Resident Medical Officer—Mr. Walter Rigden, M.R.C.S.

CLINICAL INSTRUCTION.

Medical Clinical Lectures by Prof. Sir Wm. Jenner, Prof. Reynolds, and Prof. Graily Hewitt; also by Dr. Wilson Fox, Holme Professor of Clinical Medicine, whose special duty it is to train the pupils in the practical study of disease. Dr. Roberts, the Assistant Teacher of Clinical Medicine, also gives special instruction in the methods of physical diagnosis and of clinical observation.

Surgical Clinical Lectures by Mr. Erichsen, Holme Professor of Clinical Surgery, Professor Marshall, and Sir Henry Thompson.

During the Summer Session Mr. Hill and Mr. Heath will instruct the first year's students twice a week in the observation and examination of patients.

Lectures on Ophthalmic Cases by Mr. Wharton Jones and Mr. Streatfeild.

Clinical Lectures on Diseases of the Skin by Dr. Tilbury Fox.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.

Three Entrance Exhibitions, of the respective values of £30, £20, and £10 per annum, tenable for two years.

An Atkinson Morley Scholarship for the promotion of the study of Surgery, £45 a year, tenable for three years.

Sharpey Physiological Scholarship, about £95 a year, tenable for three years.

Filliter Exhibition for proficiency in Pathological Anatomy, £30.

Liston Gold Medal for Clinical Surgery.

Dr. Fellowes's Medals for Clinical Medicine, two Gold and two Silver.

Alexander Bruce Gold Medal for Pathology and Surgery.

Cluff Memorial Prize, awarded every other year for proficiency in Anatomy, Physiology, and Chemistry.

The next Examination for the Entrance Exhibitions will be held on the 25th and 26th of September.

Prospectuses and the regulations concerning the Exhibitions and Scholarships may be obtained on application, either personally or by letter, at the Office of the College.

JOHN MARSHALL, F.R.S., Dean of the Faculty.
JOHN ROBSON, B.A., Secretary to the Council.

City of London Hospital for Diseases OF THE CHEST, VICTORIA-PARK.

CONSULTING PHYSICIANS.

Thomas B. Peacock, Esq., M.D. | J. Risdon Bennett, Esq., M.D.
Edmund Lloyd Birkett, Esq., M.D.

CONSULTING SURGEON.

John Hilton, Esq., F.R.S., Surgeon-Extraordinary to Her Majesty the Queen.

PHYSICIANS.

Stephen H. Ward, Esq., M.D. | John C. Thorowgood, Esq., M.D.
James Andrew, Esq., M.D. | Henry G. Sutton, Esq., M.B.

ASSISTANT-PHYSICIANS.

Augustus B. Shepherd, Esq., M.B. | W. H. Corfield, Esq., M.B.
Eustace Smith, Esq., M.D. | J. B. Berkart, Esq., M.D.

RESIDENT MEDICAL OFFICER.

George C. Franklin, Esq.

The Hospital affords accommodation for 164 In-patients. During the last year 763 cases were under treatment in the wards, and 13,535 were relieved as Out-patients.

In-patients admitted since the wards were opened in 1855, 9230; Out-patients admitted since the establishment of the Institution in 1848, 220,300.

Information respecting medical instruction at the Hospital may be obtained on application to the Physicians.

Offices, 24, Finsbury-circus, E.C.

Charing-cross Hospital Medical School.

—The WINTER SESSION will commence on WEDNESDAY, the 1st of OCTOBER, when the Introductory Address will be delivered by Edward Bellamy, F.R.C.S., at eight o'clock in the evening.

Two Entrance Scholarships of £30 and £20 respectively, the Llewellyn Scholarship of £25, the Golding Scholarship of £15, the Governor's Clinical Gold Medal, besides the usual Class Medals, are open to competition among the Students.

Three Resident Officers are selected from among the Students every six months.

MEDICAL OFFICERS.

Consulting-Surgeon—Henry Hancock, F.R.C.S.
Physicians—F. W. Headland, M.D., A. Julius Pollock, M.D., Alexander Silver, M.D.
Assistant-Physicians—T. Henry Green, M.D., R. Douglas Powell, M.D., G. V. Poore, M.D., J. Mitchell Bruce, M.D.
Surgeons—Edwin Canton, F.R.C.S., F. Hird, F.R.C.S., Richard Barwell, F.R.C.S.
Assistant-Surgeons—E. Bellamy, F.R.C.S., W. Fairlie Clarke, F.R.C.S., J. Astley Bloxam, F.R.C.S.
Physician-Accoucheur—J. Watt Black, M.D.
Physician for Diseases of the Skin—E. Sparks, M.B.
Dentist—John Fairbank, M.R.C.S.
Registrars—J. Mitchell Bruce, M.D., M. McHardy, M.R.C.S.
Chloroformist—Archer Farr, L.R.C.P. Edin., L.S.A.

LECTURERS.—WINTER SESSION.

Anatomy and Physiology—Alexander Silver, M.A., M.D.
Practical Histology—J. Mitchell Bruce, M.D.
Anatomy, Descriptive and Surgical—Richard Barwell, F.R.C.S.
Anatomical Demonstrations—J. Cantlie, M.A.
Chemistry—C. W. Heaton, F.C.S.
Medicine—F. W. Headland, B.A., M.D.
Surgery—Edwin Canton, F.R.C.S.
Clinical Medicine—A. Julius Pollock, M.D.
Clinical Surgery—Henry Hancock, F.R.C.S.

SUMMER SESSION.

Materia Medica—R. Douglas Powell, M.D.
Midwifery—J. Watt Black, M.A., M.D.
Botany—Edward Dowson, M.D.
Forensic Medicine—G. Vivian Poore, M.D.
Practical Chemistry—C. W. Heaton, F.C.S.
Pathology—T. Henry Green, M.D.
Psychological Medicine—W. J. Hunt, M.D.
Skin Diseases—E. Sparks, M.A., M.B.
Comparative Anatomy—A. H. Garrod, B.A.
Operative Surgery—E. Bellamy, F.R.C.S.
Bandaging, &c.—W. Fairlie Clarke, M.A., F.R.C.S.
Surgical Pathology—J. Astley Bloxam, F.R.C.S.

Fees for the full course of Lectures required by the University of London, the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries, £76 5s. (including the Matriculation Fee of £2 2s., involving no examination), which may be paid in five instalments. Composition fee for Dental Surgery, £42 2s.

Further information may be obtained by application to the Dean, at the Hospital.

A. J. POLLOCK, M.D., Dean.

Hospital for Consumption and Diseases

of the CHEST.—PUPILS are admitted to the practice of the Wards, and the Out-patient Department of the Hospital, on payment of a Fee of Three Guineas for three months, or Five Guineas for six months. Certificates of attendance on the Medical Practice of the Hospital are recognised by the University of London, the Apothecaries' Society, and by the Army, Navy, and Indian Board.

PHILIP ROSE, Hon. Sec.
Brompton, September 8, 1873. HENRY DOBBIN, Sec.

Royal Veterinary College, Great

COLLEGE-STREET, CAMDEN TOWN, LONDON.—OPENING of the WINTER SESSION.—The LECTURES will be commenced on WEDNESDAY, OCTOBER 1. The Introductory Address will be delivered by Professor Cobbold, M.D., at 1 p.m. The Educational Staff consists of—

Professor J. B. Simonds, Principal of the College and Lecturer on Pathology.
Professor W. Pritchard, Lecturer on Anatomy, General and Comparative, of Domesticated Animals.
Professor R. V. Tuson, F.C.S., Lecturer on Chemistry, Materia Medica, and Toxicology.
Professor G. T. Brown, Lecturer on Physiology, Therapeutics, and Pharmacy.
Professor T. S. Cobbold, M.D., F.R.S., Lecturer on Botany, Parasites, and Parasitic Diseases.
Assistant-Professor J. W. Axe, Demonstrator of Anatomy.

The Hospital Practice is conducted by Professors Simonds and Pritchard.

In addition to the Hospital Practice the Students have the daily advantage of attending the Examination of Horses for Soundness.

Hospital Surgeons are appointed annually to act under the Professors.

Monitors, Clinical Clerks, Dressers, and Prosectors are periodically selected from the Class.

Gentlemen intending to commence their studies this session will be required to present themselves for Matriculation on Thursday, the 25th of September.

The Matriculation Examination is conducted by the College of Preceptors. Fee 1 Guinea. College Entrance Fee 25 Guineas, the payment of which confers the right of attendance on all the Lectures and Collegiate Instructions, with the exception of Practical Chemistry.

Students are required to attend one Summer and two Winter Sessions at least before being eligible for Examination for the Diploma of the Royal College of Veterinary Surgeons.

A Life Subscriber of 20 Guineas, or one of 2 Guineas annually, to the Institution, is entitled to have admitted into the Infirmary, for medical and surgical treatment, an unlimited number of horses or other animals, his own property, at a charge only for their keep. Also to have the opinion of the Professors as to the treatment of any animal he may desire to retain in his own possession, without the payment of fees.

August 16th, 1873. JAS. B. SIMONDS, Principal.

St. Thomas's Hospital,

ALBERT-EMBANKMENT, WESTMINSTER-BRIDGE, S.E.—The MEDICAL SESSION for 1873 and 1874 will commence on WEDNESDAY, the 1st OCTOBER, 1873, on which occasion an Inaugural Address will be delivered by Dr. J. Harley, at Two o'clock.

Gentlemen entering have the option of paying £40 for the first year, a similar sum for the second, £20 for the third, and £10 for each succeeding year; or, by paying £105 at once, of becoming perpetual Students.

PRIZES AND APPOINTMENTS FOR THE SESSION.

The Wm. Tite Scholarship, founded by the late Sir Wm. Tite, C.B., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, was awarded last Session.

First Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, and £5.

Second Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, £5; the Dresserships and the Clinical and Obstetric Clerkships.

Third Year's Students—Winter Prizes, £20, £15, and £10; Mr. George Vaughan's Cheselden Medal; the Treasurer's Gold Medal; the Grainger Testimonial Prize; the two House-Physicianships; the two House-Surgeoncies; the Resident Accoucheurships. Two Medical Registrarships, at a salary of £40 each, are awarded to third and fourth years' Students, according to merit.

The Solly Medal, with a Prize of 10 Guineas, will be awarded at the end of the Session to a Student of the third, fourth, fifth, or sixth years, for the best Report of Surgical Cases.

MEDICAL OFFICERS.

Honorary Consulting Physicians—Dr. Barker and Dr. J. Risdon Bennett.
Honorary Consulting Surgeon—Mr. Frederick Le Gros Clark.
Physicians—Dr. Peacock, Dr. Bristowe, Dr. Clapton, Dr. Murchison.
Obstetric Physician—Dr. Barnes.
Surgeons—Mr. Simon, Mr. Sydney Jones, Mr. Croft, Mr. MacCormac.
Ophthalmic Surgeon—Mr. Liebreich.
Assistant-Physicians—Dr. Stone, Dr. Ord, Dr. John Harley, Dr. Payne.
Assistant Obstetric Physician—Dr. Gervis.
Assistant-Surgeons—Mr. F. Mason, Mr. Hy. Arnott, Mr. W. W. Wagstaffe.
Dental Surgeon—Mr. J. W. Elliott.
Resident Assistant-Physician—Dr. Evans.
Resident Assistant-Surgeon—Mr.
Apothecary—Mr. R. W. Jones.

Medicine—Dr. Peacock and Dr. Murchison. Surgery—Mr. Sydney Jones and Mr. MacCormac. General Pathology—Dr. Bristowe. Physiology and Practical Physiology—Dr. Ord and Dr. John Harley. Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe. Anatomy in the Dissecting-room—Anatomical Lecturers, Mr. Rainey and Dr. R. W. Reid. Practical and Manipulative Surgery—Mr. Croft. Chemistry and Practical Chemistry—Dr. A. J. Bernays. Midwifery—Dr. Barnes. Physics and Natural Philosophy—Dr. Stone. Materia Medica—Dr. Clapton. Forensic Medicine and Hygiene—Dr. Stone and Dr. Gervis. Comparative Anatomy—Mr. C. Stewart. Ophthalmic Surgery—Mr. Liebreich. Botany—Mr. A. W. Bennett. Dental Surgery—Mr. J. W. Elliott. Demonstrations Morbid Anatomy—Dr. Payne. Mental Diseases—Dr. Wm. Rhys Williams.

T. B. PEACOCK, M.D., Dean.
R. G. WHITFIELD, Medical Secretary.

For entrance or prospectuses, and for information relating to Prizes and all other matters, apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, S.E.

The Hospital for Sick Children,

49, Great Ormond-street, Queen-square, Bloomsbury.

The Practice of this Hospital, in both In- and Out-patient Departments, is open to Practitioners of Medicine and Students daily, on presenting their cards. Clinical Instruction in the Diseases of Children is constantly given by the Physicians and Surgeon.

Dr. West attends on Tuesday and Friday at 9 o'clock.
Dr. Dickinson attends on Monday and Thursday at 10 o'clock.
Mr. Thomas Smith attends on Wednesday and Saturday at 9 o'clock.

In the Out-patient Department, the Assistant-Physicians and Surgeon attend as follows:—

Dr. Gee—Tuesday and Friday at 9 o'clock.
Dr. Cheadle—Monday and Thursday at 9 o'clock.
Dr. Phillips—Tuesday and Friday at 9 o'clock.
Dr. Lee—Monday and Thursday at 9 o'clock.
Mr. Howard Marsh—Wednesday at 9 o'clock.

September, 1873. SAMUEL WHITFORD, Secretary.

Royal London Ophthalmic Hospital,

MOORFIELDS.

LECTURES DURING THE WINTER SESSION, 1873-74.

Mr. CRITCHETT will deliver a Course of Eight Lectures on "OPERATIONS on the EYE," to commence on Tuesday, October 21, at 12.30 p.m., and to be continued weekly at the same hour for two months.

Mr. SOELBERG WELLS will deliver a Course of Twenty CLINICAL LECTURES and OPHTHALMOSCOPIC DEMONSTRATIONS, to commence on Thursday, October 30th, at 4 p.m., and to be continued weekly at the same hour for five months.

Certificates will be given.

Both Courses will be open to Pupils of the Hospital. Terms for Pupils—Six months, three guineas; Perpetual, five guineas. Attendance every morning at 9 a.m. Operations daily at 11 a.m.

St. Peter's Hospital for Stone in the

BLADDER and DISEASES of the GENITO-URINARY ORGANS.

Surgeons—W. J. Coulson, Esq., F.R.C.S.; W. F. Teevan, Esq., B.A., F.R.C.S.

Patients are seen daily at 2 p.m., except Saturday, and on the evenings of Wednesday and Saturday at 6 p.m. Operations on Monday at 3 p.m. Lithotomy and Lithotrity on September 15.

Clinical Demonstrations and Practical Instruction will be given every week. The Practice of the Hospital is open free to all Students and Members of the Profession.

HOSPITAL FOR DISEASES OF THE THROAT,
GOLDEN-SQUARE, W.

HONORARY MEDICAL STAFF.

Consulting Physicians—Archibald Billing, M.D., F.R.S.; Sir William Jenner, Bart., M.D., F.R.S.
Consulting Surgeon—Sir William Fergusson, Bart., F.R.S.
Physicians—Morell-Mackenzie, M.D.; Hunter Semple, M.D.; M. Prosser James, M.D.
Surgeon—George Evans, Esq.
Assistant-Surgeon—Pugin Thornton, Esq.
Dentist—Oakley Coles, Esq.

The Medical Officers give daily Laryngoscopic Demonstrations on the cases under treatment.

The Hospital is open to occasional Professional visitors; but those who wish to acquire practice in the use of the laryngoscope by constant attendance are required to enter as Students.

Fee for Three Months' Instruction	£3 3 0
Perpetual Fee	5 5 0

Out-patients attend daily, at 2·30 p.m., and the Wards are visited when the out-patients have been seen.

Between 3000 and 4000 out-patients, and from 150 to 200 in-patients, are treated annually.

H. K. EVANS, Secretary.

St. Mary's Hospital Medical School.—

The INTRODUCTORY LECTURE by Dr. Shepherd, WEDNESDAY, OCTOBER 1st, 1873, at 8 p.m. To be followed by a *Conversazione* in the Board-room of the Hospital.

MEDICAL OFFICERS AND LECTURERS.

Consulting Officers—Dr. Chambers, Sir James Alderson, M.D., F.R.S., Dr. Sibson, F.R.S., Mr. Conlson, Mr. Lane, Mr White Cooper.
Physicians—Dr. H. Jones, F.R.S., Dr. Sieveking, Dr. Broadbent.
Assistant-Physicians—Dr. Cheadle, Dr. Lawson, Dr. Shepherd.
Surgeons—Mr. Spencer Smith, Mr. Haynes Walton, Mr. J. R. Lane.
Assistant-Surgeons—Mr. Gascoyen, Mr. Norton, Mr. Edmund Owen.
Physician-Accoucheur—Dr. Alfred Meadows.
Assistant Physician-Accoucheur—Dr. Wiltshire.
Surgeon in Charge of the Ophthalmic Department—Mr. Haynes Walton.
Aural Surgeon—Mr. Allen.
Surgeon-Dentist—Mr. Howard Hayward.
Medical Tutor—Dr. J. Reginald Stocker.
Other Lecturers—Dr. Wright, Dr. Randall, Mr. Mivart, F.R.S., Dr. Trimen.

The course of teaching at this School insures careful and complete preparation for all the Examining Boards, the Public Services, and the higher University Examinations. Special instruction is given to Students preparing for the Examinations of the University of London.

The Medical Tutor daily assists the Students in their clinical work and in preparing for the final Examinations, so that the training of every individual Student is supervised. Ophthalmic, Aural, and Dental Surgery, Comparative Anatomy, Histology, and Pathology are carefully and systematically taught both by Lectures and Practical Demonstrations. There are also departments for the Diseases of Women and Children, of the Eye and Ear, of the Skin and of the Throat.

SCHOLARSHIPS.

Three Scholarships of £40 for Three Years.
An Exhibition of £20 for One Year.

One of the Scholarships and the Exhibition awarded every year by open competition in Natural Science previous to entrance at the School.

A Scholarship of £20 in Anatomy, carrying with it the appointment of Assistant-Demonstrator.

A Scholarship of £20 in Pathology, carrying with it the appointment of Assistant-Curator.

These are awarded annually.

PRIZES.

Prizes are given in each class at the close of every session.

APPOINTMENTS.

Three House-Surgeoncies, each tenable for one year.
A Resident Obstetric Assistantship, tenable for six months.

These Resident Medical Appointments are open to the Pupils without expense of any kind, and are equivalent to four Scholarships of the annual value of £50.

In addition to the preceding, there are the following paid appointments, the holders of which are eligible for re-election.

The Resident Registrarship, of the value of £100 a year, with board and lodging.

The Demonstratorship of Anatomy, of the value of £50 a year.

The Medical Tutorship, of the annual value of £100.

For the Prospectus and Address to the Students by Sir Dominic Corrigan, Bart., M.D., M.P., apply to Mr. Knott, the Registrar, at the Hospital, or to

W. B. CHEADLE, M.D., Dean of the School.

West London Hospital,
HAMMERSMITH-ROAD, W.

Number of beds, 68. In-patients, 407; out-patients, 20,240.

Consulting Physician—Dr. Henry Maudsley.
Consulting Physician-Accoucheur—Dr. W. O. Priestly.
Consulting Surgeons—Samuel Armstrong Lane, Esq.; William Bird, Esq.
Physicians—Dr. Goddard Rogers; Dr. Thorowgood.
Physician for Diseases of Women—Dr. Wiltshire.
Surgeons—William F. Teevan, Esq.; Alfred Cooper, Esq.
Surgeon for Diseases of the Eye—B. J. Vernon, Esq.
Junior Physicians—Dr. Fish; Dr. Ferrier.
Junior Surgeons—J. A. Bloxam, Esq.; H. T. Butlin, Esq.
Surgeon-Dentist—H. E. Sewill, Esq.
Analytical Chemist—William Crookes, Esq., F.R.S.
Resident Medical Officers—Two House-Surgeons and an Apothecary.

The Practice of this Hospital is open to all Students and Members of the Medical Profession. Gentlemen desirous of acting as Clinical Clerks or Dressers can obtain any information on application to the Secretary, Mr. T. Alexander, at the Hospital.

Bethlem Hospital.—With a view of

extending the experience requisite for the efficient Medical Treatment and Management of the Insane, this Hospital is open for the admission of Two RESIDENT MEDICAL STUDENTS, who have recently obtained their diplomas to practise Medicine and Surgery.

They will be permitted to reside in the Hospital for a term generally not exceeding Six Months, and will be provided with such apartments, rations, and attendance as the Committee shall consider reasonable.

They will be under the direction of the Resident Physician, and will be elected by the Committee from candidates whose testimonials appear to be most satisfactory.

Applications for the Appointments, with testimonials, to be forwarded to Bridewell Hospital, Blackfriars, E.C., addressed to A. M. Jeaffreson, Esq., on or before Saturday, October 11th, 1873.

The Election will take place on the 13th of October, at Bridewell Hospital, and the elected candidates will be expected to commence residence on the 1st of November.

Candidates must attend at Bridewell Hospital on Monday, October 13th, at 12 o'clock.

September 13th, 1873. A. M. JEAFFRESON, Clerk, &c.

Royal Free Hospital,
GRAY'S-INN-ROAD.

Physicians—Dr. O'Connor, Dr. Cockle, Dr. Rickards.
Surgeons—Mr. De Méric, Mr. Gant, Mr. Hill.

There being a wide field for Medical and Surgical Practice at this Hospital, Students have excellent opportunities for gaining a bedside knowledge of Medicine and Surgery, and for the study of Pathology and Morbid Anatomy, and can prepare for examinations by attending a course of three or six months' Clinical Instruction. Vacancies for Clinical Clerks.

For particulars apply to any member of the Medical Staff, at the Hospital, daily at 2 p.m.

The Birmingham Clinical Board.—
THE GENERAL and QUEEN'S HOSPITALS, BIRMINGHAM.

THE GENERAL HOSPITAL.

Consulting Physician—George Fabian Evans, M.D.
Consulting Surgeon—D. W. Crompton, F.R.C.S.
Physicians—Dr. Fletcher, Dr. Russell, Dr. Wade, Dr. Foster.
Surgeons—Mr. Baker, Mr. Pemberton, Mr. Bartleet, Mr. Goodall, Mr. Jolly.

THE QUEEN'S HOSPITAL.

Consulting Surgeon—William Sands Cox, F.R.S.
Consulting Surgeon-Accoucheur—Samuel Berry, F.R.C.S.
Physicians—Dr. Fleming, Dr. Johnston, Dr. Heslop, Dr. Sawyer.
Surgeons—Mr. West, Mr. Gamgee, Mr. Furneaux Jordan, Mr. Wilders.
Obstetric Surgeon—Mr. John Clay.
Dental Surgeon—Mr. Charles Sims.

The Practices of these Hospitals are amalgamated for the purpose of Clinical Instruction, under the direction of the Birmingham Clinical Board, by whose order all Schedules will be signed and all examinations conducted.

The Hospitals have a total of upwards of 400 beds.

4500 in-patients and 45,000 out-patients are treated annually.

APPOINTMENTS.

At the General Hospital	Resident Medical Assistant Resident Surgical Assistant Two Resident Dressers.	Tenable for six months.
At the Queen's Hospital	Resident Medical Assistant Resident Surgical Assistant Resident Obstetric Assistant	Tenable for six months.

Clinical Prizes to the value of £40 will be given annually.

SCALE OF FEES.

Fees for attendance for Four Years	£31 10 0
One Year's attendance	15 15 0
Six Months' ditto	10 10 0
Special Department for Midwifery and Diseases of Women (optional)	2 2 0
Dental Fee (optional)	1 1 0

The fees are to be paid to Dr. Foster, 16, Temple-row, or Mr. John St. S. Wilders, Temple House, Islington-row, from whom any further information may be obtained.

The Owens College, Manchester.—

The SESSION 1873-74 will be opened in the New Buildings in Oxford-road.

PRINCIPAL—J. G. GREENWOOD, B.A.

PROFESSORS and LECTURERS.

Greek	Professor J. G. Greenwood, B.A., Fellow of Univ. Coll., Lond.
Latin	Professor A. S. Wilkins, M.A., Fellow of Univ. Coll., Lond.
Comparative Philology	
	Assistant Lecturer in Greek and Latin, Mr. Edwin B. England, M.A.
English Language and Literature	Professor A. W. Ward, M.A., Fellow of St. Peter's Coll., Camb.
Ancient and Modern History	Assistant Lecturer, Mr. T. N. Toller, M.A., Fell. of Christ's Coll., Camb.
Mathematics	Professor Thomas Barker, M.A., late Fellow of Trin. Coll., Camb.
	Assist. Lecturer, Mr. A. T. Bentley, M.A.
Natural Philosophy	Professor Balfour Stewart, M.A., LL.D., F.R.S.
Physical Laboratory	Professor Thomas H. Core, M.A.
	Demonstrators: Mr. F. Kingdon. Mr. A. Schuster, Ph.D.
Civil and Mechanical Engineering	Professor Osborne Reynolds, M.A., Fellow of Queens' Coll., Camb.
Geometrical and Mechanical Drawing	Assistant, Mr. John B. Millar, B.E.
Logic, and Mental and Moral Philosophy	Professor W. Stanley Jevons, M.A., F.R.S., Fellow of Univ. Coll., Lond.
Political Economy	
Jurisprudence and Law	Professor James Bryce, D.C.L., Fellow of Oriel Coll., Oxford.
	Assist. Lecturer, Mr. T. E. Holland, M.A., B.C.L., late Fell. of Exeter Coll., Oxford.
	Ditto, Mr. J. B. Gunning Moore, M.A.
	Ditto, Mr. Wm. R. Kennedy, M.A., Fell. of Pembroke Coll., Camb.
Chemistry	Professor H. E. Roscoe, B.A., Ph.D., F.R.S.
	Senior Demonstrator, Mr. C. Schorlemmer, F.R.S.
Chemical Laboratory	Junior Demonstrator and Assistant Lecturer, Mr. W. Dittmar, F.R.S.E.
	Assistant Demonstrators: Mr. W. C. Williams. Mr. H. Grimshaw.
Organic Chemistry	Lecturer, Mr. C. Schorlemmer, F.R.S.
Animal Physiology and Zoology	Professor W. C. Williamson, F.R.S.
Vegetable Physiology and Botany	
Practical Physiology and Histology	Professor Arthur Gamgee, M.D., F.R.S.
Geology and Palæontology	Lecturer, Mr. W. Boyd Dawkins, M.A., F.R.S., F.G.S.
Mineralogy	Lecturer, Mr. Charles A. Burghardt, Ph.D.
Oriental Languages	Professor T. Theodores.
German and Italian	
French Language and Literature	Lecturer, Mr. Hermann Breymann, Ph.D.
Free Hand Drawing	Lecturer, Mr. William Walker.
Harmony and Musical Composition	Lecturer, Mr. Fred. Bridge, Mus.B.

The next SESSION commences on the 7th October.

Candidates for admission must not be under fourteen years of age, and those under sixteen will be required to pass a Preliminary Examination in English, Arithmetic, and the Elements of Latin.

Prospectuses of the several departments of the Day Classes, the Evening Classes, and the Medical School, and of the Scholarships and Entrance Exhibitions tenable at the College, will be sent on application.

J. HOLME NICHOLSON, Registrar.

Manchester Royal School of Medicine,

incorporated with THE OWENS COLLEGE.

Principal—J. G. Greenwood, B.A.

Director of Medical Studies—George Southam, F.R.C.S.

LECTURERS.

General Anatomy and Physiology—William Smith, F.R.C.S.
Practical Physiology and Histology—Arthur Gamgee, M.D., F.R.S.
Descriptive Anatomy—Samuel M. Bradley, F.R.C.S.
Practical Anatomy—T. Beswick Perrin, M.R.C.S., F.L.S.
Comparative Anatomy and Botany—W. C. Williamson, F.R.S.
Chemistry—Henry E. Roscoe, B.A., Ph.D., F.R.S.
Medicine—Wm. Roberts, M.D., B.A., F.R.C.P.; J. E. Morgan, M.D., M.A., F.R.C.P.
Surgery—George Southam, F.R.C.S.; Edward Lund, F.R.C.S.
Physiology and Pathology of the Eye—Richard T. Hunt, M.R.C.S.
General Pathology—Henry Simpson, M.D., M.R.C.S.
Midwifery—John Thorburn, M.D., L.R.C.S.
Materia Medica—Alex. Somers, M.R.C.S.
Forensic Medicine—G. Morley Harrison, M.R.C.S.
Hygiene and Public Health—Arthur Ransome, M.D., M.A., M.R.C.S.
Clinical Medicine—The Physicians to the Royal Infirmary.
Clinical Surgery—The Surgeons to the Royal Infirmary.
Medical Tutor—T. Beswick Perrin, M.R.C.S., F.L.S.

The WINTER SESSION will commence on the 1st OCTOBER, 1873. The Opening Address will be delivered by Professor Gamgee, M.D., F.R.S. Attendance will be given from 12 to 1, at the College, Oxford-street, up to the 14th October, for registration.

Three Scholarships, of the value respectively of £20, £15, and £10; the Platt Physiological Scholarship of £50, tenable for two years; and the Dumville Surgical Prize, value £20, are offered for competition. Prizes are also awarded at the end of the Session.

A Fee of 40 guineas admits to the whole of the Lectures for qualification (except Practical Physiology), and a further Fee of 40 guineas to the Hospital Practice of the Royal Infirmary.

Prospectuses may be obtained from the Registrar, at the College or at the School.

J. HOLME NICHOLSON, Registrar.

The Queen's College, Birmingham.

(Incorporated by Special Act of Parliament.)

1873-74.

VISITOR—The Right Rev. the LORD BISHOP of the DIOCESE.

PRESIDENT—The Right Hon. the EARL of LICHFIELD.

VICE-PRESIDENT—The Hon. and Rev. G. M. YORKE, M.A.

WARDEN—The Rev. HARMAN CHALONER OGLE, M.A., Fellow of Magdalen College, and late Tutor of Magdalen College and Magdalen Hall, Oxford.

FACULTY OF MEDICINE.

The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st. The Introductory Address will be delivered by Professor Clay, at 3 p.m.

PROFESSORS OF THE MEDICAL FACULTY.

WINTER COURSES.

Medicine—James Russell, M.D. Lond., F.R.C.P., Physician to the General Hospital; Balthazar Foster, M.D., F.R.C.P., Physician to the General Hospital, Consulting-Physician to the West Bromwich Hospital.
Surgery—Oliver Pemberton, F.R.C.S. Edin., Surgeon to the General Hospital; Furneaux Jordan, F.R.C.S., Surgeon to the Queen's Hospital, Consulting-Surgeon to the West Bromwich Hospital.
Anatomy—Charles J. Braccy, M.B. Lond., Surgeon to the Children's Hospital, Senior Surgeon to the Hospital for Women; W. Thomas, M.B. Lond., F.R.C.S.
Physiology—Richard Norris, M.D.; T. H. Bartleet, M.B. Lond., F.R.C.S., Surgeon to the General Hospital.
Chemistry—Alfred Hill, M.D., F.C.S., Medical Officer of Health and Analyst to the Borough of Birmingham, and Analyst to the County of Warwick.
Demonstrators of Anatomy—Robert Jolly, M.D., F.R.C.S. Edin., Surgeon to the General Hospital; H. Campbell Pope, M.R.C.S.

SUMMER COURSES.

Midwifery—John Clay, M.R.C.S., Fellow of the Obstetrical Society; John Bassett, M.D., Fellow of the Obstetrical Society.
Diseases of Women and Children—Samuel Berry, F.R.C.S., Consulting Surgeon to the Children's Hospital and to the Hospital for Women; R. C. R. Jordan, M.D. Lond., Physician to the Children's Hospital.
Forensic Medicine and Toxicology—Thomas Swain, M.R.C.S.; Alfred Hill, M.D., F.C.S.
Practical Chemistry—Alfred Anderson, F.C.S.
Botany—William Hinds, M.D.
Materia Medica and Therapeutics—J. St. S. Wilders, M.R.C.S., Surgeon to the Queen's Hospital, and to the Eye and Ear Hospital; Edward Mackey, M.B. Lond., Extra Acting Physician to the Children's Hospital.
Ophthalmic Surgery—J. Vose Solomon, F.R.C.S., Surgeon to the Eye Hospital.
Dental Surgery—Thomas Howkins, M.R.C.S., Surgeon-Dentist to the Children's Hospital.
Comparative Anatomy—Thomas Savage, M.D., F.R.C.S., Surgeon to the Hospital for Women.
Registrar—R. Jolly, M.D.
Medical Tutor—H. Campbell Pope, M.R.C.S.

DEPARTMENT OF ARTS.

Sub-Warden—The Rev. Thomas Bates, M.A. Oxon.
Classics—The Rev. T. Bates, M.A.; William Bates, B.A. Lond.
Mathematics—The Rev. H. Edwards, M.A. Cantab.
French—Monsieur Jean O'Flanagan.
German—Dr. Karl Dammann.
Drawing—Mr. C. Docker.

SCHOLARSHIPS AND PRIZES.—Two Warneford Scholarships, the Sands Cox Prize (£20), the Warden's Prize, and Class Prizes are awarded annually.

FEES.—The Composition Fee for all the Lectures required by the Examining Boards is Fifty Guineas, payable by two equal instalments.

Students may reside within the College, under the supervision of the Warden and Resident Tutors. Fee, including rooms and board, £50 per annum.

In the Arts Department Students are prepared for the Matriculation Examination of the London University, or any of the Preliminary Examinations.

HOSPITAL PRACTICE.—Arrangements have been made whereby all Students of the College will in future attend the Clinical Lectures and Practice at both the General and the Queen's Hospitals for a common fee, and under such regulations as may from time to time be made by the Birmingham Clinical Board. The Fees for Hospital Practice (£31 10s.) are to be paid to either Dr. Foster, 16, Temple-row, or Mr. J. St. S. Wilders, Bath-row, Birmingham, Joint-Secretaries to the Birmingham Clinical Board. For details see College Prospectus.

The prospectus of the Medical Department, and further particulars, may be obtained by application to the Rev. the Warden, at the College; to Professor Foster, M.D., 16, Temple-row, Birmingham, Physician to the General Hospital, and Professor Wilders, Temple House, Islington-row, Surgeon to the Queen's Hospital, Honorary Secretaries to the Birmingham Clinical Board; or to Professor Swain, 62, Newhall-street, Hon. Sec. to the Professors.

Bristol Medical School.—The Winter

SESSION will commence on WEDNESDAY, OCTOBER 1. The following Courses of Lectures will be delivered:—

Anatomy—Mr. Board and Mr. Dobson.
Physiology—Mr. Atchley and Dr. Spencer.
Chemistry—Mr. Coomber.
Medicine—Dr. Martyn and Dr. Fox.
Surgery—Mr. Coe and Mr. Tibbits.

Dissections are superintended by Messrs. Chute, Lawrence, and Elliott.

Competitive Examinations are held amongst Students of the first, second, and third years respectively, and Prizes of Money, Instruments, and Books are awarded annually.

The Certificates of this School are accepted by all the Examining Boards.

The General Perpetual Fee is fifty-five guineas.

Medical and Surgical Hospital Practice and Clinical Lectures are attended at the Royal Infirmary or at the General Hospital, at which Institutions additional Prizes and Scholarships are annually offered for competition amongst the Students.

GEORGE FORSTER BURDER, M.D., Hon. Sec.

Medical School, Old Park, Bristol, August, 1873.

University of Durham.—College of

MEDICINE, NEWCASTLE-UPON-TYNE.—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st, at 2 p.m., when the President, Edw. Charlton, M.D., D.C.L., will present the Medals and Certificates of Honour to the successful candidates.

The Annual Report of the Council will be read by the Registrar, Luke Armstrong, M.D.

The Inaugural Address will be delivered by Luke Armstrong, M.D.

WINTER SESSION, commencing OCTOBER 1st, 1873.

Physiology—G. H. Hume, M.D.
Anatomy—T. C. Nesham, M.D.; Luke Armstrong, M.D.; and J. Russell, M.R.C.S.
Dissections—James Reoch, M.A., M.B., M.C.
Medicine—E. Charlton, M.D., and G. H. Philipson, M.A., M.D.
Surgery—G. Y. Heath, M.D.
Principles of Chemistry—A. F. Marreco, M.A.
Mental Diseases—T. O. Wood, L.R.C.P. Ed.
Practical Pharmacy—Barnard S. Proctor.

SUMMER SESSION, commencing MAY 1st, 1874.

Midwifery—C. Gibson, M.D.
Botany—H. E. Armstrong, M.R.C.S.
Medical Jurisprudence—B. Bramwell, M.D.
Therapeutics—Thomas Humble, M.D.
Materia Medica—W. C. Arnison, M.D.
Practical Chemistry—A. F. Marreco, M.A.
Operative Surgery—G. Y. Heath, M.D.
Pathological Anatomy—C. J. Gibb, M.D.
Practical Physiology—James Reoch, M.A., M.B.
Medical Tutor and Demonstrator—James Reoch, M.A., M.B.

Hospital Practice at the Newcastle Infirmary, which contains 230 beds, and in which the required Clinical Lectures are delivered. Number of patients last year, 16,696.

Composition fee, 17 guineas.

Four Resident Dressers are chosen from the senior Students every six months. Fee, £10.

Physicians—Dr. Charlton, Dr. Embleton, Dr. Philipson.
Surgeons—Dr. Heath, Mr. Russell, Dr. Arnison, Dr. Armstroug.
Assistant-Surgeons—Mr. A. Bell, Dr. Hume, Mr. J. Hawthorn, Mr. C. S. Jeaffreson.

Midwifery, Diseases of the Eye, and Insanity can be specially studied.

Composition fee to all the Lectures, 50 guineas.

The Laboratories, Libraries, and Museums are open daily.

Medical Scholarships in the University:—Four Scholarships at £25 a year, each tenable for four years by Students residing at Durham or Newcastle, and not of sufficient standing to proceed to a Licence in Medicine. A Scholarship will be awarded in October next.

Dickinson Memorial Scholarship—viz., £15, for general proficiency.

At the end of each Session a Silver Medal and Certificates of Honour will be awarded, after examination, to the best Students in each class.

By a recent Act of Convocation, the terms necessary for Degrees in Medicine and Surgery may now be kept by residence either at Durham or Newcastle.

LUKE ARMSTRONG, M.D., Registrar.
W. CHR. ARNISON, M.D., Secretary.

Newcastle-upon-Tyne, August, 1873.

The Wolverhampton and South

STAFFORDSHIRE GENERAL HOSPITAL. (A Clinical and Training Institution for Gentlemen intended for the Medical Profession.)

Founded 1848.—Beds 210.

MEDICAL OFFICERS.

Dr. Millington. | Mr. Vincent Jackson.
Dr. Totherick. | Mr. J. O'B. Kough.
Mr. C. A. Newnham.
House-Surgeon—Mr. Ravenhill.
Physician's Assistant—Dr. Nankivell.

This Hospital contains large Male and Female Accident Wards, Wards for cases of Burn, General Medical and Surgical Wards, a Ward for Diseases peculiar to Women, a Children's Ward, and a detached Fever wing; also a commodious semi-detached Out-patient Department. To the General Wards a Clinical Room is attached, in which the analysis and microscopic inspection of the Urine is conducted, also Ophthalmoscopic and Laryngoscopic examinations.

This Hospital is an excellent Institution for preparing and training gentlemen intended for the Medical Profession, and it offers to them unsurpassed opportunities of acquiring a complete professional groundwork and an elementary knowledge of medical subjects previously to their entering at a Medical College.

Instruction is given in Chemistry, in Natural Philosophy, and in the Anatomy of the Dry Bones, Ligaments, and Viscera.

The course of Practical Surgery includes the use of Surgical Apparatus, the performance of Surgical Operations, and the demonstration of Morbid Surgical Anatomy.

In the Hospital the pupils are required to attend daily in the Casualty Room, in the Out-patient Department, and in the Wards, the instruction afforded being of the most practical nature—including Bandaging, the Application of Splints, Tooth-drawing, and every kind of elementary professional detail; likewise how to observe and examine patients.

The art of Dispensing, the Preparation of Drugs, and of Pharmaceutical Compounds, can also be learnt in the Hospital Dispensary and Laboratory.

Operations are performed every Thursday, at eleven o'clock, and Practitioners are welcomed. The practice of the Hospital is recognised by all the examining boards.

Fees for Hospital Practice—One year, ten guineas; Perpetual, twenty guineas.

Some Members of the Honorary Staff receive Resident Pupils.

For further particulars apply to Mr. Vincent Jackson, Honorary Secretary to the Medical Committee, 46, Darlington-street, Wolverhampton.

Leeds School of Medicine.—The

WINTER SESSION will commence on WEDNESDAY, 1st OCTOBER. The Introductory Address will be delivered by Thomas Scattergood, Esq., at four o'clock.

LECTURES AT THE SCHOOL.

Anatomy—Mr. James Seaton, F.R.C.S., Dr. R. T. Land, Mr. J. A. Nunneley.
Physiology (including the Practical Course)—Messrs. C. J. Wright and James Walker.
Medicine—Dr. Heaton and Dr. Allbutt.
Surgery (including the Practical Course)—Messrs. Claudius G. Wheelhouse, F.R.C.S., T. Pridgin Teale, F.R.C.S., and T. R. Jessop, F.R.C.S.
Chemistry—Mr. Thomas Fairley.
Materia Medica—Dr. John Edwin Eddison.
Midwifery—Mr. William Hall.
Forensic Medicine—Mr. Thomas Scattergood.
Botany—Mr. Edward Atkinson.
Pathology—Dr. Eddison.
Comparative Anatomy—Mr. C. G. Wheelhouse, F.R.C.S., and Dr. Allbutt.
Demonstrators of Anatomy—Messrs. R. P. Oglesby, E. Robinson, and A. F. McGill.

Clinical Lectures are given by the Physicians and Surgeons to the Infirmary.

Ophthalmoscopic Demonstrations are given by the Surgeons to the Eye and Ear Department.

Demonstrations in Operative Surgery are given by the Lecturers on Surgery.

Demonstrations of Skin Diseases are given in the Infirmary.

Instruction in Vaccination is given by Mr. Holmes, one of the Public Vaccinators.

Besides the Infirmary, there is a large Dispensary and a Fever Hospital, both of which are open to Students of the School.

Special Prizes of the value of £10 each are given in the classes of Clinical Medicine, Clinical Surgery, and Forensic Medicine.

Silver and Bronze Medals are given in the Class Examinations.

Composition Fee, entitling to attendance upon all the required courses of School Lectures, 44 guineas. The fees for attendance upon the Medical and Surgical Practice of the Hospital are 20 guineas each for three years, and proportionally less for single sessions.

All applications for Tickets should be made to the Treasurer, Dr. Heaton, Claremont, Leeds. The Prospectus, and any further information about the School, may be obtained from the Secretary, Dr. Eddison, 29, Park-square, Leeds.

Leeds School of Medicine.—The

ANNUAL DINNER will be held at the GREAT NORTHERN HOTEL, at half-past five o'clock, on WEDNESDAY, OCTOBER 1st. Former Students and others interested in the School are invited to attend.

Tickets (price 7s. 6d. each, not including wine) may be obtained from Mr. Mayer, at the Hotel. Gentlemen who expect to be present are particularly requested to send their names to the Secretary as early as possible.

Sheffield School of Medicine.—

SESSIONS of 1873-4.—The WINTER SESSION will commence on WEDNESDAY, OCTOBER 1st, when the Introductory Lecture will be delivered by Henry Jackson, Esq., Fellow and Assistant-Tutor, Trinity College, Cambridge, in the Anatomical Theatre at 4 p.m.

LIST OF LECTURES.

Anatomy, Descriptive and Surgical—Mr. W. Skinner, Mr. E. Skinner.
Demonstrations of Anatomy—Mr. Clark, Mr. T. H. Morton; Vacant.
Physiology—Mr. Thos. Leeds and Mr. S. Morton.
Principles and Practice of Medicine—Dr. Frank-Smith.
Principles and Practice of Surgery—Mr. W. F. Favell and Mr. Parker, F.R.C.S.; Mr. A. Jackson.
Chemistry—Mr. Allen.
Dental Mechanics—Mr. G. Mosely.
Cliuical Medicine—Dr. Bartolomé, Dr. Law, and Dr. Frank-Smith.
Clinical Surgery—Mr. Barber, Mr. W. F. Favell, and Mr. Parker, F.R.C.S.
Practical Surgery—The House-Surgeon, at the Infirmary.
Practical Physiology—Dr. Thomas.

SUMMER SESSION, commencing MAY 1st, 1874.

Midwifery and Diseases of Women—Dr. Hime.
Materia Medica and Therapeutics—Dr. Young.
Medical Jurisprudence and Toxicology—Mr. Baker and Mr. Harrison.
Botany—Mr. Birks.
Comparative Anatomy—Mr. W. Jackson.
Practical Chemistry—Mr. Allen.
Dental Surgery—Dr. Merryweather.
Demonstrations of Pathology and Microscopy—The House-Surgeon, at the Infirmary.
Demonstrations of Operative Surgery—Mr. Favell and Mr. Parker, F.R.C.S.
Diseases of the Eye—Mr. Clarke.

Perpetual fee for attendance on all the Lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £42.

Prospectuses and all further information may be obtained upon application to the Hon. Secretary,

ARTHUR JACKSON, St. James's-row, Sheffield.

The Cavendish Medical and Surgical

HOME.—Trained and efficient RESIDENT NURSES are sent out from this Institution on the shortest notice. Patients can have the best accommodation, with every necessary for operations, &c. For particulars, &c., apply to the Directress, Mrs. Talbot, No. 13, New Cavendish-street, Portland-place, W., or to Mr. David Bain, Secretary. A separate establishment for ladies.

For continuation of Medical School and Hospital Advertisements, see second page after Literary Matter.

London: Printed by PARDON & SON, of 1, 2, and 3, Lovell's-court, Paternoster-row, in the City of London, and Published by J. & A. CHURCHILL, at the Publishing Office, 11, New Burlington-street, in the Parish of St. James, in the City of Westminster.—September 13, 1873.

ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture VII.—Valvular Diseases.

(*Continued from page* 222.)

Diagnosis, Prognosis, and Treatment.

Diagnosis.

In my last lecture I gave you a brief description of the different forms of valvular disease. I now proceed to speak of the symptoms by which they are severally characterised, and the means by which they may be detected during life.

1. *Obstructive Disease of the Aortic Valves.*—The appearance of patients labouring under this form of valvular affection is, if the disease do not exist to a very marked degree, rather that of persons in vigorous health. They have a flushed face and full, bounding pulse, and are liable to throbbing and sense of fulness in the head, and to palpitation, especially on using active exertion or under any excitement, while stooping, or after taking food, and especially after taking stimulants. They are also liable to fits, active hæmorrhages, and inflammatory affections of different organs, but especially of the brain.

On examining the chest the area of dulness in the region of the heart will be found large, and the impulse of the organ powerful. On auscultation, a murmur will be heard with the systole of the heart at the base, or about the level of the third cartilage, and this murmur will be propagated in the course of the aorta, so as to be loudly audible in the interspaces between the third and second and the second and first cartilages on the right side of the sternum. It may also be heard in the arteries of the neck, and frequently to the left of the spine posteriorly, though decreasing in intensity as we recede from the point of origin.

2. *Incompetency of the Aortic Valves.*—It has already been explained that this condition may be either primary or may supervene on obstructive disease. Whichever be its mode of origin, a patient labouring under regurgitation from the aorta into the ventricle presents generally a very different appearance from one in whom there is simple obstruction. He has usually a careworn, anxious expression of countenance, and is generally pallid, and complains of shortness of breath and faintness on exertion, and suffers not unfrequently from a transient feeling of unconsciousness on any active exertion or excitement. The temporal arteries are often observed to be contorted and beat visibly, and the same condition will be detected in the radial and other superficial arteries. In cases of this kind, and especially when the incompetency supervenes on previous obstructive disease, the area of the heart's dulness will be found to be increased, and especially on the left side, so that the apex is felt to beat further to the left than natural, and there is a soft murmur heard with the diastole at the base of the heart, or about the level of the third left cartilage, and propagated in the course of the ventricle down the left side of the mid-sternum.

There is also in these cases a very peculiar pulse, to which the terms *splashing*, *jerking*, *water-hammer*, have been given, but which is, I think, best indicated by the first term. This pulse is at one moment large and full, but rapidly disappears under the finger, and its peculiarity is readily understood when the incompetency of the valves and the condition of the left ventricle are considered. You will recollect that I have said that in cases of incompetency of the aortic valves the left ventricle becomes large and powerful; it must, therefore, throw a large column of blood into the aorta with much power at each beat, and hence the largeness and fulness of the pulse; but as, in consequence of the incompetency of the aortic valves, the blood immediately begins to regurgitate into the ventricle, the pulse rapidly disappears. These conditions equally explain the contorted forms of the arteries and their visible beat. The so-called splashing or regurgitant pulse exists, however, much the most characteristically in cases of obstructive and regurgitant disease of the aortic valves, and especially when the latter supervenes upon the former, and more particularly in men who have been accustomed to follow laborious occupations. In women and children, in whom the secondary changes in the left ventricle less readily ensue, the pulse seldom acquires its most characteristic form, though it may be often readily recognised. This kind of pulse is also much influenced by the position of the patient; thus, it will be made still more rapidly to disappear by causing the patient to sit up in bed or to stand, or even by simply raising the arm—the force of gravity in emptying the artery being thus added to the tendency of the blood to regurgitate during the diastole of the heart. In the combination of obstructive with regurgitant disease, the physical signs will readily be understood to combine the characteristics of the two separate forms of affection. In these cases the area of dulness is often very greatly increased—not usually in the vertical direction, for the weight of the heart causes it to drag downwards, and the ascending portion of the aorta becomes elongated, and the organ occupies a very oblique position, so that the dulness usually extends further on the left side and below the proper level, the apex of the heart beating to the left of the line of the nipple, and perhaps an inch and a half below that body in the fifth or sixth interspace. The murmur which is heard is a double one, to which the term "see-saw" may well be given. The first or systolic portion of the murmur is most loudly heard and most prolonged in the course of the aorta, or at the upper part and right side of the sternum; the second or diastolic portion is, on the contrary, most distinct and prolonged in the direction of the left ventricle or to the left of the middle third of the sternum. The murmur may therefore be indicated in the former situation thus—see-saw; in the latter thus—see-saw.

3. *Obstructive Mitral Disease* is generally seen in its most marked forms in young persons. They are often very delicate-looking, having a pale face, though generally with a slight flush about the cheeks and somewhat purple lips, and often the face is somewhat tumid. The pulse is generally small, and often quicker than natural, and the patients are subject to shortness of breath, and are very susceptible to cold, under which they suffer from various forms of chest affection. The area of dulness on percussion in the region of the heart is not very much altered, though it is generally increased on the right side. There is often a purring tumour to be felt at the apex. The murmur, which indicates the existence of narrowing of the mitral orifice, produced by the flow of the blood from the auricle into the ventricle, is heard at the time of the contraction of the auricles or immediately before the commencement of the ventricular contraction, and has hence received the name of *pre*systolic. When it exists in a characteristic form it is heard most distinctly between the left nipple and the lower end of the sternum. It is also heard at the point of pulsation of the apex of the heart, but is not loudly conveyed towards the left axilla, and is not heard, or only very indistinctly, at the lower angle of the left scapula. It has a peculiarly loud rough sound, and terminates quite abruptly.

4. *Mitral Regurgitation* is sometimes a primary, sometimes a secondary affection. When there is simple regurgitation from dilatation of the orifice or giving way of the chordæ tendineæ, the valves themselves being unaffected, so as not to be sources of obstruction, the symptoms and signs of the disease exist in their most characteristic form. The patient has a very livid and puffy face, the lips are purple, and the extremities much congested, and the feebleness of the circulation is shown by the colour very slowly returning into the integuments when they are blanched by compression. The pulse, also, is very feeble and sometimes quick, and from the dilatation of the left ventricle and the thinning of the walls which rapidly occur in these cases, the action of the heart often becomes irregular both in force and frequency, though it is by no means necessarily so in all cases. For the same reason the congestion of the lungs, of the parenchymatous organs, and of the system generally is also extreme. Bronchitis, œdema of the lungs, and pulmonary apoplexy generally occur, and the patient has great dyspnœa, troublesome cough, copious spumous dark or bloody expectoration, jaundice or albuminous urine, and head symptoms, and dropsy of the serous cavities and cellular tissue rapidly ensue. In such cases, also, the dilatation of the right side of the heart often becomes extreme, and there is incompetency of the tricuspid valve, shown by the pulsation of the jugular veins. The area of dulness is greatly extended in the longitudinal direction, both on the right and left sides. The pulsation of the apex of the heart is widely diffused, and is often not to be distinctly felt; and a murmur accompanies the systole of the heart, which is most loudly heard at the apex, is propagated

towards the left axilla, and is distinctly audible in the left, and often in the right, dorsal region.

In their simple forms obstructive mitral disease and regurgitant mitral disease are generally very readily recognisable by the physical signs; but often the two are combined, and, indeed, very generally incompetency ensues upon obstruction, the valves, which, in the first place, give rise to constriction, becoming ultimately hard and unyielding, so as not to close during the systole of the heart, and so allowing of regurgitation. In cases in which the two conditions exist the diagnosis is often attended with great difficulty. The murmur caused by the constriction should immediately precede that which indicates the occurrence of regurgitation, and it is often very difficult correctly to observe and analyse the sounds. These difficulties especially exist in cases which are advanced, in which the action of the heart is very irregular, and the murmur very imperfectly audible or entirely absent. Indeed in many such cases it is impossible to effect a decided diagnosis, and the nature of the disease can only be conjectured from the general symptoms. Tricuspid obstruction is of such rare occurrence that it is hardly necessary to dwell upon the diagnosis; and regurgitation through the right auriculo-ventricular aperture, though it is of common occurrence, and may undoubtedly occasion a murmur, is generally readily to be recognised from the pulsation which is observed in the jugular veins.

In addition to the physical signs which have been mentioned, others are occasionally detected, which, if of less practical importance, are nevertheless of great interest. Such are the cases in which murmurs which are distinctly musical are heard. I have known such murmurs to be heard in cases in which there were long, loose vegetations projecting from the aortic valves; and in one case, in which there was mitral incompetency from dilatation of the orifice, the valves not being diseased, the murmur was quite musical. Still more curious are those cases in which murmurs are heard so loudly as to be distinctly recognisable by the ear placed near the chest without the intervention of the stethoscope; and in some cases murmurs are heard at a considerable distance—one or two feet—from the patient, and often are unpleasantly audible to the patient himself. Some years ago I had a case of this kind in the hospital. The murmur was distinctly heard without the stethoscope on standing near the patient, and with the stethoscope it could be heard in the smallest arteries—those of the hand, and the dorsal artery of the foot.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

CASE OF

STRICTURE TREATED BY MR. F. JORDAN'S METHOD PER RECTUM.

By L. STROMEYER LITTLE, F.R.C.S., etc.,
Late Surgeon to the London Hospital.

A Portuguese seaman, aged 23, was admitted into the Shanghai General Hospital, suffering from stricture of the urethra. He stated that for more than a year he had had difficulty in making water, and that for some months he had only been able to do so by drops. He had often had gonorrhœa. He was a healthy muscular man; when examined, a large instrument passed easily about two inches and a half down the urethra and then came to a dead stop. The same occurred with all the various kinds and sizes of elastic and metal bougies. He passed water at the rate of a drachm a minute. He was kept quiet for some days, and then small instruments were tried through a Stromeyer guide catheter, but without success. The urethra, from the point where the stricture commenced down to the bulb, was very hard, but not much enlarged externally. Endoscopic examination afforded only negative results. When the patient had been three weeks in the hospital without any prospect of cure without operation, I determined to open the urethra from the rectum on Mr. Furneaux Jordan's plan, and either pass a bougie forwards from the wound in the rectum, thereby dilating the stricture, or by causing all the urine to pass per rectum for a time, give the strictured urethra rest, and then attempt its dilatation. The patient, after having been made to retain his urine for eight hours, was placed in the lithotomy position under chloroform, and, with the left forefinger in the rectum for a guide, the urethra was opened in front of the prostate to the extent of half an inch at least. An elastic *bougie à boule* was now passed from the wound towards the meatus, and although its point could be felt in the urethra in front of the scrotum it could not be passed further. Other kinds and sizes of bougies were tried with a like result. A large elastic catheter was now passed into the bladder from the rectum, and tied *in situ*, and forty drops of laudanum were given by the mouth.

The patient removed the catheter during the following night, but it was easily replaced in the morning. He did not suffer in any way from the operation. The catheter was retained three days, and on the fourth day, as the patient complained of passing urine by the penis, an attempt was made to pass a bougie through the penis, but without success. Three days later, however, a No. ½ elastic bougie was passed through and left in the stricture. This, after eight hours, was replaced by a larger one. From this date, every morning and evening the bougie was changed for a larger one, until No. 12 was passed. Up to this time the urine flowed entirely per rectum. As the stricture was now sufficiently dilated, a No. 12 catheter was passed every eight hours into the bladder and all the urine drawn off, so as to discourage any escape by the rectum. This treatment was continued for five days, when, on the morning of the fifth, the patient being unwilling or unable to hold his water until the catheter was passed, voided it naturally.

Examination with the speculum showed that the wound in the rectum was healed. The patient was discharged from the wards, provided with a bougie to keep his stricture dilated. One month later he presented himself in all respects sound.

Cases of stricture are common among the sailors in this hospital, and are usually treated by gradual dilatation; but as this case presented difficulties which could not be overcome without operation, and as the operation selected is still a novel one, the case is recorded. The operation did not seem to me quite so easy as it is described, but it is, doubtless, a safe way of opening the urethra without a guide, and very much simpler and less severe than by the perineum. Mr. Jordan recommends operating through a speculum, but I had not sufficient confidence in being able—with the speculum—to keep the middle line. In this respect, therefore, I departed from Mr. Jordan's valuable proceeding, discarded the speculum, and trusted to the forefinger as a guide. The subject of this case being a young man, the sphincter ani was very tight, and closed firmly on the finger and knife, hindering their movements. It would do no harm to divide the sphincter muscle, and such a proceeding would certainly make the operation easier. The operation seems suitable to many strictures which are not impermeable, for when the urine has not to pass over the stricture, dilatation can proceed much more rapidly, with less pain, with less inflammation, and, consequently, with less constitutional disturbance.

Shanghai.

ON PROFESSOR ESMARCH'S MODE OF PERFORMING BLOODLESS OPERATIONS.

By WILLIAM MACCORMAC,
Surgeon to St. Thomas's Hospital.

The importance of the simple and efficient method briefly described by Professor Esmarch at the second Surgical Congress in Berlin, for preventing loss of blood during operations on the limbs, appears to me so great, that I take the earliest opportunity of communicating my experience on the subject, brief though it be.

A little girl, 5 years old, struck the left tibia, twelve months ago, against a stone; necrosis followed, and when admitted to Hospital a year afterwards a sequestrum could be felt in the tibia enclosed by a considerable thickness of new bone. Whilst the patient was being chloroformed, I applied, pretty tightly, an ordinary elastic bandage from the toes to the middle of the thigh. The bandage was two inches wide and five yards in length, and, thus applied, the bandage forced all, or nearly all, the blood from the limb into the body. When the patient was fully narcotised, I wound a half-inch indiarubber rope around the thigh immediately at the upper border of the bandage, and sufficiently tightly to obstruct all the afferent vessels. Hooks previously attached to the extremities of the rope furnished a ready means of fastening it, as well as of removing it at plea-

sure. The bandage first applied was now unrolled, when the limb presented a blanched appearance. The operation was then commenced; some new bone removed, so as to get at and take away a considerable-sized sequestrum. During the entire time not a single drop of blood appeared in the wound; a sponge was not once required, and the facility with which the operation was conducted and finished requires to be seen to be realised. The tissues were divided, so far as bleeding was concerned, just as they might have been on the dead body. This operation was performed in St. Thomas's Hospital on August 16 in the present year, Esmarch's method for producing local anæmia being then practised, I believe, for the first time in Britain. Since the operation the little patient has progressed very favourably, and, although carefully watched, no peculiarity which might be attributed to the use of the apparatus has been observed either in the wound or in the limb.

Since then other operations for necrosis have been performed, and an excision of the knee lasting thirty-five minutes, also an amputation of the thigh, and in no instance has one single drop of blood been lost. The advantages of such a plan are so palpable as not to need much insisting upon. The generality of hospital patients can ill spare a serious loss of blood, and such a loss often proves inevitable during operations for extensive necrosis of bone. In amputations the greater part of the blood of the lost extremity is preserved, to the advantage of the patient. The duration of operations will be much shortened, as there is neither blood nor the constant dabbing of sponges into the wound to remove it, to interfere with the surgeon's sight. No accident or ill consequence at all appears to follow the use of the apparatus. In cases where amputations require to be performed for gangrene, or where there is a deposit of septic material in the limb about to be operated upon, there might be a risk of the elastic bandage forcing some portion of the septic material into the circulation. In the further use of the apparatus this possibility must be kept in view. Anyone will be surprised, in trying it upon his own arm, to find what a small amount of pressure of the india-rubber rope will stop the pulsation of the radial artery, and the femoral can also be stopped with no great exercise of force. Doubtless the history of surgery abounds with many attempts to empty limbs of blood previous to amputation, and to arrest hæmorrhage during their performance. Stromeyer, in 1853, as he relates in his "Maxims," adopted a plan precisely similar in principle, in an operation on a brachial aneurism. He bandaged the limb to a point just above the aneurism, and then applied a tourniquet. The loss of blood was very small during the operation. Billroth mentions that when he was assistant to Von Langenbeck in 1853 and 1854 a somewhat similar plan was tried in the clinique in Berlin. Vanzetti, of Padua, relates in the *Italian Medical Gazette* that Dr. Silvestri, in Vicenza, has employed bandaging and the indiarubber rope compression above it in amputations; but, this notwithstanding, to Professor Esmarch must be attributed the credit of devising and making known a most simple, practicable, and efficient plan for wholly preventing loss of blood during operations, of whatever kind, when performed upon the extremities of the body.

TREATMENT OF DELIRIUM TREMENS AND ALLIED DISEASES BY LARGE DOSES OF DIGITALIS.

By FREDERICK IRVING DE LISLE, L.R.C.P.,
Medical Officer of the St. Peter Port Hospital, Guernsey.

As the attention of the profession has been directed to this subject by the inquest alluded to in your article headed "The Relations between Prescribers and Dispensers," the reports of the following cases in which digitalis has been administered with the best results, when opium and morphia in large doses, so greatly relied upon and advocated by some members of the profession, have failed, may prove interesting, more especially as it appears, from the communications forwarded to the *Kent Coast Times*, that some practitioners are either ignorant of its beneficial effects in this disease, or that large doses are well tolerated in delirium tremens, and that it is both justifiable and incumbent on the practitioner prescribing digitalis to do so boldly—giving doses, in fact, that, if experience had not proved otherwise, would be excessive.

I had not intended to publish these cases, as I fancied that the subject was almost threadbare: many contributions on the subject having appeared in the various medical journals since the time when that illustrious practitioner who once graced our sister isle—Mr. Jones, of Jersey—first wrote on the subject, and Drs. Garrod, Ringer, and others having alluded to it in their works on therapeutics.

I have selected these two cases out of my notes of several, as the presence of cardiac affections might have deterred many, as I was deterred at first, from administering this drug. It may not be out of place to add that, owing to the cheapness of spirits, delirium tremens is of deplorably frequent occurrence amongst the poorer classes here.

Case 1.—*Lumbago accompanied and followed by Delirium Tremens.*

Timothy T., aged 30, a coachman. Patient has lived and drunk hard; has been exposed to wet and vicissitudes of weather. Has been troubled with cough, unaccompanied by expectoration, for the last two or three years. Is unmarried, and has suffered from every form of disease incidental to youthful indiscretion. Never had rheumatic fever, but has suffered from chronic rheumatic pains for some years, always increased by exposure to wet and cold. For the last year he has noticed that he has become very short of breath, "quite broken-winded," and has been attacked with palpitation of the heart when walking fast up hills, when running, and doing any hard manual labour. Family history good. Patient is tall and slightly built, but well knit.

July 27.—Patient lies straight in bed, and moves with great difficulty owing to pain in the back. Pain is increased by pressure. Most tender part is at third lumbar vertebra. Is covered with clammy perspiration, acid in reaction. Urine acid, and deposits red sand on cooling. Pulse 80, soft and compressible; temperature normal; pupils dilated; respiratory sounds healthy. Heart: There is a regurgitant mitral bruit, an exocardial creaking, and a slight roughness with the systolo at the base, heard along the course of the aorta. Tongue bright red and abnormally clean, not tremulous. Ordered ℞. Pot. iodidi ʒ j., pot. bicarb. ʒ ij., tinct. guaiaci, mucilaginis gum acaciæ āā ℥ss., aq. camph. ad ʒvj.—one tablespoonful to be taken every four hours. ℞. Liq. morph. acet. (P.B.) ʒ j., aq. ad ʒij.—half at 10 p.m., and to be repeated an hour after if necessary.

28th.—Pain is greatly alleviated. The draught produced some slight heaviness, and patient dozed for about half an hour, but did not sleep. Pulse 86. To repeat the draught ordered yesterday. 10 p.m.: I was summoned in great haste, as he was raving and perfectly intractable. Patient was quiet on my arrival, but complained of excruciating pain in the lumbar region; said that since six o'clock it had been so intense as to madden him and prevent his lying in bed, and, although still great, was to some extent alleviated. He had taken the whole of the draught without any effect. A grain of morphia was injected subcutaneously in three times, after which the patient appeared to be dozing off. I then left.

29th.—Did not sleep, although he was relieved from the pain. The pain has returned this morning. Pulse 78, soft and compressible; skin clammy. Ordered emp. lyttæ 14×6, to be applied across the loins. ℞. Liq. morph. acet. ʒ iij., aq. camph. ad ʒij.—half at bedtime, and the remainder an hour after if necessary. Repeat the mixture.

30th.—The blister has risen well and the pain is relieved, but patient was unable to sleep last night. Tongue clean; pulse 80, soft and compressible. Repeat the draught.

31st.—Pain gone, but still no sleep. Urine scanty and high-coloured. Bowels confined. Skin moist and clammy. Appetite very small; patient manages to take a little milk and beef-tea, about half a pint of each, during the day. Tongue clean, not tremulous. Pulse 80. Ordered ℞. Tinct. hyoscyami ʒ ij., aq. camph. ad ʒiij.—half at bedtime, and to be repeated in an hour if necessary. Sulphur as a laxative.

August 1.—No appetite; pupils dilated; tongue clean, not tremulous; no sleep. Am informed that when I am away patient whistles and sings, and often tries to get out of bed, and at night is delirious and sometimes violent. Bowels confined. Ordered ℞. Tinct. opii ʒ vj., aq. camph. ad ʒvj., a sixth part to be taken every hour until sleep is produced. ℞. Pulv. jalapæ co. ʒ ss. to be taken the first thing to-morrow morning. Not to have a light in his bedroom. To be allowed an ounce and a half of whisky during the day.

2nd.—No sleep. Bowels freely opened by powder, which was given last night by mistake. Patient howled, screamed, and sang. At about five this morning he became so violent

that the attendants were frightened and left him, locking the doors to prevent his egress. He nevertheless escaped by the window and went to the stables. He returned quietly to bed on being ordered to do so by his master. Complains that he sees imps and monkeys looking in at the window, and grinning at him. Pulse 82; skin clammy; tongue clean, not tremulous. Ordered ℞. Inf. digitalis ℥viij., one ounce to be taken every two hours while the restlessness continues. If the patient becomes quiet the dose to be reduced to half an ounce, and the interval to be four hours between the doses.

3rd.—After taking the first dose of the medicine patient became calm, and almost immediately after the second dose—10.30 p.m.—he dropped off into a sound sleep, from which he did not awake until eleven o'clock the following morning. Pulse 76, full and strong; skin moist and warm; tongue clean, but rather red. Patient is perfectly rational and calm. Ordered to take half-ounce doses of the infusion of digitalis every four hours.

After this the patient had no return of his delirium, but remained under my care for rheumatism until August 7, when he was sufficiently recovered for me to take my leave, although he was still weak. Notwithstanding the success attending the treatment of this case, it had a melancholy ending. On August 8 after doing his morning work in the stable, the patient's master, who had treated him with the greatest kindness and consideration during his illness, and had even sat up one night with him, told him that he might remain quiet for the rest of the day, but ordered him not to leave the premises. This order he disobeyed, and made calls at several public houses, and about eight that evening found himself at the Cobo Hotel, separated from the beach by the road. He remained drinking in the bar, and left the house about nine o'clock. The next morning he was found on the beach, in front of the hotel, about six feet below high water-mark, quite dead, lying on his face with his arm under his forehead. There was a bruise under the left eye, and blood had issued from the left nostril, staining his neckerchief, shirt, and the stones on which his face rested. His clothes were wet, and death was caused by drowning. The way in which he came by his death in my opinion was this. After leaving the inn, he went down on the beach, and when walking along he tripped and fell forward, receiving the blow before alluded to, by striking against a stone that was sticking up, and against which the left side of his face was found resting. The stunning effects of the blow, coupled with the stupefying effects of the spirits he had drunk, sent him into a deep sleep, and the tide, which was flowing, rose over him and drowned him.

Case 2.—Rheumatic Cerebritis.

Mrs. S., aged 40, sent for me on September 10, 1872. Found her in bed in a very excited state; said that she had been unable to sleep for three nights, and attributed the sleeplessness to pains in her limbs; said that she had been wet through about a week previously, and had suffered ever since—the pains had been more intense during the last three days. Pulse 90, small and compressible; tongue furred and very slightly tremulous. Heart was not examined, as there was too much noise going on to allow of its being done satisfactorily. The woman was the wife of a sergeant now pensioned off, and had drunk hard and lived badly in every way for many years. Had never had rheumatic fever, but had suffered from pains in the limbs, which she attributed to rheumatism, after every exposure to wet and cold. Ordered a pill containing one grain of opium and one grain of extract of henbane every two hours; beef-tea and milk *ad libitum*, and no alcoholic stimulant. I may here state that this woman was in about the worst kind of room that can be conceived for treating a case of delirium. Adjoining the premises were some steam flour and saw mills that were constantly at work, and the rattle of which was plainly heard in the room; below there was a carpenter's shop, with several men at work, and the noise of sawing, hammering, and other things incidental to their work was most distracting to my patient; and lastly, the neighbourhood swarmed with children, who played in the courtyard just under her windows.

September 11.—Has had no sleep. Has fancied that devils and other abominations were running about her room all night. Pulse 96, small and compressible; tongue furred, and not tremulous; skin moist and clammy. Has taken about a pint of beef-tea and about a quart of milk. She is very thirsty, and drinks large quantities of cold water, and is very abusive to the attendants because they will not give her any gin. The amount of opium in each pill to be increased to two grains, and to be taken every hour.

12th.—Has had no sleep, but has shrieked, screamed, and sworn all night long, and disturbed the neighbours. Has taken her pills regularly; has taken fifty-four grains of solid opium in thirty-six hours, without any sedative effect being produced. Tongue furred; bowels continue open; pulse 88, small and compressible; skin clammy. Ordered inf. digitalis ℥j. every second hour. Evening: Has remained quiet ever since about half an hour after taking the first dose of the mixture, but has been kept awake by the noise. Everything has been quiet now for the last hour; is inclined to doze. Pulse 70, fuller and stronger than I have yet felt it. Heart slightly dilated; a loud bruit is heard with the systole at the base of the heart. Skin warm and moist. To take the medicine every four hours instead of every two hours; but if the patient sleeps she is not to be awakened on any account.

13th.—Pulse 70, full and strong. Patient slept uninterruptedly and quietly for twelve hours last night; is perfectly calm and rational. Skin warm and moist; perspiration acid, and has a strong typical smell; joints painful and tender, but not swollen; heart's dulness less circumscribed than last night. Patient feels inclined to eat; allowed to have a chop with her dinner, and eggs and bread-and-butter for breakfast, with tea or coffee. Ordered inf. digitalis ℥ss. every four hours. Evening: Has been quiet all day. Joints of left wrist, knee, and ankle are inflamed and intensely painful. Temperature 102°. Perspiration profuse, acid in smell and reaction. Ordered ℞. Pot. bicarb. ℥ij., pot. nit. ʒij., tinct. hyoscyami ℥iv., aq. camphorem ad ℥vj.—℥ss. every second hour.

14th.—Pains in the joints less, and swelling somewhat gone down. Patient slept well at intervals, but was several times awoke by the pain caused by turning in bed. Temperature 100°. Tongue furred, not tremulous. Continue the mixture.

15th.—Joints still a little tender, but swelling has gone down. Temperature 99°; pulse 86, full, but compressible. Skin warm and moist.

16th.—Patient is incoherent in her speech, does not know anyone, and is universally abusive; she lies in bed muttering to herself, with her eyes semi-closed; does not attempt to get out of bed. Pulse 106, thin and small; skin clammy. On inquiry, I find that a friend called upon her yesterday, bringing with her three bottles of gin, which these two worthies finished between them, my patient taking by far the larger share. She refuses food, and swears coarsely at all who speak to her. Ordered ℞. Infus. digitalis ℥j. every hour. Noon: Patient remains in the same state, and has not slept. Pulse 100, fuller and stronger; skin moist and cold. Will not protrude her tongue, each request to do so bringing down a volley of the coarsest and filthiest abuse upon me. She has taken beef-tea frequently, and her medicine regularly. To continue the digitalis. 4 p.m.: Has not slept, and continues in a state of low muttering delirium. Pulse 100, more wiry and jumping; skin clammy. Will not protrude the tongue. To discontinue the digitalis and take ℞. Tinct. opii ℥j. every hour. 9 p.m.: Low muttering delirium; skin clammy; pulse 140, so small that it can scarcely be counted. Patient gradually sank, and died at about ten o'clock the following morning.

My experience is, that so far from being a depressant, digitalis is, as one authority states—Dr. Ringer, I think—a "heart-tonic." Under its influence the number of pulse-beats are lessened, and the force of the heart's contractions are increased. In cases of dilated heart, and when that organ is doing its work inefficiently and irregularly, digitalis may be administered with the best results, and I feel satisfied that more harm is done by withholding the drug than by its exhibition.

A tremulous tongue, although a frequent symptom in delirium tremens, is by no means constant, for I have often seen cases in which the disease was well marked, and the tongue not at all tremulous. It may be a fortuitous circumstance, but all these cases were allied with rheumatism.

I am not disposed to regard primary attacks of delirium tremens anxiously; they usually, in my experience, get well, and that quickly, under the exhibition of digitalis and generous diet; but a relapse is almost absolutely fatal. There digitalis is of no benefit, and I fear that the same may be said of almost every drug in the Pharmacopœia. The delirium in these relapses is of a very asthenic type; the patient remains quietly in bed, mutters and talks to himself, but rarely if ever raises his voice, screams, or attempts to leave his bed.

Relapses appear more frequent in women than in men, and always follow some alcoholic excess. I have been in the habit lately of treating these relapses with a combination of tartar emetic and opium, but, except in the first case in which I administered it, I regret to say the results are not encouraging.

Patients after recovering from delirium tremens are frequently morose and melancholy, and sometimes have suicidal tendencies. I always, therefore, direct that the patient should be carefully and efficiently watched for some time after recovery appears complete.

I first used the infusion of digitalis, instead of the tincture, to test the truth or fallacy of the assertion, that the only benefit obtained from the use of this drug was due to the spirit contained in the tincture. I continue to use the infusion, as I find that I have better results from its exhibition. I usually give a fluid ounce of the freshly-made infusion every two hours, and as the patient becomes quieter I allow four hours to elapse between each dose, and afterwards lessen the dose to half a fluid ounce.

Although Trousseau has asserted that chronic rheumatism will not affect the heart, I have met with many cases of cardiac disease, and have seen fibrinous deposits about the valves of the heart after death, where the patients have never suffered from rheumatic fever, but rheumatic pains of a chronic form, extending over a period of many years, has been complained of.

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, &c., &c.

(*Continued from page* 226.)

Those who have read or thought much of the recovery from poisons are aware that in many instances, if the circulation and respiration can be maintained sufficiently long, the patient will recover; and it seems that snake-poisoning is no exception to this rule. I have before said that those cases of snake-poisoning which to observers are the most fearful—viz., those attended with profound coma—are probably not the most dangerous, for they have yielded readily to the action of ammonia, and very probably in the manner here indicated: that is to say, by restoring the circulation and respiration so effectually that the patient's powers were sufficient to surmount (to speak in conformity with our real ignorance) the effects of the poison. I have also referred to the different effects produced by the poison on dogs and men, and referred them in former papers to the relative difference in their cerebral and spinal ganglia. I have for this reason urged upon the medical men of India to try injecting ammonia into the veins of men, even if they have failed of success with dogs. This leads me to say that snake-poison in its effects resembles in part both the anæsthetics and strychnine, and also those poisons which have, according to Broadbent, "the most diverse action on different classes of animals, being such as affect the cerebral ganglia, the functions and endowments of which vary so greatly in the animal series." Hence, as I have before said, all relative experiments should be made with animals of the same species.

In order to see with my own eyes the effect upon the heart's action of the injection of ammonia into the circulation, I with the assistance of Drs. Neild and Wooldridge made the following experiments:—

Experiment 1.—A large young dog was got under the influence of chloroform; the front of the chest was removed, and artificial respiration maintained, chloroform being occasionally dropped into the bellows. 11.27 a.m.: Half a drachm of liq. ammoniæ (B.P.), sp. gr. 0·959, was injected into the left external jugular vein. The heart's action was at once accelerated, but soon settled down to steady pulsations. 11.35 a.m.: Half a drachm more was injected into the right ventricle. Immediate increase of the heart's action ensued; consciousness returning, as evidenced by the reflex movements of the eyelids and by a withdrawing of the leg on pricking the foot. Pulsation powerful and steady. 11.45 a.m.: Completely conscious; struggling to get up. More chloroform was poured into the bellows. Soon became insensible again. 11.50 a.m.: Half a drachm was injected into the left ventricle. This was almost immediately followed by a contraction of all the muscles of the body, which soon subsided. Heart's pulsation very vigorous. 11.53 a.m.: Dog returning to consciousness; more chloroform poured into the bellows; soon again insensible. 12 noon: Half a drachm more was injected into the left ventricle. The same increased pulsation, followed by a slight universal spasm, as before. 12.2 p.m.: Dog quite conscious and struggling: more chloroform poured into the bellows. 12.11 p.m.: Dog again conscious and struggling; more chloroform poured into the bellows. 12.13 p.m.: Again quite insensible, pupils dilated, etc. 12.17 p.m.: Half a drachm more ammonia was injected into the right ventricle. Heart pulsated forcibly, the same general spasm following. 12.22 p.m.: Dog again conscious; more chloroform by the bellows. 12.26 p.m.: The dog being again quite insensible, I injected half a drachm more into the right jugular vein. In ten seconds the heart's action was increased, the same general muscular spasm following. Sensibility returning, as shown by the reflex action of the eyelids, etc. 12.33 p.m.: Quite conscious and struggling to get up; more chloroform in the bellows; soon again insensible. 12.36 p.m.: Half a drachm more injected into the left ventricle. Pulsations immediately increased, followed by the same general spasm, but in a milder degree. 12.40 p.m.: Heart's action powerful and steady; pulsations good all over the body. 12.43 p.m.: Dog again quite conscious; more chloroform given; soon insensible. 12.48 p.m.: One whole drachm was injected into the left ventricle. Heart's action immediately quickened, followed by the general spasm. Reflex action of eyelids returning. 12.57 p.m.: Dog quite conscious, and struggling hard to get up. He seemed to have as much vitality as ever; and a sufficient trial having been made, the heart was cut out and an end put to the experiment. On examining the cavities of the heart, there was not the least trace of irritation or inflammation, and the punctures through the muscular substance were scarcely visible. The vigour and persistence of the heart's contractions after removal from the body were greater than I had ever before witnessed.

Experiment 2.—Another large dog was chloroformed, the front of the chest removed, and artificial respiration maintained for one hour and twenty minutes, during which time the heart's movements were carefully observed. As in the former case, the injection of the ammonia had the effect of continually rousing the dog from the full influence of the chloroform, necessitating always a further supply of the anæsthetic before another quantity of ammonia was used. In this dog both jugular veins once, the right ventricle once, and the left ventricle three times, were injected with half-drachm doses of liq. ammoniæ (B.P.), sp. gr. 0·959. The results were precisely similar to those noticed in the other dog—viz., immediate increase of the heart's pulsation, settling down into steady beats; the same muscular spasms, followed by returning consciousness; and lastly, the same absence of any visible injury to the heart's cavities or walls.

In removing the front walls of the chest the intercostal vessels are necessarily cut, but they usually cease to bleed after a little exposure. It was so in the case of the two dogs the subjects of these two experiments. But immediately after the injection of ammonia the plugged extremities of the arteries burst open, and I was literally played upon by the little streams of blood converging towards me. It was easy to notice, likewise, the general effect of the ammonia circulating everywhere, the increased redness of the muscles, together with their firmer tone, and presently the general awakening of the dog from the stupor into which he had been thrown. What could be more favourable to recovery from snake-poisoning or any other deadly depressant? I concluded these experiments, in which I had been readily and ably assisted by my friends Drs. Neild and Wooldridge, with the utmost satisfaction, as they enabled me to see the heart's behaviour upon injecting the veins, and greatly explained the astonishing results which had been obtained by me and others in the colony when treating snake-bite upon this plan. Here is another example of the effects of ammonia upon the heart's action:—

A young man, after weeks of terrible dissipation and drinking, swallowed an ounce of chloroform. Some time after Mr. Gilbee was sent for; he found the man, as he believed then and since, dying. On the suggestion of Dr. Neild, they tried the injection of ammonia, using altogether two drachms of liq. ammon. fortior (B.P.). "After the first injection the pulse, which was previously almost imperceptible, got full and strong, and there was a general improvement; and at the second injection warmth was communicated to the extremities, which had previously been quite cold." In an hour or so the man could sit up and talk. He died, however, thirty-two hours after having been resuscitated. Of his death Dr. Neild

thus wrote in the Melbourne *Argus*—"I am desirous of establishing the fact that recovery, as the effect of the ammonia, was absolute and complete, as the man walked about the house and yard during the Thursday after, and I am sure that if he had been organically healthy he would have recovered completely; but the thorough saturation of the system with alcohol, added to an advanced stage of visceral disease, produced a degree of exhaustion under which he could hardly fail to sink."

Whilst I was just arranging my thoughts, even yesterday, as I write to-day, Dr. Farrage, of Melbourne, drove out to me, and gave me the following narrative. He had, he said, been called out two nights back to see a lady who had some hours before swallowed one ounce of Collis Browne's chlorodyne. She was totally insensible, pupils contracted, limbs relaxed, surface of the body cold, pulse nearly imperceptible, jaws closed, breathing irregular, with scarcely a sign of life about her. She was too far gone to use the stomach pump. He expected, and so told her husband, that every moment would be the last. It suddenly occurred to him to try the injection of ammonia. He went to a chemist close by, and obtained half a drachm of liq. amm. fort. (B.P.), mixed this with one drachm and a half of water, and injected the whole within one minute into the median cephalic vein. In a few minutes the pulse became perceptible, and by twenty minutes a complete reaction was established, strong steady pulse, good breathing, and general warmth returned to the whole body. The insensibility, however, did not pass away for some time after. The patient made a good recovery. Dr. Farrage states that he had never in his whole experience seen anything so remarkable, satisfactory, and decided as the results of this treatment.

It is clearly seen, then, that the injection of ammonia into the veins, or even into the heart itself, is followed by steady and powerful ventricular contraction and free circulation throughout the body. The freer circulation through the lungs must be beneficial whenever there are volatile poisons, as chloroform, in the blood, as these readily escape with the expired air. The increased warmth is evidence of general oxidation throughout the system.

I have found that the stupor induced in dogs by chloral hydrate is immediately removed by the same treatment. It is interesting to notice that when ℈ij. or ʒj. dissolved in warm water is injected into the peritoneal cavity, it takes exactly three minutes for symptoms of intoxication, staggering, etc., to show themselves. In several dogs thus experimented upon the symptoms commenced in all three minutes after injecting.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

OPERATIONS BY MR. SYDNEY JONES.

Amongst other operations performed at St. Thomas's Hospital on Wednesday, September 3, were two in which somewhat novel (so far as English practice is concerned) expedients were had recourse to.

A boy with very extensive ulceration about the knee involving nearly the whole circumference of the limb, was subjected to amputation of the thigh by Mr. Sydney Jones. The plan advocated by Esmarch for prevention of hæmorrhage during operations was adopted. Details of this mode of proceeding have been given (by Mr. MacCormac) in a late number of the *Medical Record*. An elastic bandage was first firmly rolled on the limb from below, upwards, so as to force out the blood; a tubular indiarubber cord was then securely fixed around the limb immediately below Poupart's ligament. The bandage was then removed. Mr. Sydney Jones in his remarks before operating stated that he had already tried, and satisfactorily, this mode, having in a private case amputated the leg without loss of any blood.

In the amputation under present remark there was no bleeding at all during the operation. The principal vessels were twisted before loosening the tubular constricting cord; and after its removal two or three smaller vessels were secured, also by torsion.

In another case, in which there was enormous distension of the bladder, the aspirator was used by Mr. Sydney Jones. The distension reached considerably above the umbilicus. Curiously enough the man suffered no discomfort—he had had traumatic stricture for over fifteen years. Urine was dribbling *guttatim* from the penis. A very small catheter had been introduced on two previous occasions, but recent attempts to pass an instrument had not been successful.

To relieve the distension the aspirator was used, the puncture being made in the median line about one inch above the pubes. A large basonful of urine was drawn off by this mode. As the distension, more or less, had probably existed for some considerable time, it was not thought advisable to empty the bladder completely at once.

CHARING-CROSS HOSPITAL.

CASE OF CHRONIC VOMITING—DILATATION OF THE STOMACH.

(Under the care of Dr. POLLOCK.)

A. K., male, aged 65, a tailor by trade, was admitted into Charing-cross Hospital on July 22, complaining of frequent attacks of profuse vomiting. He gives the following account of himself:—

He had scarlatina when thirteen years of age; no other serious illness. He has long been dyspeptic, and especially troubled with wind. Two years ago the present symptoms began—namely, pain in the belly and vomiting. He was at first ill with uncontrollable vomiting and abdominal pain for about two weeks; from these he recovered, to have a second similar attack some short time after. The second attack was a more protracted one. Ever since, he has had the same symptoms occasionally, recurring about twice a week, often more frequently. The sickness has prevented any food being kept on the stomach at the time, and the vomit has consisted first of food and then of bile. The pain was chiefly above the navel; it preceded the sickness and led on to the vomiting, which apparently relieved it; there seems to have been much feeling of tension along with it. There was never diarrhœa, but on the contrary constipation for days, and never jaundice. The last attack of this kind was a few days before admission. On the evening of the 19th he was sick, and brought up a large quantity of vomit. After filling the pot with this, he ejected, towards midnight, a much darker material than he ever had before; of his own accord the patient says this was "like coffee." He did not faint. He had been ill some twenty-four hours in this attack before the "coffee stuff" was ejected, and he had some twelve hours previously vomited a little blood for the first time. His wife saw the blood; the patient himself can give but little account of it. Twenty years ago the patient had "dry pox" with a suppurating bubo. About ten years ago, he had some growth on the penis, and he has frequently had a crop of spots on the brow, but never elsewhere. His children have never suffered from syphilitic symptoms.

A sallow, pale man, without much aspect of illness. He can sit up, and has no vomiting or pain at present. There is little or anything peculiar about the belly physically. It is not enlarged, is quite symmetrical, and is generally resonant, except over the liver. The lower hepatic border may be seen, felt, and percussed out in nearly the usual situation. There is no tenderness. The flanks are resonant over the region between the umbilicus and liver, and around the former there is a very distinct fluctuation and succussion sound, evidently gastric. No tumour is to be felt in any situation. Constipation for the last four days. Tongue somewhat furred. He has beef-tea only.

July 23.—Last night and on the previous night the patient wakened about three o'clock, and felt heartburn, and "as if he would be sick"; the feeling was "as far up" as the middle of the sternum. This sensation passed off in a few minutes. No vomiting since admission. His bowels are now freely moved by castor oil.

28th.—The patient began to vomit on the 26th, at 7.30 p.m., and ceased vomiting at 6.45 this morning. During this time he has brought up no less than 150 ounces.

On the 27th the sickness occurred at three different times—in the morning, at 8 p.m., and at 10.30 p.m. Last night

the patient was twice sick. The vomit is more greenish in character this morning than yesterday. The patient did not seem particularly prostrate after the great vomiting. His bowels were not opened since the 26th. He has had an enema, and passed a fair stool. The tongue is slightly foul. At present (1 p.m.) there is no gastric tenderness. There is but little tympanites, and the liver is seen moving in the usual position. There is general tympanitic percussion sound when the belly has been handled for a few minutes; the transverse region of the abdomen, corresponding to a band round the umbilicus of (say) three or four inches width, begins to present movements in a semicircular fashion—from left to right only. The swelling is first caught sight of close under the umbilicus, and in a few seconds has rolled itself out of sight in the right hypochondrium. This movement is unattended with pain, and is repeated at intervals of about a second, as long as watched. On deep palpation in the spot where the movement ceases to be seen there is felt a very doubtful firmness obliquely between the umbilicus and the right inferior rib-border. There is exceedingly distinct succussion sound and fluctuation over most of the abdominal surface. Urine alkaline, with a copious grey deposit; dull on heating, cleared by a drop of acid.

29th.—As well as could be wished. No pain or sickness. The tongue is clean and moist. He eats fish.

August 2.—Continues well.

4th.—The patient has vomited again. On the afternoon of the 2nd he felt rather full after having his milk (*i.e.*, "tea"), but not pained; he went to sleep, and about 10 p.m. wakened with a mouthful of vomit. No vomiting during the night. Next morning he had some castor oil for constipation. At 3 p.m., at 5 p.m., and at 8 p.m. the vomiting returned, but has not appeared since. About half as much fluid was rejected as on the last occasion, and the character seems to be just as before. This morning he is sitting up as if nothing had happened: he has no appetite. There has been but little pain beyond a windy feeling during this attack.

5th.—Since the last note the patient has continued well. He left the Hospital to-day.

The treatment consisted of bismuth followed by quinine, with a blister to the epigastrium.

CASE OF HYSTERIA IN THE MALE.

(Under the care of Dr. HEADLAND.)

W. M., a currier, aged 21, was admitted into Charing-cross Hospital on June 2, 1873. On reaching the ward, which he did with evident difficulty, the patient seated himself immediately and gasped for breath. His look was anxious, and he jerked his chest and belly upwards and downwards in a distressed manner. He complains of shortness of breath, or rather difficulty of breathing, of pain when he swallows, and of a sensation of lumps in the throat; withal he speaks loudly, clearly and without the slightest dyspnœa objectively. The pulse is quiet. He states that he has had sore throat for three weeks, and that he had a similar attack some months ago. He has been otherwise healthy. When put to bed the patient lies perfectly quiet until he is approached, when the gasping and forced respiratory jerking recommence. There is slight redness of the fauces; neither to the eye nor to the finger introduced into the pharynx is there any perceptible swelling; but there is great difficulty in making this examination—the patient curls up his tongue, shuts his mouth, pulls away one's hand, and cries that he is choking. There is no sub-maxillary swelling, no distortion or pain about the larynx; neither is there abnormal pulsation in the neck or chest, nor thrill, and the sternum and the top of the chest are resonant on percussion. There is no palpitation; the heart is of normal size and quiet; the pupils are equal. Pulse at the wrists 84, regular; equal on the two sides. The tongue is coated; the temperature is normal. He was ordered to take a compound asafœtida pill twice a day and quinine mixture.

June 3.—The patient's condition remains much the same. Similar gasping movements when he is approached.

4th.—The patient has a cold shower-bath daily, with threatened repetition after each fit of choking. When eating his dinner he gulps down the morsels in a distressed-like manner, nodding his head, and making exaggerated movements of swallowing.

10th.—The patient is very much better; there is very little globus. The baths have been stopped. He leaves the Hospital to-day.

BRISTOL GENERAL HOSPITAL.

DELIRIUM TREMENS: A VIOLENT ATTACK RAPIDLY SUBDUED BY CHLORAL, AIDED BY CHLOROFORM.

(Under the care of Dr. MARTYN.)

[Reported by Mr. J. H. THOMAS.]

J. A., AGED 30, admitted August 14 into the Bristol General Hospital under the care of Dr. Martyn.

Patient is a seaman. He is a tall, powerful-looking man. During the last fortnight he has got drunk every day. Last night his friends said he became very strange in his manner, and talked great nonsense.

On admission (10 a.m.) he was in a state of tremor. Skin hot and perspiring; tongue tremulous; eyes bright; anxious expression of face. Incessantly talking; said he "saw a snake coming to eat him up." Injection morphiæ hyd. gr. $\frac{1}{3}$ was administered; and milk and beef-tea ordered. For the next two hours he was quiet, and slept; but then woke up, would get out of bed, and become so violent that a strait-waistcoat was put on. 1.30 p.m.: Injection of morphia repeated, but with no effect. 4 p.m.: Chloral hyd. gr. xxv. 6 p.m.: Injection of morphiæ hyd., gr. ss. 7 p.m.: As neither morphia or chloral had any effect on him, and it required three or four people to keep him in bed, chloroform was given to anæsthesia, and its effect kept up by repeated inhalations until 9 p.m. He continued quiet for another half-hour. 10 p.m.: Chloral hyd. (gr. xl.) was given, and chloroform again administered. Slept well for four or five hours.

August 15.—10.30 a.m.—Very restless for the last two or three hours. Chloral hyd. gr. xxx. and tinct. opii. ℥xx. were given, and chloroform administered to send him off. 1.30 p.m.: Slept until now, when he awoke and became restless. Chloral hyd. ʒj. was given. 9.30 p.m.: Drank his milk and beef-tea to-day, but took nothing yesterday. Has been very restless for the last few hours; will not take his draught. Chloroform was therefore given to anæsthesia, and the draught (chloral hyd. ʒj.) was poured by way of the nose into his stomach. Has not once been sick after the chloroform.

16th.—Three one-drachm doses of chloral hydrate were given during the day. Patient slept well.

17th.—Patient had the same amount of chloral as yesterday. Slept well.

18th.—Patient had one drachm of chloral to-day in one dose, and half a drachm at night.

19th.—Had a restless night, but no more chloral was given, as he has now entirely recovered his senses.

22nd.—Discharged. He was weak, but not to any marked extent. Walked out of the Hospital all right, with the exception of a little stagger.

THE INDEX EXPURGATORIUS IN RUSSIA.—We are informed that the publications of Dr. Stanski on the "Spontaneity of Matter" have been prohibited in the Russian Empire. —*Gazette Médical*, September 6.

A CURER OF BLINDNESS OF BODY AND SOUL.—The *Vraie France*, a Lille journal, contains the following article:—"M. le Dr. Bribosia, the eminent oculist, has been appointed a director of the Ophthalmological Institute recently established at Tournay. A chevalier of the Order of Leopold, and member of the Belgian Academy of Medicine, M. Bribosia had the direction of the Ophthalmic Hospital at Namur for several years. As sincere a Christian as he is a skilful practitioner, he has, we are informed, restored sight to numbers of the blind, and cured by his counsels many souls of a far more dangerous and incurable blindness."—*Presse Belge*, Sept. 7.

A VERY severe and unusual accident was brought to hospital from the Kiangnen Arsenal. A youth, aged 20, had the whole of his scalp torn off, by his tail becoming entangled in machinery while in motion. On admission, he was deluged in blood and pulseless. Dr. Sibbald succeeded in replacing the torn scalp, but unfortunately a large portion of it sloughed afterwards, and left an exfoliation of part of the frontal bone. The patient has now been in hospital six months, and there is still a very large granulating surface, which is slowly contracting, and although the patient is very anæmic there is some hope of his ultimate recovery. Skin-grafting was tried in the case, but failed.—*Report of the Chinese Hospital at Shanghai, by Dr. James Johnson.*

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 20, 1873.

A WORD TO TEACHERS.

Last week we devoted much space and not a little care to provide for the wants of the Student: this week we would wish to do something more for him by offering a few suggestions to those who are his Teachers. This is the more necessary, since from our London system it follows that the great part of the work of teaching is entrusted to the hands of the younger men, many of whom have to commence the arduous duties of a teacher of medicine without anything like an adequate training beforehand. Indeed, this want of training in our teachers is a serious evil: men have to train themselves as they strive to teach, and meanwhile the student suffers. Many a man has found out to his cost that it is not given to every man to be a teacher; but he has found it out too late, and something like shame and disappointment have followed the discovery. When hospital and school appointments went more exclusively hand in hand than they now do, it came to each man's turn to take up a certain subject; if he did not, he was in a measure passed over: the consequence was, the insertion of innumerable square sticks in round holes, and *vice versâ*, and for this the student paid the penalty; and—in part, at least—on this account arose the outcry against lectures (it should have been against lecturers), which has hardly now subsided. Nevertheless, we are bound to confess that for the teacher himself, if earnest in the pursuit of his calling, the plan was not without its advantages, for by the time he came to be a teacher of the highest and most important branches—clinical medicine or surgery—he could not fail to be a well-informed man, of a wide acquaintance with the literature of subjects which otherwise would, in all probability, have been closed to him. But it is the Student we should consider; and assuredly this system is not the best for him. It is the day-dream of some men that they will one day see one or two great schools started in London for the education of the student in theoretical knowledge, leaving to the hospitals the more practical work in medical education. This we fear we shall not see, though there can be no doubt that such a system would be advantageous to the student; but mutual jealousies are not likely to allow such a scheme to be consummated, and meanwhile we must do the best we can with the materials and means at our disposal.

The basis of the present system of medical teaching consists of lectures, so many of which, as a rule, the student has to attend before he can be what is called "signed up." Now here in the teacher's hands is a powerful instrument, if he cares to use it. He is always sure of an audience, and an audience worth studying. Few can be so critical as medical students; none make better listeners if they have anything worth listening to. The first point, we take it, in the making of a successful teacher is to be able to carry his audience with him—if possible, not to leave a single laggard behind. Now, if a man's attention is fixed on a piece of paper or a book, he cannot see whether he is doing so or not; therefore we counsel all young teachers to acquire, at whatever expense of time and trouble, the faculty of extempore address. The time and trouble so spent are but capital placed out at interest, which later time will amply repay. This, too, we may say for the encouragement of young lecturers: that if they consider those who are now the lights of the profession, whose even-flowing discourse is listened to with greedy ears and envious hearts, they have only attained to their present pre-eminence by the assiduous cultivation of their talents in a like manner. We could mention the names of many high in our ranks who even now never make an appearance in public without a careful rehearsal of what they have got to say, and to this secret do they owe their success as public speakers. Let, therefore, all young teachers begin in the same fashion. Let them never attempt a lecture without careful preparation—even, if necessary, commit it to memory; and the habit so begun will speedily fructify, and bear good fruit. Unfortunately, it is too true that some men will never make very successful teachers; their material may be quite as good as another's, but faults in manner and style of delivery—still more, a want of sympathy with their audience, always promptly responded to—incapacitates them for the work of teaching. Nevertheless, much may, by persistent effort, be done with even the most unpromising materials; and the story of Demosthenes must be encouraging to even the most backward.

Next, as regards the lecture itself. Too often it is looked upon both by teacher and student as a disagreeable thing, to be got over as speedily as possible. The driest of material is dished up in the most unpalatable possible manner, with the most chilling effect upon the student; nevertheless, it is a fact that students can be got to listen eagerly to the driest material if the teacher only throws a little life into it. Again, too frequently the student listens to exactly the same material served up very likely in a worse style than he reads it at home in his text-book; under such circumstances it is hardly in human nature to listen with patience to a lecture which is practically a waste of time. For the lecture should ever contain something not to be found in the text-book, if it be only comment and explanation of it. In point of fact, in many subjects it is not a bad plan to select a book, to tell the student "Here is a volume which contains the essentials of my subject: make this your text-book, and I shall take it for granted in my lectures that you have done so, for they will consist mainly of explanation, comment, and development of what is therein contained." But lectures can always be made a better means of teaching than text-books, if the teacher will only try to make them so. First, there is the living speaking to the living—the powerful influence of the *vivâ vox*, which allows of amplification, illustration, and reiteration until a subject is thoroughly mastered. This cannot be done in a book without making it horribly tedious, and so the only resource the student has is to read and re-read till he has or has not mastered any given passage. It is for this reason that a lecture which

seems so eloquent when addressed to the ears, is so bald and disjointed when addressed to the eye in print. Lectures, as we have said, are the basis of our present system, be it good or bad; by all means, therefore, let us make the best of lecturing. Much has been said in favour of the tutorial system as compared with that of lectures; but in truth there is no antagonism—the two can readily be combined, and always are so by a skilled teacher. An hour is too long to devote to lecturing alone, and the attention of the student flags before it is over. This is not an invariable rule, but is so in most instances; an exceedingly good plan, therefore, is to devote a certain portion of the hour to an examination, either as to what has just been said, or what was said a day or so before. This admits of explanations being given, the necessity for which might never have been thought of save for the examination testing the students' ideas of what has been said; for what a man means to say, and the effect of what he does convey to another, are two very different things. There can be no doubt of the efficacy of this plan in teaching.

But when all is said and done, we must come to what is at once the basis and the crown of English teaching—that is, ward work. It is generally admitted that our clinical teaching here in London is not what it ought to be; and the reason is probably this,—that a successful clinical teacher is generally also a successful practitioner, and so has his attention abstracted from his hospital duties somewhat too freely. Again, men only come into the possession of wards and clinical beds when they are somewhat advanced in life, when they have less time and inclination for such work than they would have as younger men. It is highly desirable that the younger men should have a chance of doing something in this way as early as possible, and therefore the plan of giving up a certain number of beds to the junior officers for the purpose of teaching and study, as is done in some hospitals, is very highly to be commended.

Nevertheless, it has seemed to us in our experience of hospital teaching, especially of clinical medicine in London, that there is too much show and too little substance in it. Too frequently the process of education consists veritably in what used to be called "Walking the hospitals." The physician or surgeon goes round with a troop of students at his heels, hears the report of his house-physician or house-surgeon, asks how the patient's bowels are, how he slept last night, and how he eats his food; looks at his tongue, feels his pulse, and, if he be of a scientific turn, inquires what his temperature was last night and this morning; perhaps says a word to the students—tells them it is a case of dropsy or an interesting specimen of paralysis,—and goes on. But this is not teaching, and the student can hardly be blamed if, with such a system, he does not learn. Too often, again, we have observed, when there is something more earnest in the way of teaching, that the teacher thinks more of himself than he does of his pupils—he has little crotchets to air, little points of controversy to settle in his own favour, but he does not strive earnestly to master the case before him, and to convey that masterful knowledge to his pupils. The true teacher is altogether forgetful of self, and strives only to improve his pupils' knowledge.

Among the successful leading clinical teachers in London two different plans are pursued. One man goes round his wards dealing with case after case, questioning his pupils, and testing in every way the accuracy of their knowledge; another, instead of dealing with half a dozen cases, sticks to one only, and goes into that thoroughly—sometimes only taking up one particular feature in a case, for even the mechanism of diagnosis has to be taught and learned. No doubt this is drudgery, but it is very essential; and whilst leaving to the great masters and teachers of our art and science the higher flights of eloquence, and a display of acumen which requires a grasp only to be acquired by years of experience, any man can begin with the other, and so endeavour gradually to attain to the knowledge and power which will justify him in endeavouring to imitate the great exemplars of our profession.

But we have a much more serious word to say to our young teachers before we close. Too often we find that when the diagnosis is made and written down, the process of educating the student stops till perhaps the diagnosis comes to be verified post-mortem. This should not be. We are not paid to study disease, but to try to cure it; and though an accurate diagnosis is very important, it does not greatly help the patient. We should teach the student how to treat disease, as well as how to recognise it. Now, the student's knowledge of therapeutics is generally very unsatisfactory, and his knowledge of materia medica even more so. Nowadays, when there is no apprenticeship to teach men to handle and recognise drugs, it is even more incumbent on hospital teachers to attend to prescribing than it used to be. They should teach not only what drug is best in such-and-such a case, but also what is the best form in which to administer it. True, this requires an accurate knowledge both of materia medica and pharmacy—departments of knowledge it is too much the fashion to decry, but which are very necessary, if we are to become expert prescribers, skilled in the art of treating diseases, and still more so if we are to teach the same art. In this respect, however much we may have improved in others, we are not in advance of our forefathers as far as regards the rules for prescribing. We have seen nothing in recent days which at all comes near those laid down more than a century ago by Gaubius.

THE MEDICAL USES OF ELECTRICITY.—No. III.

Therapeutical Use of Electricity.

Having treated of the value of electricity in diagnosis, we now proceed to speak of its value and use in the treatment of disease. That, when opportunely and rightly employed, it is a means of great power and real value in the treatment of a considerable range of disease, is now fully and clearly proved. But as we have already observed, but few comparatively of our brethren are well informed as to its ascertained remedial properties or as to the limits within which (so far as we at present know) it may be usefully or safely employed. Many undervalue its therapeutical power, while granting that it does possess some; others doubt whether it has any; and others disbelieve in it altogether. And, again, some as greatly overestimate it, expect far too much from it, and credit it with the power of effecting absolute impossibilities. But though electricity cannot renew nervous tissue, and therefore cannot cure a paralysis caused by destructive cerebral or spinal lesion; and though it cannot restore muscular power where a muscle has been entirely cut off from the influence of the brain or the spinal cord, or when the muscular fibres are wholly degenerated or atrophied; yet when the right kind of electricity is employed, and rightly applied, we can by its help cure, relieve, or arrest disease. We can soothe or stimulate diseased or disordered muscle and nerve; we can cure or relieve over-action (spasm) and pain (neuralgia); cure some forms of aphonia, and of peripheral paralysis; renew the nutrition of muscles wasting from disease; restore the circulation and raise the temperature of a paralysed limb; and recall or lower sensation. And, though it is not any part of our intention to enter into the field of surgery, it is also known that the surgeon has successfully employed electricity to coagulate the blood, to disperse tumours, and for other purposes. It will be well, also, to state here that while it is our intention to confine our observations to the therapeutical uses of electricity in medicine as distinguished from surgery, we shall not attempt to describe fully or in much detail the medical uses even of this agent: any such attempt would demand far more space than can be given to these papers. Our purpose,

let it be remembered, is only to point out the affections in which the power of electricity to cure or to relieve disease has been most clearly and indisputably proved.

First we will treat of its use in relieving or curing pain.

Its therapeutic value in this respect is invaluable, and has been established beyond the possibility of dispute or doubt. In all the true neuralgiæ, and especially perhaps in the very worst of them—the most terrible and savagely intense of all painful affections,—electricity rightly chosen and applied displays often a remedial power not only unsurpassed, but unrivalled by any other known means. But this use of it is not so generally known or understood even yet (among us, at least) as is its employment in the different forms of paralysis. And the reason of this is perhaps not far to seek. Duchenne was the apostle of faradisation, Remak of the constant current; and the teaching of Duchenne has always been more accessible to, and better known by, the mass of the profession than has been the teaching of the German school. Moreover, Faraday was the discoverer of the induced electric current, and that fact has also not a little helped to make faradisation more popular and better known with us than the constant current; consequently it came about that for a long time it was generally believed in this country that the rotatory electro-magnetic, or magneto-electric machines, were sufficient for all electro-therapeutic purposes; and, indeed, very many of our brethren still suppose that this is the case, and when they have obtained one of these machines believe that they are fully equipped for the remedial employment of "electricity." But it is absolutely certain that in the treatment of painful affections the constant current has a far wider usefulness and a far higher value than faradisation has; and we suspect that even the strongest believers in faradisation will allow, with Dr. Beard, of New York, that in the treatment of true neuralgia "the galvanic (*i.e.*, the voltaic or constant) current will oftentimes succeed where the best faradic fails, and even in those cases where faradisation relieves, and promises to cure, galvanism may do the work in a much shorter time."

In some painful affections, and some that are often improperly called neuralgiæ, faradisation is undoubtedly of great use; but in the neuralgiæ proper the constant voltaic current is almost always the form of electricity which ought to be employed, both the electrodes being firmly pressed upon the skin and held there, neither of them being moved about: that is, the current must be the voltaic, and must be *constant*, not interrupted; and the electrodes must be applied so as to include in the circuit the affected nerve. As to the number of the cells employed, this must be regulated by the sensations of the patient, and according to the region affected; they should be as many as can be borne without pain or serious discomfort; and in the face five cells will be fully enough to begin with. In this part fifteen or twenty cells will most likely be the highest power that can be borne or safely employed, the application being discontinued for a while and the number of cells reduced whenever any giddiness occurs. Elsewhere a higher power may be used. Whether the doctrine that in true neuralgia the posterior root of the nerve is the seat of disease be accepted or not, it is, we suppose, generally held that it is best to place one of the electrodes as nearly as may be over the point of origin of the affected nerves, and the other over the painful spot; or, should there be more than one painful spot, then over the several spots in succession. The direction of the current has by some been considered of importance, and directions have been given to apply always the positive electrode to the seat of disease; but the necessity for this is not clear; and some experts are convinced that the direction of the current—whether it should be ascending or descending—is not therapeutically a matter of any importance whatever. The electrodes should be furnished with well-wetted sponges of large size, and the application be made for short periods—about five minutes,—and repeated oftener than once a day if necessary.

Cases of neuralgia of the most intense character have been not only rapidly relieved, but permanently cured by this means. Niemeyer's two cases are perhaps the most striking. Dr. Anstie, in quoting them, observes—"The patients were respectively aged 64 and 74, and the duration of the neuralgia had been respectively five and twenty-nine years; in both the pain was of the most severe type, and in both the success was most striking. In one, every possible variety of medication and several distinct surgical operations for excision of portions of the affected nerves had been quite vainly tried." Such brilliant success as this is not always to be expected; but many very striking cases besides have been recorded. Dr. Russell Reynolds has mentioned the case of a lady who for twenty years had suffered from very severe neuralgia of the ophthalmic branch of the fifth nerve, recurring every day, and greatly injuring her general health, and which was not merely relieved, but removed, by a single application of the constant current. Dr. Althaus, also, has published the case of a lady who for twenty-five years had suffered from most violent neuralgia on the left side of the face. Three applications of the constant current from four cells of Bunsen's battery were, he says, "sufficient to cure her of a disease which for twenty-five years had embittered her life."

While all the best authorities on the use of the constant current agree in estimating very highly its remedial power in neuralgic affections, they vary in their experience of its value in the different forms of this disease. Thus, Eulenberg, whose experience has been very large, thinks very highly of it as a palliative in trigeminal neuralgia, but rather doubtfully as a curative; while Dr. Anstie credits it with more of a curative power. And while Eulenberg has found sciatica the most curable of the neuralgiæ by this means, Dr. Beard has had least success as to *cure* in this form of neuralgia, though he has generally obtained *relief*. His experience leads him to consider gastralgia as more amenable to the constant current than the other remedies.

In migraine, or true sick headache, the constant current has been found very beneficial, the electrodes being applied to each temple or to the mastoid processes. A very low power must be used, two or three cells. The application must not be for longer than about sixty seconds, and it must be discontinued on the occurrence of any giddiness, or if the patient exhibits any symptom of uneasiness in the head or the epigastrium. In all the true neuralgiæ, then, the diagnosis having once been clearly made, the constant current is the form of electricity to use; and used rightly, so as to act gently and steadily, without exciting pain or other nervous disturbance, it may be employed fearlessly and with immense advantage.

This kind of electricity has also been successfully employed in toothache. M. Bouchaud states (*vide Bulletin Général de Thérapeutique*, July 15)—"If in odontalgia we employ a continuous or constant current, derived from a mean of ten elements, applying the positive pole to the cheek on a level with the painful tooth, and the negative pole to the anterior lateral region of the neck, we are enabled almost always in the course of a few minutes to procure nearly absolute relief, which in the majority of cases persists indefinitely." M. Bouchaud's paper on the subject is well illustrated by cases; and he has found the constant current useful even when the teeth were carious and the gums inflamed and swollen.

If for any reason it is determined to apply the faradic current in neuralgia—and sometimes it is beneficial—the rough coarse current supplied by a rotatory magneto-electric machine should not be ventured on, but the most gentle and steady current of this kind derivable from a volta-faradic apparatus. In some painful affections, however, faradisation may be

employed, not only usefully, but with much greater advantage than the constant current. Such are the pseudo-neuralgiæ called "hysterical," and the hysterical hyperæsthesiæ. In these affections it is desirable or necessary to excite pain, and the ordinary rotatory machines will serve for the purpose. The current must be used to affect the skin only, not to penetrate deeper; the skin must therefore be carefully *dried*, and dry metal electrodes used—one being placed on an "indifferent spot," and the other moved about over the affected part; or, the patient holding one of the brass handles of the machine, a coarse wire brush may be applied over the affected region.

THE ASHANTEE WAR.

Bravery and a somewhat foolish contempt for the enemy have brought about the serious *contretemps* the particulars of which have just reached us from the West Coast of Africa. Commodore Commerell and his boats' crews have been entrapped in an artfully-planned ambuscade, and appear to have been shot down by a perfect broadside of slugs at a distance of something like fifteen yards. The great wonder is that, considering the unprepared and defenceless state of the little expedition up the river Prah, the boats ever got back with anybody alive on board to tell the tale.

Unfortunately, it is not only the long list of killed and wounded which we have to deplore in this disaster; the savage mind on the Coast will immediately consider the Ashantees invincible, and those allies who are expected to swell our ranks will be considerably diminished in numbers by this occurrence. We suppose, however, that those persons who have all along considered that there existed no necessity for punishing the invasion of our territory, will now admit that there is but one course to pursue, and that is to read all the various tribes along the Coast a lesson so severe that peace shall remain unbroken for years to come.

Sir Garnet Wolseley, with a brilliant staff, has already sailed for the seat of operations, and it would appear, from recent announcements, that it has been decided to despatch two regiments from this country to act against the Ashantees, which will be embarked from Ireland about the beginning of December. The corps selected are said to be the 2nd battalion of the 23rd Regiment and the 2nd battalion of the Rifle Brigade: these will form the nucleus of a force, to be supplemented with native troops, and it is sincerely to be hoped that too much dependence will not be placed upon our coloured allies, since it must not be forgotten that at heart they are infected with a standing dread of the powerful and bloodthirsty king against whom they will be called upon to act.

We presume that the authorities have duly weighed the exigencies of the forthcoming expedition, and are prepared with some plan of action founded upon ample and superior knowledge of the locality to be traversed; otherwise the contradictory and dolorous letters which have been daily published in the columns of the leading journal would prognosticate nothing but disaster for our arms. It must not be forgotten, however, that similar gloomy forebodings were rife before the commencement of the Abyssinian campaign, with how much reason the complete and satisfactory results therein obtained fully demonstrated.

We should certainly have thought, looking at this subject from the principal point in which we regard it—the sanitary—that it would have been better if the Government, instead of sending men from this country, had diverted two of those regiments from India whose term of service there had expired, and who about the month of December would be coming home in the India troopships. The men of these corps would be to some extent acclimatised by long residence in a hot climate; the vessel transporting them could have been ordered to proceed round the Cape of Good Hope, and, if the hostilities are to be of such short duration, could have waited and brought them on to England after the work had been achieved. As it is, every precaution will be taken before despatching the two regiments from here. No man will be allowed to embark unless in the most satisfactory state of health; and the whole of them should be revaccinated. Another man-of-war will be sent out to act as a hospital-ship off Cape Coast Castle, in addition to the *Simoom*, already on the spot. A large medical staff will be provided for the treatment of the sick, and full supplies of all medicines and medical comforts necessary. Nor is all this forethought and preparation unnecessary, for it would appear that the present rainy season has been peculiarly pestilent and terribly fatal to Europeans; but, with a perfect knowledge of the deadly climate in which the operations must be carried out, nothing which could prevent or alleviate sickness will be omitted; and—given the necessity—surely England should be better prepared in the present day than in former times to assert her prestige upon any portion of her vast dominions.

An opinion appears to be generally disseminated that the present trouble might have been averted if the grant of a seaport had been made to the Ashantee king; but whatever concessions may eventually be made in this matter, it should be borne in mind that treaties, to be of lasting use, can only be entered into *after* we have read the enemy a lesson which he is not likely soon to forget. Anyone who has had dealings with savage tribes will admit that to hold our hands now would be construed by the Ashantees as an admission of our weakness, and very few years would elapse before the feud, thus patched up, would burst forth again. In fact, this last attack upon our arms in the river Prah removes all possibility of negotiating, and until Sir Garnet Wolseley has fully carried out the duties entrusted to him, we must make up our minds that many lives and some treasure will have to be expended; and if, as is apparent, little honour is likely to accrue from the most successful achievements, we must remember that, so long as we profess to extend our protection to the settlements which we have founded and fostered on the West Coast of Africa, so long must we be content to expend both blood and money to secure safety for our settlers and respect for our name when the disagreeable but enforced necessity arises.

THE WEEK.

TOPICS OF THE DAY.

On the 8th inst. Professor Hughes Bennett, of Edinburgh, was elected Corresponding Member of the National Academy of Medicine of France. He received twenty-eight votes, and Professor Van Benedin eight.

We regret to observe that Dr. Charles F. K. Murray, Surgeon to the *Rattlesnake*, is amongst the wounded in the disaster on the river Prah. Dr. Murray's injury is reported as "contusion of the left forearm from gunshot; slightly." In reference to Dr. Charles Murray's services in the unlucky action, Commodore Commerell, in his despatch, writes—"Surgeon Charles F. K. Murray had paid the greatest attention to them (the wounded) while in the river, besides returning the fire of the enemy from the boat (the whaler, manned and armed, which had been placed under Dr. Murray's command) he was steering."

The annual meeting of the Pharmaceutical Society has been held at Bradford this week. The President is a Mr. H. B. Brady, of Newcastle. In his address he made some remarks upon the endeavours made by the Home and Foreign Governments to produce the cinchona alkaloids. He said—

"Few subjects had been so frequently before pharmaceutical readers during the past ten or fifteen years as the efforts of

the Governments of Holland and Great Britain to introduce the various species of cinchona into their respective colonies. It would be hardly possible to overrate the importance of the enterprise, and it was one which interested alike the pharmaceutist, the botanist, and the votary of economic science. The latest official return placed the number of trees in cultivation in the island of Java at two millions. Plantations in Ceylon and Jamaica were reported to be prospering. The pet idea of the Indian Government, to manufacture on the spot a preparation supposed to consist of the crude mixed cinchona alkaloids, to sell at a very low price, was one which could not be regarded with much favour. Any such product, however carefully made, must be of very uncertain composition, and, as is well known, samples which have reached this country have even contained poisonous metallic impurities. If cheap alkaloids are required, red bark will yield cinchonidine, the value of which as an antiperiodic is now well ascertained, and many species give cinchonin cheaply enough. But surely it were better that Government should confine its attention to providing the material, and leave it to those who have larger technical knowledge and practical experience to supply the low-priced alkaloids they desire."

He also expressed himself as dissatisfied with the standard of the Pharmaceutical Society's examinations, and said that the possession of its certificate was not a sufficient guarantee of the possessor's fitness to perform such scientific duties as those devolving on public analysts. We quite agree with him in the latter conclusion, but we cannot recognise in this a reason for increasing the stringency of the examinations of the Pharmaceutical Society. These tests are already quite sufficient to insure the fitness to dispense medical prescriptions and sell drugs of those who are subjected to them. Any higher scientific aim seems to us beyond the scope of the purpose for which the Society was instituted.

A Mr. R. Hampson read a paper, in which he recommended that medical men prescribing unusually large doses of medicine should specially append their initials to the dose. The paper seems to have been written in consequence of the recent inquest at Ramsgate, in which a druggist did not dispense the prescription for large doses of digitalis ordered by a duly qualified medical man, and the patient died of delirium tremens. There could be no objection to such a rule if it were made universal; but, usually speaking, the signature at the end of the prescription must be held a sufficient guarantee for its contents, and in case of doubt arising we think the dispenser is bound to place himself in communication with the prescriber.

A woman named Amelia Hopkinson has died at Hanwell, after being removed there from St. Pancras Workhouse, contrary to the order of Dr. Hill, the resident medical officer. It appears that the woman was also seen by a Mr. Bastable, an independent medical practitioner, who gave the order for her removal. We agree with the coroner's jury who investigated the case, that it is to be regretted "that Dr. Bastable did not more fully acquaint himself with the state of the said Amelia Hopkinson by consulting with Dr. Hill; and they are of opinion that in future the certificate of fitness for removal would be more appropriately taken from the surgeon in daily attendance than from the surgeon who had only seen the patient to certify as to her state of mind." When two medical practitioners are in attendance on a case of insanity, the order for removal to an asylum should not be made without the consent of both. In case of difference of opinion a third should be consulted.

We understand that as many as sixty applications from this country for medical appointments in the Atchinese expedition have been received by the Dutch Government; but, so far as we know, at present the services of only two Englishmen have been accepted. These are Dr. Charles Mayo, Fellow of New College, Oxford, formerly Director of the Alice Hospital, Darmstadt; and Mr. J. C. Galton, M.A., M.R.C.S., formerly staff-surgeon in the same Hospital. These gentlemen leave England on Saturday next, the 27th instant, at the latest.

ILLNESS OF MEDICAL PRACTITIONERS.

It is with deep regret we announce the serious illness of two distinguished *confrères* of the Irish School of Medicine. Professor Robert W. Smith, of the University of Dublin, and Dr. Robert Law are both stricken down by disease—in each case of a very serious character indeed. To the last-named gentleman's illness we have already had occasion to refer. He was slowly rallying from an attack of cerebral hæmorrhage, when, on Saturday night, the 6th inst., a second attack occurred.

OLD FRIENDS WITH NEW FACES.

Our forefathers were wont to burn tar and naphtha, and make great fires of wood and coal, and burn sulphur, as a means of disinfecting and purifying the air in times of great plague and sickness; and our foremothers (if we may use such a term without disrespect) set great store by lavender and rose-leaves and rosemary and divers aromatic herbs, chiefly of the labiate order, which they kept in their rooms, their linen-presses, wardrobes, cupboards, drawers, and boxes. We younger folks have, perhaps, too quickly condemned these practices as foolish and unmeaning. Chemists have long taught us to recognise sulphurous acid, produced whenever sulphur is burnt, as a powerful disinfectant. Carbolic acid, found in tar and produced by the combustion of wood and coal, is also one of our most popular antiseptics. But there seems little doubt that we may carry our vindication of our ancestors and ancestresses a little farther, and claim for their sweet herbs and fragrant things a higher use than the doubtful one of ministering to the pleasure of the olfactory nerves. Dr. Day, of Geelong, has shown that many substances of the hydrocarbon group, ether, kerosene, naphtha, turpentine, and many tinctures slowly develope peroxide of hydrogen by exposure to light and air. Now, all the labiate family, and nearly all the odorous substances the men and women of old times were partial to—the ingredients of their pots-pourris and scent-vases—contain hydrocarbons which acquire this very property of absorbing oxygen and developing peroxide of hydrogen which Dr. Day thinks to be identical with the antozone of Schönbein. In his first communication to the *Lancet* (in 1864 and 1865), Dr. Day imagined that ozone was thus generated, but further experiments, and particularly the reaction with guaiacum resin, have convinced him that these hydrocarbons generate or acquire antozone, or, in other words, the peroxide of hydrogen. In a paper read before the Medical Society of Victoria on June 4 last, and published in the *Australian Medical Journal* for June, 1873, Dr. Day carries his investigations a step further, and recommends strongly the use of papers, muslins, and other textile fabrics soaked in kerosene, gasoline, benzine, and paraffin, etc., which have been thus exposed to the air. But the most interesting part of this communication is first the indirect evidence of the remarkable immunity from disease enjoyed by workers in petroleum, furnished by Dr. Berry White, Assistant-Surgeon in charge of troops, and Civil Surgeon, Dibrooghur, in reference to Makoom, in Upper Assam, where there are petroleum works, for the details of which we must refer to our Australian contemporary; and secondly, the fact referred to by Dr. Day, of the remarkable permanency of the hydroxyl or peroxide of hydrogen formed in this spontaneous way—some of the sheets of paper having been prepared seven or eight months before, and still giving the reactions of this substance. Dr. Day gives the preference to gasoline, which is almost identical with benzine. He also uses ozonic ether (such as Robbins, of Oxford-street, prepares, which is really a solution of peroxide of hydrogen) in the proportion of one part to eight of lard, in cases of scarlatina, as a means of preventing the spread of that disease. The use of lard or sweet-oil for that purpose has long been popular in England, in measles as well as scarlatina; but if it can be shown that the ozonic ether

and lard can be kept combined sufficiently long, we think Dr. Day's ingenious plan a decided improvement. Dr. Day informs us, by letter, that fresh animal fats, lard, and suet, often contain in their natural state peroxide of hydrogen, loosely combined, which can be demonstrated by manipulation and appropriate tests. One of the Victoria speakers, Dr. Jonasson, thought there might be danger in the use of petroleum papers, on account of their giving off inflammable vapours, but even supposing this to be so, the risk seems to us to be very easily guarded against.

CHOLERA ABROAD.

By the courtesy of the Medical Department of the Local Government Board, we are enabled to publish the following official information respecting the progress of cholera abroad up to September 6:—

		Cases.	Deaths.
Prussia—			
Königsberg (government)	June 22 to Aug. 9	892	352
„ (town) ..	Aug. 14 „ Aug. 20	303	120
„ „	Aug. 21 „ Aug. 27	345	150
Gumbinnen (government)	July 2 „ July 31	13	10
Danzig „	June 2 „ Aug. 8	573	323
Marienwerder „	May 22 „ Aug. 8	1540	854
Brandenburg—			
Berlin (town)	July 21 „ Aug.		
Potsdam (government) ..	July 16 „ Aug. 1	55	41
Frankfort „	July 9 „ Aug. 3	41	24
Pommerania—			
Stettin (government) ..	Aug. 3 „ Aug. 8	41	24
„ (town, police dist.)	Aug. 4 „ Aug. 19	31	23
Posen—			
Posen (government) ..	July 27 „ Aug. 9	100	51
Bromberg „ ..	May 26 „ July 31	559	351
Saxony—			
Magdeburg (town) ..	July 18 „ Aug. 7	214	91
„ (rest of government)	July 18 „ Aug. 7	21	9
Schlesien—			
Breslau (government) ..	June 28 „ Aug. 12	147	78
Oppeln „ ..	June 11 „ July 20	182	103
Hanover—			
Landderstein Luneburg .	Aug. (?) „ Aug. (?)	85	57
Munich—			
Aug. 30.—Cases average from 45 to 50 daily.			
Vienna—	Aug. 22, 23	83	52
	Aug. 23, 24	184	81
Warsaw—	May 18 to Aug. 17	1553	556
	Aug. 1 „ Aug. 15	1111	410
Disease general throughout the kingdom; particularly prevalent in the valley of the Vistula.			
Pesth—			
Buda-Pesth	Aug. 13 to Aug. 19	477	215
„	Aug. 20 „ Aug. 26	367	189
Disease very severe over almost the whole extent of Hungary.			
Cronstadt—			
Aug. 26.—1 death (a British sailor) in port.			
Riga—			
Aug. 25.—Several cases among shipping.			
Memel—			
Aug. 19.—4 cases reported.			
Hamburg—	Week ending July 26	26	19
	„ Aug. 2	104	49
	„ Aug. 9	206	113
	„ Aug. 16	213	155
	„ Aug. 23	175	
Antwerp—			
Aug. 7.—Isolated cases.			
Havre—			
Sept. 2.—Cholera first reported as probably present here on August 19; now stated to be undoubtedly present in the port, at Rouen, and at intermediate points between that town and Havre.			
Italy—		Cases.	Deaths.
Genoa, Aug. 19.—Cholera in very mild form in city.			
Venice—City	July 8 to Aug. 18	641	356
Province	Aug. 18	26	20
Trieste—	July 25 „ Aug. 13	63	19
Brescia—Province	Aug. 17 „ Aug. 23	20	12
Parma— „	Aug. 17 „ Aug. 23	38	28
Reggio d'Emilia—Province.	A few cases.		
The Danube—			
Ibraila	Aug. 4 to Aug. 19	162	101
Galatz	Aug. 8 „ Aug. 22	101	70
Ismail	Aug. 6 „ Aug. 16	6	6
Reni	Aug. 5 „ Aug. 16	12	7
The Principalities—			
Bucharest, Aug. 22 ..	July 7 „ Aug. 20	5079	1720
Bulgaria—			
Rustchuk, July 30.—Scattered.			

ASSOCIATION OF FACTORY MEDICAL OFFICERS.

An advertisement which appeared in this journal on the 6th instant was addressed to those members of the profession holding appointments as factory certifying surgeons throughout the United Kingdom, calling them together to a meeting at Leeds, to be held on the 19th of the present month. This body of medical men now numbers nearly or quite a thousand; and although they do not come prominently before the public in their official capacity, they yet exercise most important sanitary duties wherever manufacture is carried on. In several articles published in this journal a few months since we drew attention to the purpose of the factory laws, and to their administration; consequently we have no present intention to repeat the information conveyed in those papers, but only desire to incite all factory medical officers to associate themselves together for the protection, not only of their own interests, but also of those of the working-classes, who would suffer by any diminution or withdrawal of the medical organisation provided by the Factory Acts. If official wishes could be realised the medical duties required would be dispensed with, and those now called upon to perform them would find themselves speedily disestablished and disendowed. Witness the latest utterances from the Factory Office, of which the following has no uncertain sound:—"I am bold to say that the provisions of the Factory Acts can be carried out unaided by medical men." This is no novel declaration, as reference to reports of former years will make clear, and it therefore might seem unnecessary to call upon those concerned in the matter to be up and doing in order to contradict this bold assertion, and to make good their position and usefulness in the eyes of the public, were we not cognisant of much inertness among many, accompanied by something akin to timidity towards those in "brief authority."

ZYMOTIC DISEASES IN MELBOURNE.

The correspondent of the *Times*, writing from Melbourne under date of July 17, states, "An outbreak of puerperal fever, the first of its kind, carried off five patients from the lying-in hospital in as many days; about twenty deaths soon followed from the severe epidemic in other localities, and there was a wide-spread feeling of alarm, which has now ceased with its cause. There has been a coincident prevalence of diphtheria, scarlatina, and hooping-cough."

TYPHOID FEVER IN THE NORTH.

Typhoid fever is very prevalent in the district of the Rhymney Valley. There have been many cases at Tirphil, New Tredegar, Cwmsyfioch, and the Darran, and several have proved fatal. Two medical gentlemen are prostrated with the fever, having caught the disease in the discharge of their duties.

FEVER AT BRENTFORD.

This comparatively insignificant town has been recently brought into considerable notoriety by the accounts published in the daily papers of the prevalence of scarlet fever in the town. The brewery situated on the banks of the river, about the centre of the town, is that which has hitherto made this town what it is. We have instituted an inquiry into the sanitary condition of the town, which will, we think, reveal a state of incompetence on the part of the local authorities which is lamentable in the extreme, and should, for their own sakes, be made as public as possible. It is the more incumbent upon the authorities to make a searching inquiry into the condition of this town for the double reason of its suburban situation, and of its connexion with the proposed main drainage scheme. Application has been made by Mr. Montgomery, one of the local magnates, to the Local Government Board, for a special inquiry to be made by one of their inspectors. This request has, we understand, been granted, and will be published shortly. In the meanwhile we have sent down our Special Commissioner, and he reports as follows:—"It is not surprising that such towns as Richmond and Brentford should have delayed so long in effecting the much-needed reform for the disposal of their town sewage. Provided with a natural outlet for their excrementitious products so simple and so comparatively safe to themselves (because so much less influenced by the tidal back-flow than towns nearer the metropolis), it is of little importance to them how they pollute the river for their neighbours lower down, so long as they are saved the necessary outlay for the construction of a more complete system of drainage. The delay of the Thames Conservators and of the Metropolitan Board of Works to compel the towns situated on the Thames to remedy this grievance is most culpable, for to it may probably be traced the cause of the present epidemic. While they are discussing plans for the construction of weirs, with the idea of promoting a more rapid and efficient scour of the bed of the river, fever nests are cropping up in every direction from the very rapid increase in the population of towns where drainage is a very secondary consideration." Our Commissioner called upon Dr. Davies, one of the leading practitioners of the town, who informed him that, while no doubt the town was in a very backward state with regard to efficient measures of sanitary reform, they were for that reason the less able to combat with an extraneous source of pollution derived from the contamination of a small stream flowing in an open ditch through the centre of the town. Our Commissioner made inquiries at all the houses situated on the banks of the stream above mentioned, from General Scott's works at Ealing down to the river Thames, as also in some of the most densely populated parts of the town, and the conclusion he arrived at was as follows:—In one house only out of about fifty visited on the banks of this small stream had scarlet fever prevailed, and in this case other sources of contamination were probably present. The house in question, though situated close to the stream, was the last of a row of about twelve cottages, all of which drained past this house into the stream; but the floods which have prevailed of late served one important purpose, for this common drain burst open, and it was then found that the outlet into the stream was blocked up; so that, although too late to remedy the evil (three of the occupants' children being ill with the fever), a very fruitful source of malaria was now revealed. The town itself, with a population of over 10,000, is in a most unsatisfactory state. It is situated on a narrow strip of land, between the river on the south and the railway on the north side. From the main street, which passes through the town, several small courts and alleys lead up to densely packed hovels, in many of which typhoid, scarlet fever, and intermittent fever abound. The stream above mentioned conducts the Ealing sewage (after precipitation according to the lime process of General Scott) under one of the most densely populated parts, and empties itself into the Thames. The epidemic of scarlet fever, although probably aggravated by this foul open drain, does not appear to have been directly caused by it. It seems, however, clearly wrong on the part of the Ealing authorities that they should attempt to justify their own source of pollution by diverting attention to other sources of contamination. On the other hand, it would be difficult to find a town in a more disreputable state than this, both as regards water-supply and drainage. The Grand Junction Waterworks are close at hand, and yet the water supplied to the town is in many cases most objectionable. Many of the inhabitants, rather than drink that which is supplied to them, purchase water brought in carts from a neighbouring spring. Notwithstanding the natural outlet provided for the discharge of excrementitious matter, cesspools are to be found in all the older parts of the town. According to the latest information, it appears that Mr. Montgomery, one of the local magnates, who instituted the inquiry in the first instance, admits that the sanitary state of the town is most defective; and he is probably right in considering that the present epidemic has been aggravated by the effluent water contaminated with the Ealing sewage passing through the centre of the town.

TYPHOID FEVER IN WOLVERHAMPTON.

We regret very much to find that the epidemic of fever in this town has proved fatal in about six of the cases attacked, and that the Rev. George Everard has lost three children from this cause. The origin of the disease has been clearly traced to milk contamination. No new cases of typhoid have occurred during the past few days. The local authorities are carefully carrying out a system of sewer disinfection, and they expect by this means to check the progress of the epidemic. Probably as soon as the dairyman's pump is sealed up the epidemic will cease altogether.

CHANGES IN THE ARMY MEDICAL DEPARTMENT.

We stated last week (says the *United Service Gazette* of the 13th inst.) that some reduction in the *personnel* of the Army Medical Department was under consideration. "We were not then in a position to communicate the intention of Mr. Cardwell, but we learn now that about thirty-five places in the surgeons' list are to be abolished. This will be only the commencement, however, for the scheme is to extend the plan which obtains now in outlying places in the colonies, of employing surgeons in private practice when economy shows that such would be more advantageous to the public purse than stationing an army surgeon at the place where there are but few troops. The chaplains' department is formed and worked on this principle, we think, and that it is which Mr. Cardwell and his advisers are thinking of following with the Army Medical Department." We can only say that up to the present we have received no intimation of the changes announced by our contemporary, but we will endeavour to ascertain the correctness of the intelligence for the benefit of our numerous readers whom it may concern.

ARMY MEDICAL OFFICERS FOR THE GOLD COAST.

Surgeon-Major Jackson (of the 100th Regiment) and Surgeon Atkins have volunteered for service on the Gold Coast, and have already sailed with Sir Garnet Wolseley; and Surgeons Saudford Moore, M.B., and J. H. Moore have also volunteered for the same service, and embark this week for Cape Coast Castle.

A FLOATING EPIDEMIC-HOSPITAL FOR DUBLIN.

At last a decided step in the right direction has been taken by the sanitary authorities—the Board of Guardians of the South Dublin Union, to whom the Local Government Board for Ireland recently entrusted the preservation of the port and city of Dublin from a cholera visitation. At a meeting of the Guardians held on Thursday, September 4, Mr. Byrne (a member of the Board) said that he had been in communication with a well-known Dublin shipbuilding firm—that of Messrs. Bewley, Webb, and Co., of the North Wall—as to the feasibility of constructing, at a small cost, a suitable floating flat-bottomed structure; and he held in his hand their specification to erect such a floating hospital, able to accommodate sixteen patients, and giving a space of 40 ft. by 20 ft. and 10 ft. high, at a cost of £975. This would be very cheap, and would, he trusted, be found adequate to any emergency likely to arise. He therefore proposed the adoption of Messrs. Bewley's estimate. The washing, etc., in connexion with this form of the proposed hospital would, he might mention, be performed on deck, and be thus more conducive to sanitary results. The proposal was agreed to—the contract to be completed on or before November 6 next. Although any danger of a cholera invasion will, we trust, have passed away before the day named in the contract, we may congratulate the Dublin citizens on having carried their point as to the advisability of constructing an epidemic-hospital for their port, to which cases of cholera or other infectious diseases may be removed from vessels arriving in the bay.

THE ARMY MEDICAL WARRANT IN INDIA.

By the last mail which reached us from India we have news that a memorial of grievances entailed on medical officers of the army by the recent Royal Warrant was about to be presented to Lord Napier. We are glad to find that an agitation against what is unfair and impolitic in the new Warrant is being carried on in India, as tending to show how widespread and general is the dissatisfaction aroused by the obnoxious clauses. Doubtless the memorialists will receive the stereotyped reply that "the matter shall be taken into consideration." Nevertheless, these respectful protests from all quarters may have the effect of urging on the authorities to reconsider the unpopular portions of their Warrant, and to perform a necessary act of justice in a graceful manner.

RESULTS OF BURNS BY PETROLEUM.

The general phenomena observed by Dr. Chairon, and which he has communicated to the French Academy of Medicine, on the cases of some persons he attended who were injured by the late explosion of petroleum at Rueel, near Paris, were as follows:—The pain, which was at the first very moderate, increased to a terrible intensity after a few hours had elapsed. Nearly all had a violent shivering of more or less duration (which was at times spasmodic), an insatiable thirst, constant and exhaustive vomiting, and an almost continuous delirium. The burns were attended by enormous swellings and tumefaction. A strange fact was that all the sufferers believed that everything they ate or drank tasted and smelt of petroleum.

TESTIMONIAL TO A PHYSICIAN.

Last week there was a right pleasant gathering at the Mechanics' Hall, at Nottingham, partly for the distribution of prizes of successful candidates who had been examined in various subjects, and partly for the presentation of a testimonial to Dr. Elder. It appears this gentleman during last winter had gratuitously given some important lectures on "Health" at the institution. These were numerously attended, and excited considerable interest. In a remarkably happy speech the chairman, Mr. Richard Enfield, concluded his remarks in the following words:—

"When he uncovered what was before him, he thought that those who saw the present would say it had been selected with admirable taste. The timepiece constituted a beautiful memorial of the past winter's work, and in giving it to Dr. Elder, on behalf of the meeting, they would all join with him, he thought, in hoping it might long be an ornament of a happy home, and that it would number many pleasant, useful hours of Dr. Elder's future life, often reminding him of those who assembled round him last winter for instruction, as well as of the present gathering, at which it was awarded as a testimonial of their sincere regard and appreciation. He had much pleasure in presenting Dr. Elder, on their behalf, with the timepiece and with a purse of gold."

Dr. Elder having responded in a suitable speech, was loudly cheered. The meeting was one of a very gratifying character, and equally honourable to the donors and the receiver.

PROSECUTION UNDER THE MEDICAL ACT.

Mr. H. Ker, of 110, Copenhagen-street, Caledonian-road, was last week fined in the mitigated penalty of £5 for having unlawfully, wilfully, and falsely pretended to be a doctor. The proceedings were instituted by Dr. John Thomas Slater, of 1, Thornhill-crescent, Caledonian-road. It appeared that when visiting his patients, Dr. Slater had a bill placed in his hand relating to Caledonian-road Provident Dispensary, 110, Copenhagen-street, from which it appeared that Mr. Harding, of Guilford-street, Russell-square, was the surgeon, and the resident medical officer "Dr. H. Ker, late of the Clerkenwell Provident Dispensary, King's-cross-road." The name of Dr. H. Ker not being found in the "Medical Directory," Mr. Sutherin, a surgeon's assistant, went to the dispensary and saw the defendant, and asked him to prescribe for him for sore throat. Having prescribed for him and entered his name in a book, he paid him 1s. For the defence, it was not denied that the defendant was not registered, but it was stated he had served his full time, and was qualified to act as a surgeon. He had served under several well-known members of the profession, and had first-class certificates as to his ability and competency. In addition to that, he held a certificate from the Philadelphia College, United States, stating that he had passed the examination at that College, and was entitled to practise in medicine and surgery. Mr. T. M. Harding, of Guilford-street, Russell-square, said that he had been in practice as a surgeon for the last twenty years. The defendant acted as his assistant at the premises in Copenhagen-street. It was not an uncommon thing in the profession to have branch practices. He attended at the infirmary every day, and it was his wish to see every patient. He did not authorise the defendant to prefix the title of "Dr." to his name on the bills. He wished the defendant to call himself "resident officer." He had not entered into any deed of partnership with the defendant. There was some talk about taking the premises jointly with the defendant for the purposes of the dispensary, but there had not been time to carry the arrangements into effect. This case shows that, properly acted upon, the Medical Act is sufficiently stringent to meet most cases of the assumption of titles by unqualified practitioners. The question at issue was in a nutshell. Mr. Ker was neither registered nor possessed any qualification which entitled him to be registered.

ADULTERATED MILK.

The Wandsworth police magistrate inflicted, on Saturday, a fine of £10 and costs, or two months' imprisonment, on Philip Meredith, a dairyman, of Old Town, Clapham, for selling milk mixed with water. The defence was that pure milk was sold at 5d. per quart, and those who paid 4d. knew that the milk was adulterated with water. The magistrate said that "recent events had shown how important it was

not to let milk vendors have any option in the matter of mixing water with milk, so as to prevent them from using contaminated water, and to protect the public from typhoid."

DEFECTS IN THE SANITARY ACT.

As new causes for sanitary inquiry present themselves, so are new defects discovered in the Public Health Act. In reply to an inquiry on the subject, Mr. Oakeshott, Medical Officer of Health, Hornsey, stated at the last meeting of the Local Board that he could not find he had power to visit the dairies in the district, Hornsey being out of the metropolitan area. If sanitary improvements are to attain anything like a national practical result, fuller powers must be given to our medical officers of health. The gravity of the defects of the present Act demand the early attention of the Legislature in the next session for their rectification. It is a subject upon which the public mind is aroused. The dangers of delay or of piecemeal legislation in respect to it are now fully seen and understood.

INDIAN CENSUS AND STATISTICS.

During the first two months of 1872 a census of the whole Indian Empire was taken, except in a few provinces in which the people had been carefully numbered a few years before. The eight provinces under British rule contain 939,922 square miles, and 184,166,134 people. If we add the remaining districts under native rulers, or held temporarily by the English, the sum totals amount to more than a million and a half of square miles, and nearly 240 millions of inhabitants. China contains about 1,300,000 square miles, and although inferior by about one-fifth in area, contains 300 millions of people, or 60 millions more than the whole of India. The Russian Empire, nearly four times the size, has only 95 millions of people. British India is as large as all Europe except Russia, but this contains only 190 millions of people. The United States are nearly as large as India, but as yet have only about 32 millions of people. Apart from the learned or root languages—Sanskrit, Pali, and Arabic—there are about thirty dialects, Aryan, Mongolian, and aboriginal, in which schools are taught and endeavours are made to create a pure literature. (The total number of languages is nearly 200.) In the Bengal provinces the zeal and labour displayed in enumerating the 67 millions of human beings scattered over 250,000 square miles were immense. At least 60,000 boats in the great rivers, containing a floating population of 300,000 souls, were boarded and counted. Passengers were reckoned on arriving at the railway terminus. In jungly places, where wild beasts were feared, the enumeration was effected during the day; otherwise the bulk of the work was done on the night of January 25. Census forms, in seven or more languages, to the number of 6½ millions, were printed by the convicts of Alipore gaol. The total cost of this gigantic operation was only £21,600. "Under careful supervision," says *The Annals of Indian Administration*, in the year 1871-72 "the people numbered themselves. The happy idea was hit on of issuing honorary letters of appointment to the most intelligent and respectable inhabitants, after they had satisfied the authorities of their ability for the task. So coveted was the honorary office of enumerator, that many who were rejected as unfit or passed over as not required, petitioned Government to remove the insult." In Hooghly the work was most laborious, and one enumerator died from tramping about in the mud and exposure to the sun. In hilly districts each chief took the census of his own clan or dependents: "In Southalistan, the village headmen knotted strings of four colours,—black for male adults, red for female adults, white for boys, and yellow for girls. In some villages, three people were told off to keep the reckoning, which was done by so many seeds or small pieces of gravel, one person keeping count of the men, another of the women, and the third of the children. Here it was pleasing to see the pride of the simple village elders in their work." Out of the 67 millions in the province of Bengal, there are under 23,000 "Europeans, Americans, and other non-Asiatics," more than 30 millions of Hindoos, about 14 millions of aborigines undergoing conversion into Hindoos (just as a Welsh or Irish family becomes English), 20 millions of Mahommedans, and about 50,000 native Christians. The aborigines—the original people, whom the Hindoos conquered and enslaved, and drove to the hills—are fast being transformed into new castes of so-called "Hindoos." Population is very dense in fertile and richly cultivated districts, amounting to 691 to the square mile in Tirhoot.

VENTILATION OF HOSPITALS.

A recent number of *Hygiene*, an American publication devoted to sanitary science, contains a report of a paper read before the Public Health Association of New York, on "Architectural Hygiene," by Mr. Carl Pfeiffer, the Secretary of the American Institute of Architects. In the first annual report of the Roosevelt Hospital, recently erected in New York from his designs, the managers acknowledge that the unusual proportion of favourable results experienced since the opening of the Hospital is due in a very great measure to the successful ventilation of the building. "For this they are indebted to the skill of the architect, and he has the satisfaction of knowing that his efforts have been crowned with signal success in the most difficult part of hospital construction."

CHOLERA AND SMALL-POX IN INDIA.

We learn from India that cholera is prevalent along the Ganges in the North-West Provinces, and the disease has broken out with extraordinary violence in Roy, Bareilly. Small-pox of a bad type is prevalent in Binapore, Bengal. Twenty-seven deaths in Madras from the same disease occurred between August 1 and 12. Our correspondent at Madras writes:—

"The cholera has been raging fearfully in the city of Bangkok, in Siam. It is said that 600 persons died on the 30th June, and that 1864 bodies were burned in the last week of that month. It is supposed that 10,000 out of 300,000 inhabitants have perished. The temples are said to be full of dead bodies. Cholera is also said to have appeared at Singapore."

NEW SANITARY TRAP.

Now that typhoid fever and other maladies of a kindred type are so generally prevalent, it may not be out of place to direct our readers' notice to a newly invented sanitary and ventilating trap, which has been brought under the favourable notice of the Royal Society of British Architects and the Royal Institute of British Architects, from the members of both which bodies it has called forth the highest commendation. It is called "The Radcliffe Sanitary and Ventilating Trap," is easy of application to existing systems, and of moderate price. The noxious vapours and gases which now so commonly enter our houses from imperfect and defective traps are a well-known fruitful source of illness and disease.

DEATH OF PROFESSOR CZERMAK.

We regret to hear that Professor Czermak, the eminent physiologist, died at Leipzic on Tuesday, the 16th inst. We hope to give in an ensuing number a sketch of his career.

FROM ABROAD.—BUDGET OF THE ASSISTANCE PUBLIQUE FOR 1874—DISEASES OF CHILDREN IN MASSACHUSETTS—THE CHOLERA IN THE FRENCH ACADEMY OF MEDICINE.

The "Assistance Publique" of Paris has just presented to the Préfet de la Seine its Budget for 1874. This, which in 1873

amounted to 26,962,000 fr., has been raised to 28,150,000 fr. (£1,126,000), the increase of 1,188,000 fr. being caused by the great rise in prices and wages. The number of beds proposed to be maintained is the same as in 1873—viz., 20,161, of which number 9311 are devoted to the aged and infirm, 8277 to the sick, and 2081 to the insane. Those who are expected to come under the care of the administration are estimated on the same scale as in 1873—viz., 303,099,—and are divided into two categories. The first of these consists of 111,099 individuals "treated" in the hospital or hospices, and the second of 192,000 individuals "succoured" under the following circumstances: Indigent persons registered at the Bureaux de Bienfaisance, 102,000; sick persons treated at home, 43,000; women delivered at their own houses, 10,000; necessitous persons temporarily assisted, 30,000; and infants placed out by the nursing department. But the Assistance Publique also extends its guardianship over 8601 insane persons placed out in asylums either in the department or the provinces, and 26,000 *enfants assistés* placed in the country. Towards meeting the wants of these 377,000 individuals, the Assistance has at its disposal an ordinary revenue calculated for 1874 at 9,044,000 fr., being an increase on that of 1873 of 113,800 fr., due to an augmentation of the value of its property, and the products of its gardens, dairies, etc., as also of the tax levied for the poor on the theatres. As already said, the budget is fixed for 1874 at 28,150,000 fr., of which sum 11,520,000 fr. will be derived from a municipal subvention. Numerous new works and improvements are projected at several of the hospitals, and 1,000,000 frs. is to be devoted towards the construction of the new hospital at Menilmontant, in the crowded 20th Arrondissement, and which it is expected will be completed in 1876. No new vote has been taken for the new Hôtel-Dieu, upon which so much money has been thrown away, as the sums voted in former years and carried forward will suffice to carry on the works for another year after these have been resumed.

From an interesting paper on "Children's Diseases in Massachusetts," read by Dr. J. O. Webster before the Massachusetts Medical Society (and reported in the *Boston Journal*, August 14 and 21), we take the following facts:—

Dr. Webster's observations are founded on the returns of infantile mortality for the years 1865-70 inclusive; and from these he finds that the mortality of children under 5 years of age in the entire State for those six years was about 6·50 per 1000 of population—the highest mortality being 7·25 in 1865, when dysentery and diphtheria were prevailing, and the lowest 6·21 in 1866. For eleven of the cities of the State, having a population of over 20,000 each, the rate rose to 8·75, while for the remainder of the State it stood only at 5·20. The percentage of deaths (during the first five years of life) to births was—for

	First year.	Second year.	Third year.	Fourth year.	Fifth year.
Massachusetts . .	14·9	5·3	2·5	1·6	1·1
Eleven cities . .	18·7	6·8	2·9	1·9	1·3
Rest of the State . .	12·3	4·3	2·2	1·4	1·0
English life-table . .	14·6	5·2	2·7	1·8	1·3

It is found that of the children born alive in Massachusetts about 15 per cent. die in the first year, 5 in the second, $2\frac{1}{2}$ in the third, $1\frac{1}{2}$ in the fourth, and 1 in the fifth—results almost identical with those of the English life-table. Moreover, in the eleven cities referred to, $18\frac{1}{2}$ per cent. die in the first year, $6\frac{1}{4}$ in the second, $2\frac{3}{4}$ in the third, while in the fourth and fifth years the mortality is only slightly in excess of that for the State at large.

Referring to the various causes of the great mortality in childhood, Dr. Webster observes that while *residence in the large towns* has been shown to be more fatal (three to two), this only applies to certain portions of these; for an analysis of the mortality of Boston for 1870 shows that in the best districts of that city infantile mortality is very low. In fact, "residence in a city, and other things being equal, is as healthy for children as in the country." The *seasons*, as with ourselves, exercise great influence, about 20 per cent. of infantile mortality occurring in the first two quarters of the year, 37 in the third, and 23 in the fourth. The high percentage of the summer months is due to the prevalence of intestinal disease, 84 per cent. of the deaths occurring in that quarter being due to cholera infantum, 57 to diarrhœa, and 76 to dysentery. In the cold months, from December to April, about 60 per cent. die from pneumonia, and as many from croup from November to March. Diphtheria carried off about 40 per cent. from October to January; but consumption destroys about an equal number of lives every month. Seasons, too, influence the mortality of eruptive fevers; for 70 per cent. of the deaths from measles occur between March and August, and 65 per cent. of those from scarlatina between December and May. The *neglect of sanitary laws* is exemplified by the greater mortality among the foreign children. Thus, during 1867-70, of all dying under five years, 41·5 per cent. were of American and 58·5 of foreign parentage, although of the total mortality 55 per cent. were of American and only 45 per cent. of foreign parentage. Eighteen per cent. of the mortality is attributed to the use of *improper food*, maternal suckling being rare in America. *Insufficient clothing* is a frequent source of fatal disease among children, and is sadly contrasted with that of adults, who are so much better able to bear a low temperature. "One simple direction will suffice: Always dress a child more warmly than is required by an adult for the same temperature." Although the "hardening process" has somewhat gone out of fashion, the idea still remains that it is proper to take children out every day, and that they may be allowed to sleep in cold rooms. The winters are far too cold in New England to allow of the former practice being followed with impunity, and air at a temperature of 50° Fahr. is probably the lowest that an infant should be allowed to breathe when its vital powers are reduced during sleep. More than 20 per cent. of the infantile mortality is caused by *epidemic* and *infectious* diseases, which are largely preventable.

In specifying the diseases which have proved most fatal in children, Dr. Webster states that those of the digestive organs occasion nearly a fourth (23 per cent.) of the deaths, those of the respiratory organs about one-fifth, developmental diseases (including atrophy and debility) one-sixth, and typhoid and eruptive fevers, tubercular disease, and affections of the nervous system, each one-tenth. "Although our infantile mortality is no greater than that of other countries, it is differently distributed among the diseases, bowel affections being much more common here than abroad, and nervous diseases holding there a much more important place than here. Pulmonary diseases also cause over double the infant mortality in England that they do in Massachusetts."

Whether genuine cholera has actually invaded France, as stoutly maintained by some, and as stoutly denied by others, it will certainly give rise to one of those tremendously wearisome debates in the Academy of Medicine which are among the things that foreigners can only wonder at, without possessing either the desire or ability to imitate. A cholera-debate, indeed, has been smouldering at the Academy for years past, but has been put off from time to time on various pretexts, but really because even the most seasoned members seem to have dreaded entering upon it. Two famous reports on cholera have never yet been discussed—viz., that presented by M. Briquet, in 1865, relating to the epidemic of 1849; and that of M. Barth, in 1869, relating to the epidemics of 1854 and 1865. These, to all appearance, would still have reposed for an indefinite period had not a communication on the present

alleged epidemic aroused into activity that most energetic of debaters and most inexhaustible of talkers, M. Jules Guérin. He only takes up one point for discussion—the question of *diarrhœa in relation to cholera*,—but with this he intends to deal exhaustively, considering it as it precedes or accompanies epidemics of cholera, and as it precedes or accompanies particular cases of the disease. At present he has not got further than the history of premonitory diarrhœa, for which he has had a whole *séance* to himself, the report of his address occupying more than twenty closely printed pages in the *Bulletin;* and the probability is that he will require two or three more *séances* before he has had his say out,—for it seems to be a rule at the Academy to always begin a subject again *de novo*, and never to assume anything as proved, however often it may have been told or demonstrated; and accordingly the orator felt himself justified in going through the entire history of premonitory diarrhœa, from his discovery of it in 1832 to the present time, reproducing facts, figures, and narrations which have been repeatedly published in this country and in France, and with which all interested in the subjects are well acquainted.

The immediate cause of this debate was a letter addressed to the Academy by M. Lecadre, Médecin des Epidémies at Havre, giving an account of the recent outbreak of cholera in that city. While admitting the occurrence of numerous deaths, he denies that the cases have exhibited the symptoms of Asiatic cholera, and regards them as examples of cholera *nostras* of a severe type. In this opinion he was joined by some members of the Academy; but M. Guérin insisted that the disease was really cholera in its premonitory stage, and then proceeded to deliver his elaborate essay on diarrhœa in relation to cholera. Two hospital physicians of Havre also, writing to the Academy, state that M. Lecadre, Médecin des Epidémics though he be, must have entirely neglected observing the cases both in their private and hospital practice, or he would have at once declared them to be genuine specimens of Asiatic cholera. Thus here, as always with respect to early cases of this disease, observers—apparently quite competent—are at issue with respect to its identification. These Havre cases are also assisting, in conjunction with preparations against the ingress of the disease made in other maritime districts, to render quarantine regulations ridiculous. While vessels—especially those coming from "abominable" Germany—are harassed by every possible regulation and impediment, thousands of foreigners are arriving from all parts of Europe by rail, untrammelled and unfeared.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Forty-third Meeting.

(*From our Special Correspondent.*)

The British Association has changed its quarters from Brighton, where the meeting was held last year, to a very different locality, situated in the very heart of the manufacturing districts of Yorkshire. The town of Bradford, which is now the temporary home of the Association, is distinguished for the rapidity with which it has developed itself from comparative obscurity to magnificence and importance, until it has attained almost the dimensions of a capital. The town itself forms one of a cluster of townships, the others being Bowling, Horton, and Manningham, together constituting the borough of Bradford; and the enormous and rapid strides it has made may be estimated from the fact that whereas the population of the borough in 1801 was only 13,264, it is now (1873) estimated at 156,609. The parish of Bradford, which includes the outlying population as well as the townships, is returned by the Bradford Superintendent Registrar as comprising 257,713 persons. As is well known, Bradford was originally the centre of the worsted trade, but at present a number of other materials, as cotton, silk, alpaca, mohair, etc., enter into the composition of the goods made in the Bradford district.

The town lies in the hollow of a basin, surrounded by an amphitheatre of hills, and it was formerly an unsightly aggregation of narrow and ill-built streets spreading along the hillsides, and the drainage and other sanitary arrangements were, and indeed still are, defective, and the water-supply was insufficient. The quantity of this fluid furnished by nature is most copious, as may be supposed from the geographical conditions of the locality, encircled as it is by a belt of hills, all furnishing their quota from the clouds; but the arrangements for rendering it available for the wants of the population were for a long time clumsy and defective. The energy of the inhabitants, however, headed by the Corporation, has done very much to improve the sanitary state of the borough, the old waterworks having been bought up, a new scheme of water-supply been inaugurated, the cattle fairs formerly held in the public streets having been removed, and many other improvements of a similar nature having been effected. Among the most important of these have been the formation of a wholesale meat market and abattoir, the establishment of baths and wash-houses, the abolition of intra-mural interments and the substitution of two extensive cemeteries in the suburbs, and the opening of two large parks for the recreation of the people. In reference to this last provision, which especially affects the mass of the population, it is in contemplation to appropriate three more portions of land for this object, so that eventually Bradford will possess five recreation-grounds in different quarters of the borough, all within easy reach of the homes of the residents.

The drainage, however, is necessarily defective, for the town lies in the heart of Yorkshire, almost equidistant from the sea to the east and to the west, the distance being about fifty miles in either direction. The great rivers—the Humber to the east, and the Mersey and the Ribble to the west—which drain the counties of Yorkshire and Lancashire are at a great distance from Bradford, which communicates with the Humber only through the medium of a very small river—the Aire—which is wholly insufficient to receive, still less to purify, the sewage of so dense a population. Nor is even this small river situated near enough to Bradford to carry off the sewage; for the Aire is connected with the town by a still smaller tributary stream called the Bradford Beck. Hence the problem of disposing of the sewage has here always been, and still remains, a very difficult one—on which, however, the proceedings and the discussions now instituted at the British Association may perhaps throw some important light, and offer some useful suggestions. We find from a report of Mr. Netten Radcliffe, dated July 17, 1872, that enteric fever is endemic at Bradford; and the same authority attributes the fact to the defective manner in which the excrementitious matter of the population is disposed of, the common privy system being the prevailing mode adopted for the purpose. It was stated in evidence before the Rivers Pollution Commission in 1866 that there were from 12,000 to 14,000 privies in the borough; upwards of 6000 *middensteads*, as they are called, or receptacles into which the contents of the privies are periodically emptied; and not more than 1500 water-closets. The middensteads are emptied when they are full, but not on any systematic plan, and the ordure is carried away at the expense of the corporation through the agency of contractors, and is sold to the neighbouring farmers, or when not immediately purchased it is carted to and deposited in any old quarries or other hollows which can be made available for the purpose. Besides the prevalence of enteric fever, a great amount of mortality prevails at Bradford among children, which is accounted for partly by the circumstances just mentioned; but it is also due in a great measure to the negligent or erroneous manner in which the infant population are nourished by the mothers.

The proceedings of the present meeting of the British Association commenced on Wednesday evening at St. George's Hall, when Dr. Carpenter formally resigned the Presidency, and Professor A. A. Williamson assumed the office and delivered the inaugural address.

Although the new Town Hall, a very magnificent and imposing structure, was opened last week, and now forms one of the most striking features of the town, it is inapplicable to the purposes of the meeting, in consequence of the comparatively

limited accommodation of the rooms in presence of the large number of members and associates who are assembled on the present occasion. Different edifices have therefore been selected as being more suitable, the Exchange having been given up for the time as a reception-room, St. George's Hall for the addresses and for one of the *soirées*, the Mechanics' Institute for another *soirée* and for some of the meetings, while the sections are accommodated at other buildings in various parts of the town. The Biological Section, which comprises the three departments of Natural History, Anatomy and Physiology, and Anthropology, are lodged at the Church Institute, and the Chemical Science Section at the schoolroom of the Unitarian Chapel.

The President of the Biological Section is Dr. Allman, who is also President of the Department of Zoology and Botany, while Professor Rutherford, M.D., presides over the Department of Anatomy and Physiology, and Dr. Beddoe over that of Anthropology. Dr. W. J. Russell is the President of the Chemical Section.

The meeting promises to be a great success. More than 1100 members and associates had inscribed their names before the commencement of the proceedings, and probably the number will amount to upwards of 2000 before they are terminated. As usual, there is a considerable proportion of ladies among the number. Among the most important subjects to be discussed, that of "fuel" will no doubt be generally interesting; while in reference to sanitary matters, there will be an inspection of the Bradford Sewage Defæcating Works as a part of the programme. The medical profession of Bradford are taking an active part in promoting the objects of the meeting, and among the evidences of good feeling existing towards their brethren, we may mention that they have invited their *confrères* coming from a distance to an entertainment at the Victoria Hotel this evening (Saturday).

SNAKES.

(*From our Correspondent.*)

In Madras in 1870-71 the number of human lives said to have been destroyed by beasts of prey and poisonous snakes was 2225, and the number of cattle 5314. The rewards paid for killing tigers, etc., amounted to £2511. Only £2 14s. was spent in rewarding the destruction of snakes. But an official return for the year from April 1, 1872, to March 31, 1873, shows a very different state of things. In March, 1872, seventy-four snakes were destroyed in the whole Presidency, and the reward of 2 annas, or 3d., for each poisonous snake amounted to 18s. 6d. But month by month the serpenticidal zeal of the population was more and more aroused, till in March, 1873, the number of snakes destroyed was 425,057, and the rewards not less than £5313 4s. 1½d. Taking the year as a whole, the number of snakes destroyed in the Presidency was more than one million and a quarter, and the money paid in rewards was £15,728 16s. 9d., which numbers would have been trebled had every part of the Presidency been equally zealous. The Madras Government seems to have repented of its liberality, and to have thought that even snake-killing might be too dear; therefore, by an order dated May 28, 1873, they have restricted the reward to cobras only, and have fixed it at one anna, or three-halfpence, per cobra. It was alleged that some of the natives used to breed cobras on purpose to get the rewards; but considering the immense quantity of land which seems not to be cultivable profitably for human food, and which is covered with prickly pear and other wild plants, there really seems to be no limit to the number of snakes which might be captured.

Very few cases of snake-bite in India are seen by European or medical authorities. The poison is too rapid. We get an incidental glimpse occasionally from indirect sources of the details. For instance, in the "Report of the Society for the Propagation of the Gospel" a poor Christian thus describes the death of his daughter:—"Three months after her marriage in a field in the wilderness a snake bit her. Her husband dragged her towards home as far as he could. Her legs were cut by the stones and bleeding. When he could carry her no longer he laid her near a thicket, and ran for help, but *the ants had begun to eat her face* before he could return."

It must in candour be said that some authorities consider the accounts of the numbers of men and animals destroyed by snakes very much exaggerated, and affirm that many women and others who are murdered are said to have died from snake-bite. On this point we can offer no opinion. Certain it is that nothing is more rare than to hear of Europeans bitten. The cases known can be reckoned on the fingers, and amongst them are two of eminent military men in the Madras Presidency, one bitten by a cobra in the hand, one over the os sacrum (by a small snake which had concealed itself in the *chaise-percée*), and both these gentlemen recovered. A Brahmin friend tells me that he was bitten on the head by a cobra in the middle of the night, when a child of ten years old, in bed. He speedily became insensible, and so continued for some hours. He was taken at once to a holy *guru* (a poison doctor), who knows *muntrums* or sacred spells of force almost to draw the moon from its orbit. This sacred person was candid enough to say that his muntrums were of less efficacy against the cobra than against other snakes. However, he did his best, and my friend recovered with nothing worse than an abscess. On the other hand, a little boy was brought in a drowsy state to the Triplicane Hospital last week who had got a bite in his hand when thrusting it into a hole in a garden wall to search for a bird's nest. He died in an hour and a half after he was bitten, spite of the administration of brandy and potass by month and enema.

There is an "Elementary Treatise on Ophiology," (a) with a descriptive catalogue of the snakes found in India and the adjoining countries, by Edward Nicholson, Assistant-Surgeon Royal Artillery, and now employed as scientific chemist and naturalist by the Government. This is a short, precise, and careful description of the structure and classification of *all* the snakes, venomous and others; and the author, like other enthusiastic naturalists, loves his pets, makes slight of the harm they do, and writes "in hope of dispelling the lamentable prejudices entertained in India against some of the most beautiful and harmless of God's creatures." Hence he minimises their alleged ill effects, and ascribes a good deal that is said to exaggeration and sensationalism. Such snakes as are truly oviparous generally deposit their eggs in a mass of decaying vegetation for the sake of warmth and moisture, and are believed to watch them, but not to incubate in the same way as most birds. Dr. Nicholson has in vain endeavoured to hatch snake eggs in captivity. The thin outer shell dries and becomes shrivelled. With reference to the notion that young snakes when in danger can seek refuge by crawling into their mother's throat he has no experience of his own, but conceives it to be quite possible, "for young snakes could certainly do without air for half an hour, and a snake's stomach is sufficiently capacious to allow a frog to croak *de profundis* when he evidently occupies a position two feet from the daylight."

Snakes feed on any small animals, eggs, fish, and above all on frogs. They may feed on each other. "I have seen," says Dr. Nicholson, "two snakes who had caught the same frog between them manœuvre very cleverly, when their noses met: the one who got his head within the other's jaw would certainly have gone down along with the frog if he had not freed himself from the frog and snake too by a sudden effort." Snakes drink water freely, but Dr. Nicholson has never succeeded in getting them to drink milk, and disbelieves the stories of their robbing dairies and sucking cows. He also greatly discounts the stories of pythons swallowing large animals, and says that "the pressure which the largest snake can exercise is very mild indeed," just enough to keep their prey from escaping. "Neither do snakes lick their crushed prey ('slaver it over' is the term used in story and simile) before swallowing it. If the prey is active, after catching it with their teeth they throw a few folds round it simply to prevent it from struggling, and then bolt it as they would a frog." Dr. Nicholson gives a very interesting chapter on *The Serpentarium*, showing where to look for snakes of different kinds; how to catch them and carry them home; how to feed them and facilitate the casting of the skin, and to tame and train them; how to kill them humanely and preserve them for the museum; how to distinguish the various species; and how to treat snake-bite, in which his remedies are very modest. But he believes that only the cobra and the daboia, or chain viper, amongst Indian snakes, are fatal to man. I must add a little gossip, if I may, some day, on the religious or superstitious and phallic history of snakes. R. D.

(a) Published at Madras, by Higginbottom, 1870. A new edition is in the press.

A HEART WITH FIVE CAVITIES.

On Tuesday evening, Mr. Langham held an inquest at the St. Margaret's Board-room, York-street, Westminster, on the body of Maria Smith, aged 30, who died under the following peculiar circumstances:—It appeared from the evidence that deceased, whose real name was Phillips, resided at 12, Union-court, Westminster. On Friday last, deceased, who had long complained of her heart, called a neighbour to her room, who, seeing deceased was evidently in a dying state, called for further assistance, and sent for a medical man, but before his arrival she exclaimed, "I am dying!" and fell on to her right side, dead. Mr. George Fenton, 28, Great Smith-street, Westminster, remarked to the coroner that this was a case of peculiar interest, as there was only one other similar case recorded in medical annals known to him. On Friday he was called to see deceased, whom he had known by sight for about twelve months, and found her lying on the bed, warm but dead. He had since made a post-mortem. On examining the thorax he found the lungs slightly congested, and on separating the heart from the lungs he found the pericardium adherent over the whole surface. In carefully dissecting it off he found a most extraordinary formation—viz., five cavities. The extra cavity was anterior to the left ventricle, and communicating with it by two small holes. One was just below the semilunar valves, and was tendinous all round, and smooth and shining; the other was more at the apex of the ventricle, rather larger than the superior one, and was covered with a valve somewhat similar to the other valves of the heart. The heart was in a most abnormal condition, being almost three times the ordinary size, weighing twenty-three ounces. There was a small fibrinous clot in the extra cavity, and the valves on the right side were inflamed and thickened. The liver was soft, and weighed one pound heavier than it ought to have done. The kidneys were small and much congested, and the capsule was very loose. No doubt the condition of the heart had caused death. The jury, after a few remarks, returned a verdict of death from natural causes. In a note received from Mr. Fenton, he adds—"I have no doubt at some time or other it was a true aneurism of the heart, but the woman having had acute inflammation of both pericardium and endocardium, and the former being adherent at the time the walls of the ventricle were ruptured saved the life of the woman. I may further state that the size of the cavity was somewhat larger than the ventricle, and the anterior wall was wholly tendinous and smooth. Of course its inner wall would be the muscular wall of the left ventricle, and not so smooth, with the two holes communicating, the upper one being about the size of a quill, round, tendinous, and smooth; the lower one somewhat larger, and covered by the columnæ carneæ of the ventricle on one side, and the valve spoken of on the other. The capsules of both kidneys were non-adherent, and stood in the same relation to the kidneys as the pericardium does to the heart in a healthy state."

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, September 16.

The Cholera in Paris—Health of M. Nélaton.

The cholera has caused a certain panic here, and although the mortality has not been so great as might have been expected, the disease was assuming rather alarming proportions, having visited nearly every arrondissement in the town. The quarters most tried have been Belleville and la Roquette, two of the most populous districts of Paris, and where the inhabitants are not remarkable for cleanliness and sobriety. The disease, however, is on the decline, as is shown by the mortuary return issued from the office of the Prefect of Police, there having been only six deaths in all on Saturday, the 13th inst., and five on Sunday, from cholera.

I am glad to be able to inform you that M. Nélaton is much better, and I have learned from Dr. Moutard-Martin, his friend and medical attendant, that the illustrious patient has been able to take a little food, and even to move out of his bed.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

September 12.

Adulteration of Butter.

A case has just been terminated here which shows how much has yet to be done before tests so indubitable can be discovered as to secure unanimity among highly skilled witnesses concerning the adulteration of some of our commonest articles of daily food. Nine or ten months ago the Chief Inspector of Nuisances purchased from a firm of extensive butter merchants a sample of butter at 7d. per lb., and submitted it to Dr. Campbell Brown, the borough analyst, for examination. On that gentleman's certificate a summons was taken out against the vendors for selling adulterated butter. The summons was resisted, a denial of the alleged adulteration offered, and scientific evidence in favour of the purity of the butter adduced. In view of the direct conflict of scientific evidence before him, the stipendiary magistrate resolved to call in the aid of a third expert, whose opinion should be decisive. One eminent chemist after another was asked to undertake the examination, but declined, till at length the duty was accepted by Professor Anderson, of the University of Glasgow, and his report contains so much that is interesting, with not a little that is curious, that I do not scruple to copy it at length. It is as follows:—

"I have carefully examined and analysed the sample of butter for the purpose of ascertaining whether it is adulterated, and find it to contain—

Fatty matter	84·77
Curd	1·12
Salt	5·65
Water	8·46
	100·00

"As far as the results of chemical analysis are concerned, this sample of butter presents no special peculiarities. The salt is present in almost exactly the proportion in which it is said to be used in the best dairies—viz., one ounce to the pound of butter; the water is not excessive, and the curd only a very little above the proportion usually found in good butter. It is obvious, therefore, that neither salt nor water—the two substances most generally employed as adulterants—has been used in this case, and if any foreign substance be present, it must be some inferior variety of fat.

"I have therefore directed my attention most particularly to this point; and on examining the different processes described in books for detecting foreign fats in butter, I am bound to say that I have found the whole subject in an exceedingly unsatisfactory state. Microscopic examination is the process on which the greatest reliance was placed. Ordinary butter under the microscope is seen to consist entirely of exceedingly minute granules, in which no trace of crystalline structure can be detected; while all ordinary fats—such as tallow, lard, etc.—are completely crystalline, and consist of small radiated groups of needle-shaped crystals. The appearance of these crystals does not afford any means of determining the nature of the fat in which they are formed; for the constituents of all fats are so similar in external characters that they cannot be identified, except in those cases in which they contain some peculiar substances. Thus, tallow and cocoanut oil may be distinguished in a rough manner by their peculiar smells, which are really due to the presence of a small quantity of certain odorous fats, and of other odorous principles the nature of which is still very imperfectly understood.

"If the mere presence of a crystalline fat is to be taken as conclusive evidence of adulteration, then this sample of butter must undoubtedly be considered as adulterated. But it appears to me that there are other matters to be taken into consideration which must materially modify this opinion, and of these the proportion which these crystals bear to the whole mass of butter is a matter of primary importance.

"It is here necessary for me to point out a very important difference between a chemical analysis and a microscopic examination. In the former the different constituents are actually separated, and their relative proportions determined by weight. In the latter the separation and weighing of the different substances are impracticable, and any estimate of the relative proportions of the different constituents is a matter of

judgment and opinion, the value of which is mainly dependent on the experience of the individual, and is at best no more than an approximation. After careful and repeated examination I am of opinion that the crystals contained in this sample of butter certainly do not exceed 5 per cent. of its whole weight, and are probably considerably less than that quantity.

"Now, it appears to me that the facts just stated are entirely opposed to the view that these crystals are the result of deliberate adulteration. The person who has made up his mind to adulterate is not likely to be satisfied with the additional profit which would be obtained by the addition of 5 per cent. of the cheapest fat that could be purchased; and it is scarcely necessary to say that the number of fats that could be profitably used to adulterate butter which, I understand, is sold at 7d. per lb., is necessarily extremely restricted.

"A number of experiments which I have made, chiefly in connexion with this case, further lead me to doubt how far the presence of crystals in butter can be considered as an indisputable proof of adulteration. I find that nothing is easier than to make pure butter assume a completely crystalline appearance under the microscope, so that the eye cannot distinguish it under the microscope from tallow. On the other hand, tallow can be converted into a state in which, under the microscope, it might possibly pass for genuine butter. It further appears to me by no means certain that genuine butter, when kept for a long time, may not, to a certain extent, acquire a crystalline character. I have been unable to find any facts bearing on this opinion in books, and, of course, have not had time and opportunity for making experiments on the matter. But it is well known that a similar change takes place in other substances, and there are various circumstances which make me think it not impossible that it may occur in butter.

"As the result of the whole examination, I am forced to come to the conclusion that there is no evidence to show that this sample of butter is adulterated. It is undoubtedly of most inferior quality, and I am not surprised that suspicion has arisen as to its genuineness; but I am not prepared to describe it as adulterated, and, in fact, believe that much of its present peculiarities is due to the length of time it has been kept.

"Thomas Anderson.

"University of Glasgow, September 6, 1873."

On this report the summons was dismissed. Professor Anderson does not seem to have done anything towards rendering the whole subject of the detection of inferior fats in butter less unsatisfactory than he confesses to have found it. The matter is not so hopelessly obscure, however, as his report implies. Dr. Brown himself has done what Professor Anderson admits that *he* has not—viz., kept butter (*i.e.*, pure butter) for many months, and found that there were no more crystals in it at the end than at the beginning of that time; yet on the assumed possibility of such crystals in some way or other making their appearance in genuine butter as the result of keeping it the verdict hung. True it is, as Dr. Anderson remarks, that it is easy to make pure butter assume a completely crystalline appearance under the microscope—very much easier, indeed, than to make it appear to have only a small percentage of crystals; but it is nowhere assumed—indeed, elsewhere it is expressly denied—that the conditions for producing any such change could have been present in the butter that was the subject of this examination. It seems almost a pity that Dr. Anderson, finding the subject so obscure, and not having any time to throw any original light on it, did not follow the example of the other eminent men to whom application was made, and decline to interfere. As for Dr. Brown, few men have higher qualifications for the prosecution of this kind of work; and the laborious and conscientious way in which he has for a long time pursued it, and the new light that he has been thus enabled to throw on some methods of detecting adulterations, are manifested by his able and eminently practical articles communicated to the *Chemical News*, "Manchester and Liverpool Medical Reports," etc.

BIRMINGHAM.

September 12.

Instructions of Medical Officer of Health—The Gaol Appointment—Resignation of Dr. Fleming—Death of Dr. Evans—Musical Festival.

Diarrhœa having become somewhat prevalent here, our energetic Medical Officer of Health has issued, for the information of the public, an excellent code of instructions for its amelioration and prevention. They are as follow:—1. Observe temperance in eating and drinking. 2. Avoid improper and unwholesome food, such as tainted meat or fish, or unsound and unripe fruit. As the majority of deaths occur in infants, the greatest care should be taken in feeding them. Young infants should be suckled or fed with sweetened milk, either with or without the addition of water. 3. Drink no water which is muddy, or offensive, or under suspicion of contamination by surface impurities. Where there is no choice, a suspected water should be boiled and allowed to cool before being used as a drink; water so prepared should not be used for a longer time than one day. 5. Allow no accumulation of decaying or refuse matter in the neighbourhood of dwellings. Much that is thrown out of houses might be advantageously disposed of by being thrown behind the fire. 6. Report foul ash-pits or privies, untrapped drains, and other sources of nuisance to the medical officer of health or inspector of nuisances. 7. Practise personal and domestic cleanliness and free ventilation of houses by opening windows and doors during certain parts of the day. 8. Disinfect immediately all discharges from patients.

The Gaol is still without a permanent Surgeon. In our last communication we stated that there were four candidates for the office, but not one of them was selected by the magistrates, who have again urged the Town Council to raise the rate of income to the original sum of £200 a year, as they are of opinion it is the only way to obtain the services of a really good and competent officer.

We regret to state that Dr. Fleming, through ill health, has resigned the office of Physician to the Queen's Hospital, with which he has been connected for fifteen years, and on which he has shed great lustre by his rare talents as a physician and clinical teacher. In the latter capacity one of his former pupils, Dr. Sawyer, speaks of him in the following true and eulogistic terms:—"As a clinical teacher, for closeness of observation, clearness of reasoning, and conciseness of teaching, he had never been surpassed." The governors of the Hospital have only honoured themselves by proposing that Dr. Fleming be made Consulting Physician to the Hospital as a reward for his past valuable services.

Sad to record the melancholy fact, one of our most distinguished physicians has been taken from us. Dr. Evans died a short time since in the plenitude of renown as a doctor of the highest order. He had been leading physician here for many years, and until latterly senior Physician to the General Hospital. Dr. Evans was better known by his prodigious practical knowledge and experience in his profession, and by his diagnostic skill in the detection of diseases of the chest by the stethoscope. The *tactus eruditus* he possessed to perfection. In these acquirements he stood unrivalled in the provinces. To the school of Laennec he was, we are informed, indebted for the possession of the grand and important truths as revealed by the stethoscope, the enunciation of which has rendered the name of Laennec illustrious in the annals of medicine. Dr. Evans was not only an eminent physician, but he was a gentleman in the full significance of the term. Studying the feelings of the general and younger practitioner, he made himself deservedly popular and beloved, and his memory will ever be held in kind and grateful remembrance.

Our triennial musical festival is just over. The pecuniary results have been most gratifying. The noble sum of about £13,000 has been thus raised for the benefit of the General Hospital, whose sphere of usefulness will be thus considerably enlarged by this bountiful and needful addition to its funds. Truly,

"Music hath charms."

Increase in Consumption of Horseflesh in Paris.—During the first six months of 1867 there were consumed 893 horses, asses, and mules, furnishing 166,030 kilogrammes of meat. For the first six months of 1870—*i.e.*, prior to the war—the animals were 1992 in number, giving 366,440 kilogrammes. For the corresponding period in 1873, 5186 animals have been butchered, furnishing 883,840 kilogrammes, without counting the heart, liver, brain, tongue, etc., which are consumed like those of oxen. The same progress has been made in the consumption in the provinces. The horses are bought for this purpose at from 120 fr. to 150 fr. each, this new industry having increased the value of horses that are worn out, but not diseased, by more than 100 fr.—*Union Méd.*, August 26.

GENERAL CORRESPONDENCE.

THE DAIRY REFORM COMPANY.

Letter from Mr. D. Maconochie.

[To the Editor of the Medical Times and Gazette.]

Sir,—We venture to ask your permission to lay before your readers our view of the deplorable disaster which has happened to us, in the belief that both you and your readers will then take a very different view of the case.

Of course, looking back upon what has happened, it is easy to criticise, and we see now that the prudent course for us, whilst totally disbelieving what we regarded as an erroneous theory based upon a misapprehension, would have been immediately to have asked that the matter should be investigated by the Local Government Board. Had we done so on the receipt of Dr. Whitmore's first letter, no one could have blamed; us but then, after all, it is not every day that honest dealers are accused of poisoning their customers, and they cannot be expected always to know what would be the prudent thing to do, and all we could do was to judge of the facts laid before us. Now, we confidently assert that the facts laid before us by Dr. Whitmore on August 5 did not point to the milk at all. Had the statement been that there appeared to be an *increase* of typhoid in Marylebone, and that some of the cases appeared to have a curious connexion with our milk, we should have been much more alarmed; but the statement made to us was that there was a fresh "outbreak" of typhoid in Marylebone, the whole of which was attributable to our milk, and the more we investigated it the more did we find that this statement was not the fact—that there was no fresh "outbreak," because there had been no cessation of typhoid in Marylebone. And similarly we found, as, indeed, Dr. Whitmore did not seek to deny, that there were other cases which could not be attributed to the milk. No doubt the word "outbreak" is used by medical men, and also by veterinary surgeons, to signify the occurrence of any fresh case or cases arising from a new source of infection, even although occurring in presence of other cases from older and previously known sources of infection. I trust that so illogical a use of the word will be discontinued in consequence of the sad teaching of the Marylebone so-called outbreak, for it was unquestionably the use of this word more than any other circumstance that made us regard the evidence as not merely insufficient, but as altogether irrelevant,—as having nothing in all the wide world to do with milk. But, misleading as was this statament, we were still more thrown off our guard and led to reject the evidence as absolutely worthless on account of the belief—indeed, conviction—which Dr. Whitmore laboured under, that the whole affair was easily accounted for by the supposed fact of the whole or a greater part of our milk coming from a sewage farm.

Now, Sir, the directors appeal to you and your readers to say whether it is reasonable to blame any educated persons for rejecting and scouting the evidence put before them under such circumstances. They were told—first, that there was an outbreak, when they found that there had been no cessation of the fever; and they were then told that it was milk which had produced this non-existing outbreak, and no wonder! because it came from a sewage farm,—when none of it came from any farm within scores of miles of any example of sewage irrigation. It is evidently wholly irrelevant that we should be told now that Dr. Whitmore only laboured under the erroneous conviction as to a sewage farm for half an hour. He did not tell us so then, and how could we suppose that such was the case? We did not go by imaginations; we went by hard facts, and we unhesitatingly say that the facts were all in our favour on August 5. Moreover, Dr. Whitmore's first letter was more than hesitating. But we are now blamed because, instead of simply refusing to close our premises in reply to the second letter, we offered to do so if he would compensate us. We thought that we were making a great concession in favour of what we supposed was his crotchet by making that offer, for the facts against the milk, so far as we knew them, were still the same on the 8th as on the 5th. By that time we had what appeared to be—and what I say medical men, when they are able to reason calmly on the matter, will agree with us in saying was—complete evidence in favour of the milk. Unfortunately, that evidence turns out not to be true in two particulars; but we did not know this, and we were not to blame for it. It was again medical men, and not we ourselves, who were to blame, if anyone was to blame; but surely we have not lived beyond the age in which accidents occur with no one being to blame. We have not sought to blame either Dr. Whitmore for telling us that all our *employés* were free from typhoid, nor have we blamed the medical attendant of our one *employé* who was ill, and who at a later period declared his illness to be typhoid, nor have we blamed the medical attendant of the farmer who died for concealing from his family the fact that he was suffering from typhoid; but we say if blame is to be fixed anywhere it is to be fixed upon those gentlemen, and not upon ourselves, and we refuse to bear it.

The correspondence with Dr. Murchison has lately been of so painful a nature that we would rather not refer to it at all. But it perhaps is sufficient to say that—

1. When he wrote to us the matter was in the hands of the Government;
2. His letter contained a different version of facts from those officially given to us by Dr. Whitmore;
3. It contained statements that, on the face of them, could not be exact; and
4. The postscript contradicted the letter.

Perhaps the prudent course—had we been the cold-blooded, unfeeling, physiological experimentalists which we have been accused of being—would have been to have acknowledged the receipt of his letter, and stated that we had forwarded a copy to the Local Government Board. Being, however, sincerely desirous of getting at the truth, we immediately answered his letter frankly and fully, and we only wish that he had been as frank as we were, and had not left us in ignorance of the facts in his possession, although, as it happened, the particular supply of milk which had done the mischief was cut off within thirty-six hours of the receipt of his letter; and, probably, after the letters and telegrams which we had sent down to the country during those thirty-six hours, no poisonous matter ound its way into the milk. But if any blame is to be thrown upon anyone as to the "Murchison incident"—as the French would call it—we again distinctly refuse to bear it, and we say it is he himself who is to blame; and we beg your readers to note seriously what we say, and not to jump at the conclusion that we are ignorant, cold-blooded, mercenary, or possessed of any of the other unamiable qualities which have been attributed to us, because, surely, out of this disaster we should all try to learn something. We have learnt our lesson by taking precautions—not to prevent milk becoming contaminated with infection in case an infectious disorder breaks out on a farm, for that we firmly believe to be next to impossible; but the lesson that we have learnt from this disorder has been to take precautions immediately to cut off the supply of milk from any farm on which infection occurs, for we are firmly persuaded that it is the only way in which purity can be attained. And we now beg our friends of the medical profession to learn a lesson—that honest men of business will always act under any such circumstances, should they ever occur again, as we acted, if asked to close their business, not merely on suspicion, but on apparently unfounded suspicion. If medical men wish to persuade practical men of business to close business premises on account of some infectious disorder believed to be spread by that business, they must take great pains in submitting the evidence, whatever it may be, to those men of business. They must not, as Dr. Murchison did, communicate it through third persons, or withhold it as he also did; but they must either pronounce a confident and, so to say, oracular opinion that the illness is produced in some way by the business, without any qualifying expression; or they must carefully explain the nature and bearing of the whole of the evidence, and above all they must keep nothing back, and they must not treat honest men of business as wilful poisoners having antagonistic interests to the medical profession. If evidence is carelessly prepared, and hastily written letters are sent, with inconclusive, contradictory evidence and hasty opinions, precisely similar disasters will be repeated to the end of time. We speak thus plainly because we know what we say to be true, and although we cannot complain of the tone of the criticisms in your paper, we have been held up to public odium in some of your medical contemporaries, and we are determined that the truth shall be known, and whatever blame may attach to anyone, shall not at all events be attached to us.—I am, &c., D. Maconochie, Secretary and Manager.

*** From a sense of fairness we publish the above letter, although we do not wish it to be supposed that we in any

degree consider that it meets the points urged in our leading article of the 6th inst., neither can we allow that any blame can be thrown upon the medical men who warned the directors of the Dairy Reform Company—least of all upon Dr. Murchison. The *tu quoque* argument is the last resource of a beaten disputant. We allow that it is easy to be wise after the event, and in so far as Mr. Maconochie admits that the Dairy Reform Company ought to have applied to the Local Government Board immediately on the receipt of Dr. Whitmore's first letter, he allows that the course which the Company did pursue was neither the best nor the wisest. No one can for a moment suppose that a board of directors, presided over by Mr. Hope, would have allowed for any consideration poisonous milk to be circulated amongst their customers had they believed it to be poisonous. And the fact that they did not believe it to be poisonous is the only excuse that can be offered for their requirement of pecuniary indemnity before they stopped its circulation. But human belief is too often under the influence of interest. The warning letters of Dr. Whitmore acquired their force from the gravity of the issue. It was the grave interests at stake which, in our opinion, should have aroused the Company to immediate action—either to stopping the supply or at least to making a full scientific investigation as to the possibility of contamination at the sources whence their milk was procured. This was not done; and whilst we acquit the Dairy Reform Company of wilfully and knowingly imperilling the lives of the public, we think that their course of action was sadly deficient in caution, and was characterised by a most unfortunate disregard of the warnings of duly constituted medical authority.

THE EXAMINATIONS AT THE IRISH ROYAL COLLEGE OF SURGEONS.

LETTER FROM MR. A. H. JACOB.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have reason to believe that the Registrar of the Royal College of Surgeons in Ireland has forwarded to you, for publication in your Students' Number, educational regulations of the College similar to those which have been published last and previous years. In order that the publication of details which are calculated to mislead the student may be avoided, I think it right to inform you that the regulations to which I refer are applicable only to a few fourth-year students, and that all future examinations for students who commenced their studies after October, 1870, will be held on an entirely different system, and in other subjects than those set forth in the old regulations.

On July 29 last the Council of the College—on my motion—adopted a resolution that the new system of examination, "subject to such alterations in its terms as may meanwhile be made, be brought into effect at the next and future sessional examination of the College, and that the October examination be deferred until the date in December fixed by that scheme." Not having immediate access to official copies of this scheme, I beg to send herewith a pamphlet which contains a verbatim copy of it, and would venture to suggest that, if the old regulations be published, it would be proper to append the foregoing statement of the expressed determination of the Council with regard to the examination of students now pursuing their studies. I am, &c.,

A. H. JACOB, F.R.C.S.I.,
A Member of the Council.

79, Harcourt-street, Dublin, September 10.

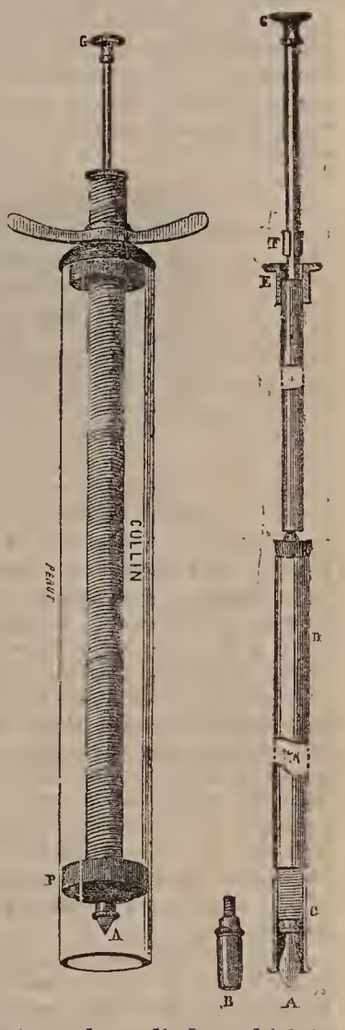
*** The new regulations provide that the sessional examinations essential for the granting of the letters testimonial be three in number, instead of two as at present, and must be passed by the candidate within the following periods:—(*a.*) The primary examination, after the termination of the second summer session. (*b.*) The secondary, after the third summer session. (*c.*) The pass or practical examination, after the fourth summer session. Each examination will occupy two days, of which the first is to be devoted, in the primary and secondary examinations, to the writing of answers to printed questions; and in the pass examination, to clinical examination and operative surgery; and on the second day, in all cases, to *vivâ voce*.

A NEW UTERINE SCARIFICATOR.

LETTER FROM DR. A. BOGGS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I do not generally approve of bleeding in uterine disease, but there are cases in which local depletion is useful. This is effected by leeching or by scarification either of the uterus itself or of its neighbourhood. The former situation is preferable, as relief or cure is more rapidly obtained, and with considerably less loss of blood. Leeching has its inconveniences, not only from the time it takes up, but many ladies object to the application of those loathsome animals, whether externally or internally, and I have known some to fall into fits at the mere sight of them. Scarifying or puncturing the uterine neck has been resorted to as a substitute for leeching, and this is done with a lancet or bistoury fastened on to a stem or with an instrument made for the purpose.



Many instruments have been devised for puncturing the uterine tissue, but I have found none so well suited for the purpose as that just invented by M. Collin, successor to Charrière, the well-known instrument-maker in Paris. The "nouveau scarificateur uterin" is a very ingenious instrument, and is a combination of a scarificator and an aspirator, or rather Pravaz's hypodermic syringe without the perforated needle. It is, in fact, the artificial leech on a large scale, and is composed of a glass cylinder, which is adapted to the uterine neck with or without the aid of a speculum. The air is thus exhausted by a few turns of the piston, which is a screw, and which runs through the cylinder. This has the effect of producing a certain degree of tumefaction in the part which is included in the extremity of the cylinder, and which is then punctured by a sharp-pointed stem (A), which passes through the piston. This is then withdrawn (the cylinder remaining *in situ*), and fixed after the puncture is made, the depth of which is regulated by a check or "curseur" (G). This done, the blood rushes into the cylinder, which it fills in a few minutes.

Finding the instrument so convenient for the purpose for which it is intended, I obtained the permission of M. Collin to give an account of it through your journal for the benefit of my British *confrères*, and in order that they may form an idea of its mechanism I must refer them to the accompanying engraving, the block of which M. Collin has kindly left at my disposal. I am, &c., ALEX. BOGGS, M.D.
(late of H.M.'s Indian Army).

13, Boulevard de Courcelles, Paris, Sept. 12.

THE UNIVERSITY SCIENCE COMMISSION.

[To the Editor of the Medical Times and Gazette.]

SIR,—In speaking of the proposals of the last new University Commission this week, you forbear to compare them with those put forward by yourself in January and February last. Allow me to say that I very much prefer your scheme. The notion of the Commissioners seems to be "More professors"; why, very few of those already in office can get a class to lecture to! The notion of the monopolists in possession is "More highly paid college tutors"; this is intelligible enough. I would respectfully suggest that the notion "More students"

might be tried with advantage as a leading principle. And I am firmly convinced that Oxford will never be changed from a place of gentlemanly lounging into a national centre of knowledge accessible to all unless the corrupt monopoly of the colleges be first swept away. This being done, the colleges can be made of the greatest use, each being constituted the permanent head-quarters of some one or more branches of knowledge. Let those interested in the progress of medicine see to it, or medicine will be again left out in the cold.

September 1. I am, &c., OXONIENSIS.

NEW INVENTIONS.

IMPROVED WATERPROOF PADDING FOR SPLINTS.

WE have received from Messrs. Arnold and Sons, of West Smithfield, a specimen of indiarubber padding for splints, which we think will prove worthy the attention of surgeons. The padding is in sheets, consisting of parallel lines of tubing arranged at a distance of three-eighths of an inch apart; the intermediate flutings are perforated by punched apertures equidistant five-eighths of an inch from each other, so that equable pressure can be maintained on the splint without

interfering with natural discharges. These sheets may be cut to any required size, and are always clean and ready for use. Solidity can readily be given to the pad by inserting in the parallel tubes soft metal wires or common canes, and then a glue or starch bandage superimposed; such a form of mechanism is admirably fitted for treating simple fractures of the lower extremities in children. The diagram represents the sheet laid flat, and the lower line shows well a section of the parallel tubes of a splint. The padding has been manufactured at the suggestion of Mr. Richard Davy.

OBITUARY.

WILLIAM BARKER, M.D., F.K.Q.C.P.I.

WITH deep regret we announce the death of this esteemed member of the profession, at the age of 63 years. The sad event occurred at his residence, Hatch-street, Dublin, on September 11. For some months back Dr. Barker's health had been gradually failing, until at last decided symptoms of hepatic disease showed themselves, and increasing, finally determined the fatal result. Dr. Barker was Professor of Chemistry in the school of the Royal College of Surgeons in Ireland, and Professor of Natural Philosophy in the Royal College of Science, Dublin. He had held the degree of Doctor of Medicine of the University of Dublin since 1742, and had been a Fellow of the King and Queen's College of Physicians since 1845. In private life Dr. Barker was universally beloved for his many engaging qualities of disposition, and among those who followed his remains to the tomb were many who felt that they had lost a friend indeed. Besides being almost passionately fond of music, he was himself a skilled musician, and was wont from time to time to beguile the evening hours after a hard day's work in either listening to or taking part in a performance of classical music. In his capacity as Professor of Chemistry, first at the Royal Dublin Society, and subsequently at the College of Surgeons, he had won a well-earned reputation as an erudite chemist and a painstaking and successful teacher.

JAMES CRUIKSHANKS, L.F.P.S. GLASG.

THIS gentleman died on the 9th instant. He had been in practice for nine years at Ayton, Berwickshire, and was much respected.

MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Sept. 4:

Johnstone, Charles Richard, Haxley, Yorkshire.
Vincent, Henry Bird, East Dereham, Norfolk.
Waylen, George Swithin Adee, Devizes.

The following gentlemen also on the same day passed their primary professional examination:—

Brummitt, Robert, Guy's Hospital.
Owen, Gwatkin, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ADDY, B., M.R.C.S., L.S.A.—In-door Physician's Assistant to the Manchester Royal Infirmary, *vice* R. Hughes.

BERRY, WILLIAM, M.R.C.S. Eng., L.R.C.P. and L.R.C.S. Edin.—Junior Assistant Medical Officer, Workhouse Hospital, Manchester.

HUNT, W. J., M.D. St. And., F.R.C.P. Edin., L.R.C.P. Lond.—Assistant-Physician to the Metropolitan Free Hospital.

WALKER, JOHN HARRISON, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A.—Medical Officer of Health for the Township of Pickering, Yorkshire.

NAVAL APPOINTMENTS.

ADMIRALTY.—John Elliott, Staff-Surgeon additional to the *Duncan*; Thomas L. Bickford, and George Gibson, Surgeons to the *Charybdis*, to be commissioned on September 24; George H. Madeley, Surgeon to the *Pembroke* for temporary services; Dr. James A. Allen, Surgeon to the *Crocodile*.

BIRTHS.

BATCHELOR.—On September 11, at Stratford St. Mary, Suffolk, the wife of Ferdinand C. Batchelor, L.R.C.P., M.R.C.S., of a son.

BIGLAND.—On September 4, at Chichester Lodge, 65, Warwick-gardens, Kensington, W., the wife of T. B. Bigland, M.R.C.S. Eng., L.S.A., of a daughter.

BLOXAM.—On September 4, at 21, Mount-street, Grosvenor-square, the wife of William Bloxam, M.D., of a daughter.

GORDON.—On September 2, at Woolwich, the wife of Dr. H. G. Gordon, Deputy Surgeon-General, of a daughter.

GRABHAM.—On September 4, at the Pico do Infante, Madeira, the wife of Michael Grabham, M.D., M.R.C.P., of a daughter.

GRANT.—On August 18, the wife of J. A. S. Grant, M.A., M.D., C.M., Egyptian Medical Service, Cairo, of twins (son and daughter).

GRANT.—On September 7, at Westerton, Huntly, N.B., the wife of R. A. P. Grant, M.R.C.S. Eng., Army Medical Department (late 43rd Light Infantry) of a daughter.

HENDERSON.—On July 1, at Darjeeling, in the Sikkim Himalayas, the wife of Dr. George Henderson, Officiating Superintendent Royal Botanic Gardens, Calcutta, of a son.

HOPKINS.—On September 7, at 180, Shoreditch, the wife of Alfred Boyd Hopkins, M.R.C.S., of a son.

JEFFERY.—On September 10, at Carter's-corner House, near Hailsham, Sussex, the wife of G. A. Jeffery, M.D., of Trinity House, Eastbourne, of a daughter.

KING.—On September 14, at Camberwell, the wife of Thomas W. King, M.D., of a daughter.

LINDSAY.—On September 2, at Mickleover, Derby, the wife of J. Murray Lindsay, M.D., prematurely of a son.

LONG.—On September 15, at 93, Richmond-road, Dalston, the wife of Mark Long, M.D., of a son.

LYNCH.—On September 12, at 41, Chepstow-villas, W., the wife of J. Roche Lynch, L.R.C.P. Lond., of a daughter.

MASON.—On September 7, at Tywardreath, Cornwall, the wife of S. Mason, L.F.P.S. Glasgow, M.R.C.S. Eng., L.S.A., of a daughter, stillborn.

SMITH.—On September 2, at Rochester, Kent, the wife of Robert Smith, F.R.C.S., L.F.P.S., Assistant Colonial Surgeon, Freetown, Sierra Leone, West Africa, of a daughter.

WINKFIELD.—On September 7, the wife of W. B. Winkfield, L.R.C.P., M.R.C.S. Eng., L.S.A., of a son.

MARRIAGES.

BARKER—BATH.—On September 10, at Glastonbury, Eustace V. P. Barker, youngest son of the late William D Barker, M.D., to Frances Elizabeth, only daughter of Richard Bath, Esq.

BLAND—TEALE.—On September 11, at Hoddesdon Church, William Charles, eldest son of the late John Bland, M.R.C.S. Eng., of Durham, to Ellen Marion (Nellie), youngest daughter of W. H. Teale, Esq., The Rye, Hoddesdon, Herts.

CAMERON—MACLEAN.—On September 10, at the parish church, Kew, Lieutenant-General Sir Duncan Alexander Cameron, G.C.B., to Flora, fourth daughter of Andrew Maclean, M.D., Deputy Inspector-General, Royal Military College, Sandhurst.

CROWTHERS—WARD.—On September 3, at Elm, Cambridgeshire, Wallace George, only son of Robert Crowthers, M.D., of St. Leonard's-on-Sea, and county Tyrone, Ireland, to Fanny Robinson, second daughter of Augustus Henry Ward, Esq., of Oldfield House, Elm, Wisbeach, Cambridgeshire.

DEEPING—WARWICK.—On September 11, at the parish church, Southend, George Davison Deeping, Esq., to Marianne, second daughter of W. R. Warwick, M.D., M.R.C.S. Eng., L.S.A.

DOUGLAS—SHAW.—On September 4, at the parish church, Whitby, W. T. P. Douglas, B.A., M.B. Cantab., of Newbury, Berks, to Agnes Maria, daughter of the late John Shaw, Esq., of Attercliffe, Yorkshire.

GILMAN—OXLEY.—On September 4, at St. Jude's Church, Southsea, Francis Gilman, of Shanghai, fourth son of Ellis James Gilman, Esq., of The Boltons, S.W., to Gertrude Lina, third surviving daughter of T. Oxley, Esq., H.M. Bengal Medical Service (Retired List).

GRAIN—COPLANN.—On September 13, at the parish church of St. Leonard's-on-Sea, John Henry Grain, Esq., of Lewisham-hill, Kent, to Martha Janet Sved, younger daughter of the late James Copland, M.D., F.R.S., of Old Burlington-street, London.

LARKIN—WOON.—On September 17, at St. Saviour's, Southwark, Frederick George Larkin, M.R.C.S. Eng., of 44, Trinity-square, and Union-street, S.E., to Jane Maria (Jennie), second daughter of the late William Wood, M.R.C.S. Eng., L.S.A., of 28, Trinity-square, and Union-street, S.E.

LYONS—ELWELL.—On September 4, at the parish church of Wednesbury, Alfred De Courcy Lyons, M.R.C.S., son of the Vicar of Wednesbury, to Carew, youngest daughter of the late Edward Elwell, Esq., of Wood-green, Wednesbury.

MAXWELL—ASHBY.—On September 9, at the parish church, Hove, Brighton, Thomas Maxwell, M.B., of King's College, Cambridge, to Elizabeth Eyre, second daughter of the late John Eyre Ashby, LL.D., of Enfield, Middlesex.

NORRIS—BROWN.—On September 9, at the parish church of St. Wolfran, Grantham, Lewin C. C. R. Norris, M.A., of Utterby, Lincolnshire, eldest son of the late Major Charles Norris, to Josephine, second daughter of Joseph J. Brown, M.D., of Grantham House.

PEARSE—MORRISON.—On September 10, at St. Peter's Church, Belsize-park, Reginald J. Pearse, Esq., of Genoa, to Mary Maud, youngest daughter of the late Wm. Morrison, F.R.C.S.

PARKER—DAMES.—On September 3, at Trinity Church, Clapham-common, Walter Augustus Parker, L.R.C.P., M.R.C.S., of Winchester, second son of the late Captain-Commandant Charles Parker, of the Hyderabad Contingent, to Caroline Charlotte, second daughter of the late Captain George Longworth Dames, of H.M.'s 66th Regiment.

RAY—HARRISON.—On September 4, at St. John's, Brixton, Herbert F. H. Ray, Esq., of Eastdowne, Anerley-park, Norwood, third son of the late Edward Ray, M.D., F.R.C.S. Eng., of Dulwich, to Elizabeth S. (Bessie), youngest daughter of the late Thomas R. Harrison, Esq., of 53, Russell-square, London.

THWAITES—GROVE.—On September 3, at the parish church, Hampton, Christopher Thwaites, City Engineer, Norwich, son of the late Sir John Thwaites, Chairman of the Metropolitan Board of Works, to Emma, second daughter of John Grove, M.D., Spring-grove, Hampton, Middlesex.

WILLOUGHBY-OSBORNE — WILLIAMSON.— On August 27, at St. Paul's Episcopal Church, Edinburgh, Eric James Michael Willoughby-Osborne, Esq., youngest son of Major-General Willoughby-Osborne, of Hawford, to Jane Napier, third daughter of Thomas Williamson, M.D., F.R.C.S.E., Leith.

WILY—EVANS.—On September 12, at St. Mary's, West Brompton, Richard F. Wily, Paymaster R.N., to Mabel Marian Gwendolen, only daughter of W. J. Evans, M.D., of Finborough-road.

WINKFIELD—WILSON.—On August 28, at Windsor, Alfred Winkfield, F.R.C.S., of Oxford, to Rosalie Anna, third daughter of the late Henry Wilson, Esq., of Crofton Hall, Yorkshire, formerly Captain in H.M.'s King's Dragoon Guards.

WIRGMAN—WILLIAMS.—On September 9, at Hemingford Abbots, Hunts, Thomas Ernest, second son of the late Ferdinand Charles Wirgman, Esq., of Timberham Lodge, Reigate, to Mary, second daughter of the late Owen W. Williams, M.D., of Hemingford Abbots, Hunts.

WORNINGHAM—GREEN.—On September 4, at St. Giles's, Camberwell, John Douglas Pennington, eldest son of the late John Wordingham, M.D., of Kensington, to Fanny, only daughter of the late William Henry Green, Esq., and only granddaughter of the late Thomas Green, Esq., of Westerham, Kent.

DEATHS.

COBB, REGINALD, son of Frederic Cobb, M.D., of Frensham, Surrey, at Christchurch, Canterbury, New Zealand, on September 3, aged 35.

DICK, LAURENCINE JOSEPHE, wife of William Dick, M.D., Inspector-General of Army Hospitals, and daughter of the late Charles Malo, Marquis de Rune, of Warsy, Picardy, at Marine-parade, Brighton, on September 6.

GIDLEY, MARY ANNE, wife of Gustavus Gidley, M.D., J.P., at 19, Durham-terrace, Westbourne-park, on September 13, aged 58.

LYFORD, HENRY GILES, M.D., F.R.C.S., late of Winchester, at his residence, Round-hill-crescent, Brighton, on September 10.

PAYNE, CHARLES HENRY, M.D., M.R.C.S., L.S.A., late of Wimbledon-hill, at Maida-vale, on September 16.

PENNELL, RICHARD LEWIN, M.D., at Cheriton Bishop, Devon, on September 12, aged 80.

SLACK, HENRY KELSALL, eldest son of Robert Slack, M.D., of Brandon-parade, Leamington.

YARROW, GEORGE ALEXANDER, infant son of G. E. Yarrow, M.D., at 87, Old-street, E.C., on September 4, aged 8 months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

CHELTENHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to E. T. Brydges, Clerk to the Urban Sanitary Authority, Public Offices, Cheltenham, on or before October 11.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to John Binks, Esq., Honorary Secretary, Wakefield.

EASTERN DISPENSARY, BATH.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Francis Savage, Esq., Hon. Secretary, 10, Beaufort-buildings East, Bath, on or before September 24.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD, S.E.—Registrar. Particulars may be obtained from the Hospital.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Board, on or before September 20.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Medical Officers Candidates must be duly qualified. Applications, with testimonials, to P. Goldschmidt, Esq., Chairman of the Board, 100, Albert-square, Manchester, on or before October 15.

QUEEN'S HOSPITAL, BIRMINGHAM.—Fourth Physician. Candidates must be duly qualified. Applications, with testimonials, to the Committee, on or before October 3.

ROYAL CORNWALL INFIRMARY.—House-Surgeon, Secretary, and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Treasurer, Robert Tweedy, Esq., Truro, on or before October 8.

ST. THOMAS'S HOSPITAL.—Resident Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Treasurer.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bideford Union.—Mr. Edgar Cox has resigned the Bideford District; area 3196; population 5742; salary £45 per annum.

Bridgnorth Union.—Mr. Robt. Stuart has resigned the Fourth District; area 10,192; population 4550; salary £40 per annum.

Conway Union.—Mr. W. M. Williams has resigned the Creuddyn District; area 17,235; population 7899; salary £50 per annum.

Narberth Union.—Mr. Maurice G. Evans has resigned the Third District; population 4470; salary £35 per annum.

Newmarket Union.—Mr. Robt. Fyson has resigned the First District; area 570; population 3261; remuneration per case.

Abingdon Union.—Mr. John S. Barrett has resigned the Third District; area, 13,796; population, 3064; salary, £110 per annum.

Brentford Union.—Mr. J. C. T. Nicoll has resigned the Seventh District; area, 4526: population, 3292; salary, £40 per annum.

Stoke-upon-Trent Parish.—Mr. Haslam Davis has resigned the Bucknall and Bagnall District.

Ulverstone Union.—Mr. John Morison has resigned the Broughton West District; area, 28,956; population, 3169; salary, £42 per annum.

APPOINTMENTS.

Belper Union.—George Harvey, L.R.C.S. Ire., L.R.C.P. Edin., L.A.H. Dub., to the Wirksworth District.

Buckingham County.—James A. Wanklyn, M.R.C.S. Eng., as Analyst.

Hollingbourn Union.—David G. Browne, M.D. & C.M. Q. Univ. Ire. to the Headcorn District.

Stafford County.—Wentworth L. Scott, as Analyst for the Northern Division; and Edward W. T. Jones, F.C.S., as Analyst for the Southern Division.

Alresford Union.—Charles E. Covey, M.R.C.S. Eng., L.S.A., to the Second District.

Barnstaple Union.—James W. Cooke, M.R.C.S. Eng., L.S.A., to the Fourth District.

Blandford Union.—Hauteville H. J. Sterling, M.R.C.S. Eng., L.S.A., to the Holworth District.

Tenterden Union.—Richard Minors, M.R.C.S. Eng., L.S.A., to the Rolvenden District.

Wandsworth and Clapham Union.—Edward C. Haden, M.R.C.S. Eng., L.S.A., to the Workhouse and the Infirmary.

SUPERANNUATION ALLOWANCE.

Sudbury Union.—Mr. George King has been granted a retiring allowance of £30 after having served as Medical Officer for the First District since the formation of the Union in 1835.

THE library of the Royal Medical and Chirurgical Society was reopened on Thursday, the 11th inst.

DR. H. SANDFORD, of Brixton, has been appointed Medical Officer of Health for the combined districts of Bromyard, Hereford, Ledbury, Leominster, and Weobly, at a salary of £500 per annum.

IT is stated that an application to the Court of Queen's Bench has been made by a parishioner for a mandamus to compel the vestry of St. George's, Hanover-square, to remedy the defective drainage of Park-lane, the Vestry having refused an application made to them on the subject.

THE Belper Board of Guardians have rejected the application of Dr. Cantrell for a superannuation allowance after thirty-five years' service as Medical Officer for the Wirksworth District.

THE *Homeward Mail* states that no less than 14,529 persons lost their lives by snake-bites in 1869, and in 1871 there were 18,078 deaths reported as caused by dangerous animals of all classes; but Dr. Fayrer is of opinion that systematic returns would show that there are more than 20,000 deaths annually from snake-bites.

ACADÉMIE DE MÉDECINE.—At the meeting on the 9th instant, Professor Hughes Bennett was elected Foreign Corresponding Member in the Section for Anatomy and Pathology.

The Finance Committee of the Aberdeen Parochial Board recently recommended that the salaries of the Medical Officers should be increased from £40 to £47 per annum; but the Board negatived the recommendation by a majority of one, it being argued during the discussion that Poor-law medical appointments were not so much for money as to give a start to young doctors!

Mr. Thomas P. Edwards has been presented with an illuminated address and a purse containing eighty sovereigns by the inhabitants of Ballyboggan, as a mark of esteem on his resigning as Medical Officer of the Dispensary District from ill-health, after a service of nearly a quarter of a century; and the Board of Guardians of the Edenderry Union have granted him a pension equal to two-thirds of his salary.

Royal College of Surgeons.—From the annual report of the receipts and expenditure at this institution which has just been published it appears that the former amounted to £13,311 16s. 5d., and the latter to £12,276 6s. 2d., showing a gratifying balance of £1035 10s. The largest amount of the income was derived from fees paid by candidates for the diplomas of Fellowship, Membership, Midwifery, and Dental Surgery, which produced £10,713 7s.; rent of chambers adjoining the College, £991 1s. 6d.; fees paid on election into the Council, Court of Examiners, and Fellowship amounted to £231; the receipts on account of the various trust funds were £290 16s. 2d.; dividends on stock (£36,000) produced £1062. The largest item in the expenditure was in fees paid to members of the Council, Courts, and Boards of Examiners—viz., £4761 9s. 3d.; for salaries and wages to officers and servants in the three departments of College, Museum, and Library, £3314 16s. 9d. was paid; a slight reduction in amount of pensions has taken place, which now stands at £353 12s.; Government and parochial taxes and stamps (exclusive of postage) absorb the large amount of £1034 1s.; expenses incidental to examinations, as patients, subjects, bandaging, refreshments, etc., £168 11s. 1d.; lectures and oration, £265 11s.; for alterations, repairs, and painting, £580 11s. 2d. was expended. The following is a summary of receipts:—College income, £13,021 0s. 3d.; trust funds, £290 16s. 2d.; total, £13,311 16s. 5d. The summary of disbursements for College purposes is £12,092 16s. 1d.; trust funds, £183 10s. 1d.; or a total of £12,276 6s. 2d. Will the authorities of the College be able to exhibit such a fair account and balance when it only draws a share of examination fees under the Conjoint Scheme?

Glasgow Medico-Chirurgical Society.—The first meeting of this Society for this session was held in the Faculty Hall on the 5th inst. The following are the office-bearers for session 1873-74:—*President:* Dr. Robert Scott Orr. *Vice-Presidents:* Dr. Andrew Fergus and Mr. John Reid. *Council:* Mr. J. Pollock, Mearns; Dr. R. Renfrew; Dr. George Miller; Dr. T. D. Buchanan; Dr. R. Stewart, Coatburg; Dr. James Scanlan; Dr. Alexander Patterson; Dr. James Dunlop. *Secretaries:* Dr. Robert Perry and Dr. Joseph Coats. *Treasurer:* Dr. H. R. Howatt.

Suicide in the United States.—The statistics of 1870 show an increasing tendency to suicide throughout the country. The percentage was 3·06 per 100,000. In 1860 it was 3·02, and in 1850 2·01. Now, it occurs to us that a comparison of these ratios with the percentages of suicides occurring in our life-companies, would go a good way towards settling the bearings of the suicide clause. If the proportion of suicides bears no heavier on the insured than on the country at large, it is pretty strong argument in favour of those who hold that no man in his right mind would destroy his life for the sake of the insurance. But if, as we are inclined to suspect, cases of self-murder are excessive among this class, the companies ought, in the interests of society as well as their own, to take away all mercenary motives to the crime. As usual, the male sex greatly predominates—more than three-fourths being men. Suicide is rare among women who have reached maturity, the majority of the cases being confined to the romantic period of girlhood. Men, on the contrary, resort to it in numbers increasing with age. Ten suicides occur among the whites to one among the blacks; the cheerful, contented disposition of the latter shows where lies the exciting cause of suicide. It is the product, not of mental rust, but of wear and tear. The rate is higher in the bustling communities of the North than in the more quiet South. But the German and French minds, of all others, appear to be particularly prone to suicide. These nationalities stand nearly as three to one as compared with the Irish, and four to one compared with the native American. The depressing effect of leaving home and country is exhibited in the heavy ratio among all classes of our foreign population. —*New York Medical Record* (*from Insurance Monitor*).

Opium land pays a price in Malwa unknown in any other part of India. Meadow land about a market town in England is scarcely more remunerative to landlords than thousands of square miles blooming with the poppy are to the chiefs of Malwa.

Indian Mortality.—During the first week of August the deaths in Madras were 266, being seven above the average of the corresponding week for fourteen years. There was no death from cholera, the mean of fourteen years being forty-three. The deaths from diarrhœa and dysentery were forty—the precise average. Fevers destroyed thirty-six, which number is five below the average. Of the deaths there were of Europeans, 3; East Indians, 2; Mahommedans, 29; and Hindoos, 232. During last May, over the whole Presidency of Madras (population 31,312,150) there were seventeen deaths from cholera and 4416 from small-pox.

Composition and Quality of the Metropolitan Waters in August, 1873.—The following are the returns (by Dr. Letheby) of the Association of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	—	—	—	—	—	—
West Middlesex	17·33	0·010	0·125	0·001	13·6	3·0
Southwark & Vauxhall	18·00	0·043	0·036	0·001	13·8	3·3
Chelsea	18·81	0·083	0·120	0·001	14·8	3·3
Lambeth	17·77	0·059	0·110	0·002	13·8	3·3
Other Companies.						
Kent	27·43	0·005	0·248	0·000	20·8	5·8
New River	17·63	0·026	0·098	0·000	14·0	2·6
East London	17·05	0·026	0·125	0·000	13·6	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in those of the Lambeth, and the Southwark and Vauxhall Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 126,144,369 gallons; and the number of houses supplied was 504,579. This is at the rate of 37·6 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 24·9 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

The returns of the Grand Junction Company have not been received.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Member.—The library and museum of the College of Surgeons will be re-opened on Wednesday, October 1.

A Student of St. Thomas's.—The examinations will take place about the middle of November at the College of Surgeons.

Mr. R. F. Snape.—The person is an unqualified practitioner. His name does not appear in the Register of the General Medical Council nor in the "Medical Directory."

Nicholas F.—Apply to the Secretary of the Apothecaries' Hall.

A Reader.—A recent number of the *Journal of Anatomy and Physiology* contains an exposition of Mr. Garrod's views.

Gwent.—The seventeenth annual congress of the Social Science Association will be held at Norwich on October 1 and successive days.

Jabez.—At the late competitive examination there were fifteen candidates for the Medical Service of the British Army, and fourteen for that of the Indian Army.

D. M. B.—The Vestry of St. Pancras have passed a resolution condemning the proposed additional outlay of £12,500 to adapt the Cleveland-street Workhouse as a hospital for sick paupers.

J. M.—Apply at once to Apothecaries' Hall; you may be in time for the preliminary examination, which is recognised by the College of Surgeons, and, passing this, could commence your professional studies in October. The registration will take place during the first fortnight in that month.

Clifton.—The London Hospital, Whitechapel-road, was instituted in November, 1740.

Professor Tyndall on Education.—Professor Tyndall's sentiments on education in general are interesting, and his account of his own education is a valuable piece of autobiography:—

"Two rival methods (he says) now solicit attention. . . These are the classical and the scientific method. I wish they were not rivals; it is only bigotry and shortsightedness which make them so, for assuredly it is possible to give both of them fair play. . . The proper study of a language is an intellectual discipline of the highest kind. If I except discussions on the comparative merits of Popery and Protestantism, English grammar was the most important discipline of my boyhood. . . Knowing the value of English so well, I should be the last to deny or even to doubt the high discipline involved in the proper study of Latin and Greek. That study, however, has other merits. . . It is organised and systematised by long-continued use. It is an instrument wielded by some of the best intellects of the country in the education of youth, and it can point to results in the achievements of our foremost men. What, then, has science to offer which is in the least degree likely to compete with such a system? I cannot do better than by recurring to the grand old story from which I have already quoted. Speaking of the world and all that therein is, of the sky and stars around it, the ancient writer says:—'And God saw all that he had made, and behold it was very good.' It is the body of things thus described which science offers to the study of man."—*Address to Students in "Fragments of Science"* (London, 1871).

The late Mr. Paliologus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In a late number of your paper I see noticed the death of Mr. Paliologus, Surgeon in the Army. The name is a remarkable one, and it seems as though it must be identical with *Palæologus*, the name of the last emperors of the Eastern empire. Constantine Palæologus, the last emperor, fell by the hand of the Turks at the capture of Constantinople in 1452. Members of the ex-imperial family escaped to Italy, and from Thomas, brother of Constantine, was descended Theodore Palæologus, who came from Pesaro, in Italy, to Clifton, near Landulph, in Cornwall, where notices of his death in 1636 are to be found to this day in the parish register, and on a monumental brass in the church. It is believed by Sir B. Burke (from whose work on the vicissitudes of noble families I gather this information) that this branch of the family became extinct with the death of Theodore's grandson in 1678, and that no male representative exists. Had there been one found, he would have been raised to the throne of Greece in 1831. But of what stock was the Paliologus whose death you chronicle?

I am, &c., X. B.

P.S.—From the same work of Sir B. Burke I extract a notice of the late Archibald Stewart, also a Surgeon in the Indian Service:—"Here," says Burke, "his health failed, and he returned to his native town, Queensferry, where he established himself as a surgeon, and for many years gained a hard livelihood as a country practitioner, riding over the broadlands which had owned his ancestors as lords, and gathering a few shillings per visit from the vassals of his fathers. He died about the year 1830, leaving an unmarried sister, the last of his ancient and noble race." Amongst his ancestors were the most royal and princely families in Scotland, and he was "The Stewart"—the heir male of the great house of the Lord High Stewards of Scotland, co-heir of the ancient Lords of Lorne and Princes of the Isles, as well as of the kings of Scotland.

Tilley.—A medical congress is to be held at Vienna before the close of the Universal Exhibition, to exchange opinions as to the merits of the surgical instruments and appliances exhibited, and on other subjects.

C. T. T.—Dr. Littlejohn, Medical Officer of Health, Edinburgh, gave evidence before the Rivers Pollution Commissioners. The evidence has been lately printed.

Cid.—The records of the Register Office of Births, Marriages, and Deaths in England began in 1837.

Mack.—The Examiner of Medical Inventions at the Patent Office at Washington is debarred from female assistance, and is compelled to keep a male clerk; but medical inventions are the only exception; the other examiners have now a lady clerk, who takes charge of the official correspondence, etc.

Sheffield General Infirmary.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have the honour to forward you the following report, for publication, of a case attending the accident room of this Infirmary.

I am, &c., Fred. W. Jordan, Asst. House-Surgeon.

H. A., aged 15, received a blow from a boy's fist over the left eye, in the situation of the superciliary ridges. There was no pain and no swelling. Next morning, when he was blowing his nose rather forcibly, the left upper eyelid suddenly became very much distended. The tumefaction gradually lessened, but did not entirely disappear. The next day but one after the accident the patient was again blowing his nose rather hard, when the swelling returned, but not to such an extent as before. On examination it was found quite soft and compressible, crepitation being felt, slightly reddened and painless. In five days from that of the accident the swelling had lessened considerably in size, and it could not then be made to increase on the patient blowing his nose. I presume that here there was fracture of the superficial plate of the frontal bone into the frontal sinuses, and that the act of blowing the nose forced air through the fracture, and so set up emphysema of the eyelid. By the sixth day the aperture had closed, and so the escape of air became impossible.

B. N. P.—1. No. 2. The Treasury was authorised by an Act passed in the last session to advance to the Public Works Loan Commissioners £3,000,000, to make loans to sanitary authorities under the Public Health Act and the boards under the Education Act. The repayments may be spread over fifty years at an interest of 3½ per cent.

A Correspondent at Mount Barker, Adelaide, writes:—"Of our gold fields in the 'Northern Territory' many reefs are turning out very productive, but many will be failures. I may mention, if you are asked the question, that there are far too many young medical men coming out to these colonies. Numbers will be and are at present disappointed."

Unpaid Sanitary Services.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The election of the Medical Officer of Health for East Sussex is now taking place, and some of the candidates for the appointment have paid me the compliment of sending me their "testimonials," concerning the issuing of which by men of mature years I have my own opinion; but they are issued, and from one of them I extract the following: "Should he be elected, I shall be most willing to co-operate with him," and the same thing is mentioned in others. I do not agree with those gentlemen; their intention is wrong. Unpaid co-operation—and that I take it is what is meant—is an injustice to the whole body of Poor-law medical officers that individuals have no right to inflict. The poor-law medical officer in a rural, if not in an urban district, is the only man in the district who knows all the bye-places, and backs and fronts of houses, and often their insides as well as their outsides. It is to him that the medical officer of health must look for co-operation; he is part of the sanitary machinery; and why should that portion of the machinery work without grease? This is what the gentlemen referred to, in giving testimonials to their friends, pledge themselves to do. I trust they will reconsider and abandon their intention, and that the Poor-law medical officers throughout the country will combine with the hope and intention of obtaining remuneration for services that must be had. You, the editors of other medical periodicals, and the Poor-law Medical Officers' Association, will I feel sure give us all the assistance in your power; and if we are but true to ourselves and properly represent our case to our respective boards of guardians, our claims are so clear that they must be admitted.

I am, &c., Wm. Elliott Porter,
Medical Officer, Third District, Cuckfield Union.

Lindfield, Sussex, September 17.

N. I. S.—There were last year 25,705 coroners' inquests held in England and Wales, and in the year before 25,898.

An Irishman.—The Lord Lieutenant, in his reply to the governors of the Dublin Lunatic Asylum, has declined to grant an inquiry into the alleged partiality of Dr. Nugent in conducting the inquiry into the death of the patient Deanford. With regard to the charges and insinuations against Dr. Nugent, that his report was not a fair one, his Excellency found, from Dr. Nugent's explanations and also from the reports in the newspapers sent him, that his report was a perfectly unbiased one, and therefore his excellency could not permit the investigation to be held into Dr. Nugent's conduct.

Margate.—Great dissatisfaction prevails in Margate in consequence of the admirable Sea Infirmary in that town not having participated in the London Hospital Sunday Fund. In answer to the objection that it is a provincial hospital, its friends contend that the chief benefits it confers are upon the sick inhabitants of the metropolis. No one can doubt the immense importance of the hospital to the welfare of a vast number of the sick children of London, and we think it has established its claim to participate in the funds raised in London by a Hospital Sunday collection.

Metaphysics.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was struck with the clever and Platonic soliloquy suggested in the *Medical Times and Gazette* of the 6th inst., in the lines headed "Metaphysics." I could not help carrying the sentimental mood a little more onward, which I am sure the author could do much better.

My double self a mystic union gives,
Each one is conscious that the other lives;
Yet still more mystic, and as surely true—
Revealed by Holy Writ to me and you,—
This double self from union must break,
And each a diverse course and object take:
That which is made from earth returns to earth,
And that to God who gives the heavenly birth.

I am, &c., One of your Readers.

Medicus.—Harvey made his experiments in 1616 and 1618. It is commonly said that he first promulgated his opinions in 1619, but the manuscript of his lecture which he delivered before the College of Physicians, and which is preserved in the British Museum, refers them to April, 1616.

A Union Medical Officer.—There is great diversity of opinion in the profession on preserved Australian meat. The consumption has increased in England. The importation, which in 1866 was only £300, amounted last year to £890,000, but large quantities were transhipped for the use of emigrants and others. Its introduction into the dietary of some public institutions has succeeded, in others it has failed. But a considerable improvement must be effected in the system of preserving it before the profession will generally, we think, recommend its use, especially where it is to take the place of home-produced meat.

The Climate of Colorado.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The territory of Colorado is becoming every year better known in Eastern America as the great American sanitarium. Every summer large numbers of invalids come from the East to spend weeks or months in these mountains, returning, according to universal testimony, in most cases greatly benefited. But Colorado is not yet properly appreciated, as it will surely be, as a winter residence for the invalid.

The climate of Colorado is highly praised at large for its healthiness. Here in the foot-hills of the Rocky Mountains we have the best of it, there being drawbacks to places on the prairie, such as Denver and Greeley, which we in the hills escape.

The Seasons.—Spring is the least pleasant time here, as throughout the United States: the winds are high, the changes of temperature sudden and extreme. But these changes do not produce bad effects in the human constitution, as they would in England. The summer is delightful, the air

balmy and delicious, the heat very seldom, if ever, oppressive. Sunstroke is, I understand, unknown in this region. The early summer is the wettest time of the year, yet so dry that irrigation is necessary for the crops, the rainfall being rarely sufficient for them. The autumn is the pleasantest part of the year: only poetry could adequately describe it. The winter is also generally very pleasant. Our first snowfall this season was on October 28. We have had several since, lasting each about twelve hours or less. After every one the clouds cleared away immediately, and the sun shone clear as at midsummer. In the middle of the present month (November) we had a spell of extreme cold at night—my thermometer standing on three days at 8 a.m. at 3°, 5°, 8° below zero Fahr. This must seem terrible to an Englishman, but it is not really so. The nights are indeed cold, but the days usually delicious. The air now, as all the year round, sweet and mild, clear, pure, very bracing, but not irritating. The sky is even in winter of such a deep and lovely blue as the finest day of an English summer cannot show. As night gathers in the blue changes to violet equally intense. And night by night the evening star, hanging like a great lamp over our south-western hill, twinkles like a fixed star.

Such is the climate throughout this foot-hill region—generally clear, bright days, with clear, cold nights, now and then interrupted by storms of snow or wind. Snow does not lie long. The cattle find their own food. I lately sent five calves away to a valley four miles off; they will have to shift for themselves there throughout the winter. The grass, self-cured upon the stalk, is abundant enough to feed them. Last winter, one of unexampled severity, while the snow lay on the prairie outside the hills for thirteen weeks together, and numbers of cattle froze and starved, here it never lay for more than thirteen days at a time. Warm airs blow among these valleys and rapidly dry up the snow. Hence last winter, while the loss of life among cattle was very great outside, here in the hills the stock did well and kept fat. While the thermometer reached 27° below zero at Collins, four miles outside, here at the same time it stood at 5°. In the summer we have equally the advantage as regards the extremes of heat.

The most noticeable points for the invalid coming here are—the great elevation, and the dryness of the air. My aneroid barometer usually indicates about twenty-three inches, rising to nearly twenty-four (rarely quite so high), showing an elevation above the sea-level of five to six thousand feet. The atmospheric dryness is very great. Timber never seems to season enough. Wheels of waggons made for the market of this territory are, I am told, boiled in oil, and even then shrink in their tires. We do not find this dryness at all unpleasant. My house stands in a beautiful valley, the most striking features of which are magnificent steep cliffs of red sandstone to the east, and on the north-west the very beautiful canon or gorge out of which flows our river—a clear mountain stream. The banks, covered with great masses of wild grape-vines, require very strong adjectives to express their loveliness.

As to the curative effects of the climate, testimony is unanimous and unimpeachable that it is very highly efficacious in cases of even considerably advanced consumption, not to speak of other complaints.

The classes of patients to whom temporary residence here offers special advantages are—*a*. The consumptive. *b*. Cases of asthma, chronic bronchial and throat affections. *c*. The debilitated; the numerous class of patients who need general bracing of the constitution, such as youths who, from over-study or any other cause, are below the normal standard of health and vigour for their years; men who have broken down from over-work in business; persons who have inherited a feeble constitution and cannot pursue their calling in life to advantage.

We are close to scenery of the grandest character. Colorado is commonly spoken of as the Switzerland of America. People who have travelled here and in Switzerland report that our scenery is equal to that of the Alps; some (but they are Americans) say it is finer. We are some forty miles from Long's Peak—about 15,000 feet above the sea-level. Our river starts from one of its glaciers. Our home scenery is, as I have already said, very beautiful, and the contrast of the mountain range with the great prairie is sublime. The artist and photographer can find here a new and magnificent field of work. The invalid can take just as much or as little exercise as his powers allow without fatigue, and yet always be amid fine scenery. And I can think of nothing more invigorating to mind and body than riding over the great prairie in front of the snowy range. The artist, naturalist, and sportsman can find here full occupation. The flora and fauna are very various and interesting. To be shot are—elk, deer, antelopes, bears, wolves, and other vermin; eagles, hawks, grouse, wing and water fowl in great variety, humming-birds, etc. Our river abounds with fine trout. The geology of this region has never, I believe, been adequately investigated.

Thus, then, an intelligent person need be at no loss for occupation. The pursuit of art, natural history, or sport might well, I think, compensate for the main drawback of this place—the limited amount of refined society. I must not fail to add that farming, stock-raising, and dairy work may be learned at home or in the immediate neighbourhood; mining (gold or silver) at some distance. And the student of the high science of man may observe a rapidly growing civilisation under new and interesting conditions.

Another point deserves attention. A young man is sent from home for his health to some spot, for instance, on the Mediterranean. He has nothing particular to do, has ample means, and is presented with every form of enervating pleasure. The relaxing climate disinclines to exertion, incites to pleasure amid a society where a laxer moral code prevails than in England. Hence, no doubt, many an invalid misses his recovery, or, if he attains it, is disqualified for the active business of life when he returns home. Here are no opportunities for dissipation, while all the surroundings invite to a manly, active life.

Many a person might be attracted by this account, but discouraged by the distance from home. This distance need be no real obstacle. No journey of equal length round about Europe could be made with so little discomfort. The traveller crosses the sea in one of the finest steamships in the world. From New York he has at command Pullmann's "Palace Cars" (which are said to have no match in Europe) as far as Cheyenne, on the Union Pacific Railroad—that great line which joins New York to San Francisco. From Cheyenne another train goes, in two hours and a half, to Greeley, an interesting colony, whence a drive of thirty-two miles brings the traveller to this house.

The best time of the year for the invalid to come out would be the spring, as soon as the sea can be crossed with comfort. I brought my family out in the very early spring. We had a bad sea voyage, but though one of my children was under six months old we reached Longmont all well, having met with nothing we could really call a hardship.

Everyone interested in our present subject should read what Sir C. Dilke says in his "Greater Britain" of Colorado and its climate.

I am, &c.,
F. B. Hutchinson.

Finbagh, Namaqua, Lorimer County, Colorado, U.S.

A Doctor's Log.—No. III.

An awning on deck; the shipping of native stokers more resembling wild beasts than human beings, especially when caged in sheep pens; the metamorphosis of artillery officers into pastry-cooks in white clothes; the appearance of straw hats, helmets,—all significant symptoms. Passing from the Gulf of Suez to the Red sea, notice languidly the supposed track of the Israelities, the peaks of Sinai and Horeb, fleecy, fluffy, purple-looking mountains of sand; read that the Arabian gulf, altogether about 1400 miles long, 130 wide, is notorious for sand-banks, dangerous shoals, coral reefs, and terrible heat; observe the sunset orange, shading off into every colour of the spectrum; and, in common with other passengers, complain of lassitude, nausea, sledge-hammer headache, disturbed dreams, incessant thirst, also loathing for food, a hatred to neighbours, a wish to be alone, away, back in England,—bother the rupees. There are fourteen men in hospital, nothing serious about, fourteen attending; also about six women and children in hospital, about sixteen or twenty attending at the utmost. Now twenty days out from Portsmouth: one labour; also one child lost, aged eight weeks, dry nursed, and alluded to previously. Bronchitis and diarrhœa still trouble some, especially where the mothers are wanting in tact, experience, or obedience. For instance, this very morning, prowling about the deck, several young infants at the breast, teething, had their bare heads exposed to the sun, the purple face, the stupor, the tinged veins indicative of threatening cerebral mischief. Yet every woman has been presented with printed instructions what to eat, drink, and avoid, and how to manage the children. Considering the number on board, everything in the way of food and management thoughtfully arranged. None of the bother of depending on medicine-chests, there being a neat dispensary inhabited by a qualified compounder, a "Jack-in-the-box," ready at any moment. Still the children require constant supervision, and the cases do not answer the helm as on shore. Two infants—one weaned, the other nursing—each suffering from dry, husky, croupy cough, high pulse, restless nights, fits of violent passion, dirty tongue, disordered secretions; the general symptoms nothing, but the dry hoarse cough so horrible to hear in croup, laryngismus stridulus, laryngitis, diphtheria, and thrush. The tonsils are inflamed and swollen and covered with white patches, and occasionally the spasms resemble those of hooping-cough. In addition to general principles, attention to alimentary canal, warm bath, sinapisms to throat, chest, and back; chlorate of potash, carbonate of ammonia and calumba, expectorants, milk, wine, beef-tea, and the swabbing out the throat with strong solution of borax tried to-day. The younger infant has the better chance; the mother put into good order and taking quinine. The other child, refusing milk, subsists on lime-juice and beef-tea. Two children at Suez distinctly whooped; since arrival in Red Sea much better. For spasmodic affections, notably hooping-cough, Dr. Doyle, R.N. (the assistant-surgeon on board), speaks highly of tincture of cantharides, but beyond change of air I have no faith in any particular remedy. The Egyptian stokers have assumed their summer clothing, consisting of a rag around the loins, somewhat startling the ladies. Supposing the "Doctor's Log" written for general readers, how easy it would be to sketch a few characters on board,—to describe the old soldier; the splendid wife, with clean, healthy children, always neatly dressed, ever active; she has heaps of baggage, a splendid canteen, knows all the rules, regulations, dodges, the good seat at dinner, the waiters' names, how to get plenty of ice and comforts innumerable for her sick husband. You may be sure she could give an excellent dinner in the desert, where a Jew or even a Scotchman would starve. In return for an infallible prescription (compound colocynth, ipecac., podophyllin)—I hope to learn a trick or two about children. On the other hand, the lovely, elegant young girl—fragile, delicate, helpless, very pleasant to meet, clever at accomplishments—too often resembles "Dora" (and you remember what a miserable *ménage*, what a comfortless home David Copperfield had!) Amongst the males there are all ages, from the young subaltern going abroad full of adventure—tiger-shooting and pig-sticking—up to the colonels, anxious to shake the pagoda-tree before it withers. Some have married early—"We can get on in India, don't you know; my wife is mad to go." Some are gladly returning to a country congenial as to climate and associations; others merely obediently go at the call of duty; whilst a few bear the stamp of debt or failure, or, having played their cards badly, philosophically hope for a turn of luck. In addition to a deputy-inspector, a surgeon-major, six assistant-surgeons, all going to different places, we have a naval surgeon and assistant on board—a regular gang of doctors, all very harmonious—no squabbling about "ethics," or stealing each other's patients—"unprofessional conduct"—or struggling for hospital appointments. We have substantial pet grievances, and having seen neither *Medical Times* nor *Lancet* since leaving England, the grievances come in handy for discussion, and our thoughts are our own.

One evening, after an admirable theatrical performance of the *Area Belle*,—the part of Tosser the Grenadier, partial to cooks and cold mutton, well sustained by Dr. Greig, R.A.; the farce of *Little Toddlekin* also capitally acted, the part of the invalid who comes to London to consult the faculty in Savile-row assumed by Lieutenant Armitage—the subject of fire at sea somewhat occupied attention. When the fire-bell is rung every port is to be closed—the troops keeping perfect silence will fall into detailed places—the women remain in quarters—the sick in hospital, under charge of medical officers, prepared for removal. In short, each man at his post will endeavour to prevent panic and confusion, especially amongst ladies and their children, who, under charge of the quarter-master, remain in the saloon. The number and position of pumps, directions regarding prisoners, lunatics, books, valuables, and the disposal and duties of officers and men, the sentries over the spirit-room, and the isolation of gunpowder, are carefully laid down and rehearsed, everything depending on discipline. The narrative of the *Birkenhead* we are never tired of reading. How well the troops were controlled: standing shoulder to shoulder, rigid as on parade, they gave one British cheer whilst sinking in the doomed vessel beneath the waves. Medical men, of all others, should be prepared to be useful in peril at sea.

(*To be continued.*)

COMMUNICATIONS have been received from—

Dr. Haddon; Mr. Ingpen; Mr. W. E. Porter; Dr. Fenton; One of your Readers; Dr. Finucane; Dr. Little; Dr. J. Russell; Dr. Martyn; Mr. MacCormac; Mr. W. F. Teevan; M. C. F. Maunder; Mr. De Lisle; Dr. Letheby; Mr. Snape; Dr. W. J. Hunt; Dr. Berry.

BOOKS RECEIVED—

R. H. Patterson on Gas Purification in London—Dudgeon's 11th Annual Report of the Peking Hospital—What a House should be *versus* Death in the House, by W. Burdwell, Architect—Reeves on Heart Disease in

Australia—Eeter on the Convolutions of the Human Brain—Plan einer Mortalitäts—Statistik für Grosstädte, von Joseph Körösi—Introductory Lecture delivered at the Medical College, Calcutta, on June 16, by H. C. Cutcliffe, F.R.C.S.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Tribune Médicale—Nature—L'Union Médicale—London Medical Record—Practitioner—Progrès Médical—Mouvement Médical—Pharmaceutical Journal—Gazette Hebdomadaire—Berliner Klinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Kerle's Margate and Ramsgate Gazette—Transactions of the Odontological Society of Great Britain, vol. v, No. 8—Le Bordeaux Médical—Indian Medical Gazette—O Correio Medico—Revista Medico Quirúrgica—Bombay Gazette—Gazette des Hôpitaux—Philadelphia Medical Times—Allgemeine Wiener Medizinische Zeitung—Monthly Review of Dental Surgery—Canada Medical and Surgical Journal—Bulletin Général de Thérapeutique—London Mirror—Melbourne Argus—Journal de Médecine et Chirurgie Pratiques—Liverpool Daily Courier—Guy's Hospital Gazette—Nottingham and Midland Counties Express—France Médical—Gazette Médicale.

APPOINTMENTS FOR THE WEEK.

September 20. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

22. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

23. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

24. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

25. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

QUEKETT MICROSCOPICAL CLUB, 8 p.m. Dr. Horatio Wood's Method of Mounting Fresh-water Algæ.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 6.

BIRTHS.

Births of Boys, 1131; Girls, 1117; Total, 2248.
Average of 10 corresponding years 1863-72, 1950·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	668	598	1286
Average of the ten years 1863-72	669·4	662·0	1331·4
Average corrected to increased population	...	...	1465
Deaths of people aged 80 and upwards	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	1	2	3	...	3	1	40
North	751729	1	1	2	2	5	...	4	1	42
Central ...	334369	...	...	...	1	2	...	2	...	19
East	639111	1	6	7	...	12	...	2	2	53
South	967692	...	8	2	2	16	3	8	1	75
Total	3254260	2	15	12	7	38	3	19	5	229

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·760 in.
Mean temperature	56·0°
Highest point of thermometer	70·8°
Lowest point of thermometer	44·5°
Mean dew-point temperature	51·3°
General direction of wind	W.S.W., W., N.W., & N.
Whole amount of rain in the week	0·51 in.

Week ending Saturday, September 13, 1873.

BIRTHS.

Births of Boys, 1125; Girls, 1131; Total, 2256.
Average of 10 corresponding years 1863-72, 2023·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	648	671	1319
Average of the ten years 1863-72	655·6	625 1	1280·7
Average corrected to increased population	...	...	1409
Deaths of people aged 80 and upwards	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	...	1	4	...	1	...	21
North ...	751729	...	1	1	5	13	1	5	1	38
Central ...	334369	...	4	...	1	6	1	1	1	18
East	639111	2	13	7	2	17	...	2	3	33
South	967692	...	11	5	3	9	4	5	1	52
Total	3254260	2	29	13	12	49	6	14	6	162

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·626 in.
Mean temperature	55·6°
Highest point of thermometer	67·2°
Lowest point of thermometer	41·3°
Mean dew-point temperature	49·9°
General direction of wind	S.W.
Whole amount of rain in the week	1·10 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 13, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Sept. 13.	Deaths Registered during the week ending Sept. 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2256	1319	67·2	41·3	55·0	12·78	1·10	2·79
Portsmouth ...	118280	12·4	78	43	...	...	...	...	...	...
Norwich	81677	10·9	44	49	63·5	41·0	52·3	11·28	0·72	1·83
Bristol	189648	40·4	132	85	62·3	46·9	53·2	11·78	1·34	3·40
Wolverhampton ...	70084	20·7	48	50	67·2	38·1	51·6	10·89	0·93	2·36
Birmingham ...	355540	45·4	245	203	65·2	39·2	52·1	11·17	0·57	1·45
Leicester	102694	32·0	102	66	65·0	36 5	51·9	11·06	0·69	1·75
Nottingham ...	89557	44·9	55	58	64·7	35·8	50·5	10·28	0·39	0·99
Liverpool	505274	98·9	472	237	61·0	42·8	51·7	10·94	0·83	2·11
Manchester ...	354057	78·9	260	211	63·7	35·5	51·7	10·94	0·97	2·46
Salford	130468	25·2	111	70	62·5	34·0	50·4	10·22	0·87	2·21
Oldham	85141	20·4	84	36	59·0	...	...	...	1·24	3·15
Bradford	156609	23·8	98	87	61·4	39·0	51·3	10·72	0·36	0·91
Leeds	272619	12·6	234	164	64·0	38·0	50·8	10·44	0·43	1·09
Sheffield	254352	11·1	219	150	65·5	38·7	51·9	11·06	1·06	2·69
Hull	128125	35·9	87	71	64·0	35·9	51·0	10·56	0·96	2·44
Sunderland ...	102450	31·0	106	58	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	87	65	...	...	...	...	...	...
Edinburgh	208553	47·1	110	70	62·4	36·8	53·0	11·67	0·43	1·09
Glasgow	498462	98·5	349	221	58·7	33·1	51·1	10·61	1·17	2·97
Dublin	314666	31·3	187	121	66·3	39·6	53·9	12·17	2·05	5·21
Total of 21 Towns in United Kingd'm	7507575	34·5	5384	3434	67·2	33·1	52·0	11·11	0·90	2·29

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·63 in. The lowest was 29·43 in. on Tuesday evening, and the highest 29·77 in. on Friday evening.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

St. Bartholomew's Hospital and

COLLEGE.—The WINTER SESSION will begin on WEDNESDAY, OCTOBER 1st.

The Clinical Practice of the Hospital comprises a service of 710 beds, inclusive of 34 beds for convalescents at Highgate.

Students can reside within the Hospital walls, subject to the College Regulations.

For all particulars concerning either the Hospital or College, application may be made, personally or by letter, to the Resident Warden of the College. A handbook will be forwarded on application.

St. Bartholomew's Hospital and

COLLEGE.

SCHOLARSHIPS IN SCIENCE.

Two Scholarships in Science have been founded at St. Bartholomew's Hospital:—

1. An Open Scholarship of the value of £100, tenable for one year, to be competed for in September. The subjects of examination are Physics, Chemistry, Botany, and Zoology. The successful candidate will be required to enter at St. Bartholomew's Hospital in October next.

2. Preliminary Scientific Scholarship of the value of £50, tenable for one year, to be competed for in October next by Students of the Hospital of less than six months' standing. The subjects of examination are identical with those of the Open Scholarship.

For further particulars and syllabus of subjects, application may be made, personally or by letter, to the Warden of the College, St. Bartholomew's Hospital.

University of London.

MATRICULATION AND PRELIMINARY SCIENTIFIC EXAMINATIONS.

SPECIAL CLASSES for these Examinations are held at St. Bartholomew's Hospital. The Classes are not confined to Students of the Hospital.

A Class for the Matriculation Examination is held twice in each year, from October to January, and from March to June.

A Class for the Preliminary Scientific Examination is held from January to July.

For particulars, application may be made personally, or by letter, to the Warden of the College, St. Bartholomew's Hospital.

St. Thomas's Hospital,

ALBERT-EMBANKMENT, WESTMINSTER-BRIDGE, S.E.—The MEDICAL SESSION for 1873 and 1874 will commence on WEDNESDAY, the 1st OCTOBER, 1873, on which occasion an Inaugural Address will be delivered by Dr. J. Harley, at Two o'clock.

Gentlemen entering have the option of paying £40 for the first year, a similar sum for the second, £20 for the third, and £10 for each succeeding year; or, by paying £105 at once, of becoming perpetual Students.

PRIZES AND APPOINTMENTS FOR THE SESSION.

The Wm. Tite Scholarship, founded by the late Sir Wm. Tite, C.B., M.P., F.R.S., the proceeds of £1000 Consols, tenable for three years, was awarded last Session.

First Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, and £5.

Second Year's Students—Winter Prizes, £20, £15, and £10; Summer Prizes, £15, £10, £5; the Dresserships and the Clinical and Obstetric Clerkships.

Third Year's Students—Winter Prizes, £20, £15, and £10; Mr. George Vaughan's Cheselden Medal; the Treasurer's Gold Medal; the Grainger Testimonial Prize; the two House-Physicianships; the two House-Surgeoncies; the Resident Accoucheurships. Two Medical Registrarships, at a salary of £40 each, are awarded to third and fourth years' Students, according to merit.

The Solly Medal, with a Prize of 10 Guineas, will be awarded at the end of the Session to a Student of the third, fourth, fifth, or sixth years, for the best Report of Surgical Cases.

MEDICAL OFFICERS.

Honorary Consulting Physicians—Dr. Barker and Dr. J. Risdon Bennett.
Honorary Consulting Surgeon—Mr. Frederick Le Gros Clark.
Physicians—Dr. Peacock, Dr. Bristowe, Dr. Clapton, Dr. Murchison.
Obstetric Physician—Dr. Barnes.
Surgeons—Mr. Simon, Mr. Sydney Jones, Mr. Croft, Mr. MacCormac.
Ophthalmic Surgeon Mr. Liebreich.
Assistant-Physicians—Dr. Stone, Dr. Ord, Dr. John Harley, Dr. Payne.
Assistant Obstetric Physician—Dr. Gervis.
Assistant-Surgeons—Mr. F. Mason, Mr. Hy. Arnott, Mr. W. W. Wagstaffe.
Dental Surgeon—Mr. J. W. Elliott.
Resident Assistant-Physician—Dr. Evans.
Resident Assistant-Surgeon—Mr.
Apothecary—Mr. R. W. Jones.

Medicine—Dr. Peacock and Dr. Murchison. Surgery—Mr. Sydney Jones and Mr. MacCormac. General Pathology—Dr. Bristowe. Physiology and Practical Physiology—Dr. Ord and Dr. John Harley. Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe. Anatomy in the Dissecting-room—Anatomical Lecturers, Mr. Rainey and Dr. R. W. Reid. Practical and Manipulative Surgery—Mr. Croft. Chemistry and Practical Chemistry—Dr. A. J. Bernays. Midwifery—Dr. Barnes. Physics and Natural Philosophy—Dr. Stone. Materia Medica—Dr. Clapton. Forensic Medicine and Hygiene—Dr. Stone and Dr. Gervis. Comparative Anatomy—Mr C. Stewart. Ophthalmic Surgery—Mr. Liebreich. Botany—Mr. A. W. Bennett. Dental Surgery—Mr. J. W. Elliott. Demonstrations Morbid Anatomy—Dr. Payne. Mental Diseases—Dr. Wm. Rhys Williams.

T. B. PEACOCK, M.D., Dean.
R. G. WHITFIELD, Medical Secretary.

For entrance or prospectuses, and for information relating to Prizes and all other matters, apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, S.E.

The London Hospital and Medical

COLLEGE.—The next WINTER SESSION will commence on WEDNESDAY, OCTOBER 1, 1873, when the Introductory Lecture will be given at 3 p.m. by M. Prosser James, M.D., Lecturer on Materia Medica at the College.

General fee to Lectures and Hospital Practice, £90, payable in two instalments of £45 each. Library fee, £1 1s. Special entries can be made to Lectures or Practice.

The Hospital contains 600 beds.

The In-patients during 1872 were 5392, and the Out-patients 64,275—total 69,667.

The following Prizes and Appointments are offered, without any further payment, to Students paying the general fee of £90:—

Seven Scholarships to be offered for competition in the Winter Session:

1. A Scholarship of £30 to the Student of less than three months' standing who passes in October the best examination in the subjects required at the Preliminary Examinations.
2. A Scholarship of £20 to the Student of less than three months' standing placed second in the above examinations.
3. A Scholarship of £20 in Human Anatomy for first-year Students; to be awarded in April, 1874.
4. A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, for first-year and second-year Students; to be awarded in April, 1874.
5. A Hospital Scholarship, value £20, for Clinical Medicine; to be awarded in April, 1874.
6. A Hospital Scholarship, value £20, for Clinical Surgery; to be awarded in April, 1874.
7. A Hospital Scholarship, value £20, for Clinical Obstetrics; to be awarded in April, 1874.

The Duckworth Nelson Prize, value £10, for Practical Medicine and Surgery (Biennial), 1874.

Money Prizes to the value of £60 given annually by the House Committee for zeal in Dressing Out-patients and knowledge of Minor Surgery.

For particulars as to appointments, &c., see the prospectus, which will be forwarded on application to the Bedell of the London Hospital Medical College, Turner-street, E.

Further information may also be obtained from Mr. James E. Adams, Treasurer, 10, Finsbury-circus, E.C.; or Mr. Waren Tay, Vice-Dean, at the Medical College.

Charing-cross Hospital Medical School.

—The WINTER SESSION will commence on WEDNESDAY, the 1st of OCTOBER, when the Introductory Address will be delivered by Edward Bellamy, F.R.C.S., at eight o'clock in the evening.

Two Entrance Scholarships of £30 and £20 respectively, the Llewellyn Scholarship of £25, the Golding Scholarship of £15, the Governor's Clinical Gold Medal, besides the usual Class Medals, are open to competition among the Students.

Three Resident Officers are selected from among the Students every six months.

MEDICAL OFFICERS.

Consulting-Surgeon—Henry Hancock, F.R.C.S.
Physicians—F. W. Headland, M.D., A. Julius Pollock, M.D., Alexander Silver, M.D.
Assistant-Physicians—T. Henry Green, M.D., R. Douglas Powell, M.D., G. V. Poore, M.D., J. Mitchell Bruce, M.D.
Surgeons—Edwin Canton, F.R.C.S., F. Hird, F.R.C.S., Richard Barwell, F.R.C.S.
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ORIGINAL LECTURES.

LECTURES ON DISEASES OF THE HEART.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
Senior Physician to St. Thomas's Hospital.

Lecture VII.—Valvular Diseases.

Diagnosis, Prognosis, and Treatment.

(*Continued from page* 320.)

Prognosis.

In order fully to understand the relative degrees of danger which attend different forms of valvular disease, and to estimate the probability of life being prolonged or rapidly terminated, it is necessary to point out the different modes in which death may occur, and the sources of danger to be apprehended. These may be classed under the following heads:—1. Failure of muscular power in the heart from gradually advancing disease, from atrophy and disorganisation of the muscular structure, or from impairment of the general strength. In this way the cavities anterior to the seat of obstruction become dilated, and their walls thinner and looser in their texture, or undergo interstitial changes, such as fatty degeneration. They are thus no longer capable of contracting with sufficient power to propel the blood through the smaller vessels and capillaries, and there is liability to sudden cessation of action and to death by syncope. 2. Congestion of the organs anterior to the seat of obstruction. This condition is a necessary result of the former, if of sufficiently long duration. The effects may be shown in the heart and pericardium, in the lungs, the liver, the kidneys, the brain, and in the system at large, causing effusion in the pericardium or pleural cavities, œdema of the lungs, bronchitis, pulmonary apoplexy and hæmoptysis, various morbid changes in the liver, kidneys, and brain, and general dropsy; the pulmonary, hepatic, renal, and dropsical symptoms being the most common. 3. Thrombosis of the cavities adjacent to the seat of obstruction or in more distant vessels, or embolism from the separation of the clots so formed or of inflammatory exudations, and their conveyance in the course of the circulation into some of the smaller vessels, especially those of the brain, giving rise to obstruction in the vessels of the extremities or to softening of the brain, and to apoplectic extravasation and paralysis.

These sources of danger are respectively more prone to arise in some forms of valvular disease than in others, though they may occur in any case and be variously combined, or present themselves in succession at different times in the same case.

Obstructive disease of the aortic valves may long continue without seriously impairing the general health of the patient; but it predisposes to the occurrence of various serious complications, more especially to active inflammatory and hæmorrhagic affections, particularly of the brain. Ultimately, with the failure of the muscular power of the heart, evidences arise of obstructed circulation and of congestion of the parenchymatous viscera, and there may be general dropsy; or the constricted orifice may be further obstructed by inflammatory exudations or clots, and the secondary effects of their displacement may ensue.

Incompetency of the aortic valves, whether a primary or secondary condition, is a much more serious defect than obstruction, for the circulation is with difficulty maintained when a large portion of the blood propelled into the aorta at each beat of the heart immediately regurgitates into the ventricle. The power of the left ventricle is also exhausted by the almost constant distension to which the cavity is subjected, the ventricle therefore rapidly becomes dilated, and sudden death is especially apt to ensue from failure of contractile power and syncope. In consequence, however, of the strength of the left ventricle, and especially when the organ is much hypertrophied, as in the cases in which incompetency supervenes on previous obstruction, the alterations in the right side of the heart do not quickly occur, the lungs and parenchymatous organs remain for a considerable time free from serious disease, and general dropsy does not readily ensue. In regurgitant disease of the aortic valves life is seldom much prolonged; a large portion of the cases prove fatal within a few months or a year or two, though in exceptional cases the patients do sometimes live for several years. The orifice may, however, apparently contract, and lessen the degree of incompetency, and so life may be prolonged. The duration of life is, however, always uncertain, and sudden death is apt to ensue in cases not otherwise very threatening. Thrombosis and embolism also may occur, and produce various complications which may immediately endanger life.

Obstructive disease of the mitral valve may be compatible with the prolongation of life for a considerable time, though probably scarcely so long as in the corresponding disease of the aortic valves. It, however, produces permanent congestion of the parts anterior to the constriction, and thus the left auricle becomes dilated, the lungs are liable to various congestive and inflammatory affections, the right side of the heart is hypertrophied and dilated, and the parenchymatous organs are congested, and ultimately dropsical affections ensue, though generally only after the state of obstruction is combined with incompetency, or after the occurrence of some other serious complication, as of the lungs or kidneys. There is also danger in these cases of thrombosis of the affected orifice and embolism of distant vessels, with their effects.

Regurgitant disease of the mitral orifice produces all the effects of mitral impediment in their most aggravated forms; the left ventricle rapidly dilates, and the action of the heart may quickly become irregular both in force and frequency. The lungs are intensely congested, and œdema, apoplectic extravasations and hæmoptysis, and broncho-pneumonia are very generally occasioned. The liver and kidneys also become congested and diseased, and dropsical symptoms ensue, and if they be not relieved the patient dies in no long time, rather from the secondary affections of other organs than from the direct effect of the disease of the heart itself. There is no doubt, however, that in many cases of this kind the symptoms are relieved, and the patient recovers from the attack and regains his previous condition, and may enjoy a fair state of health for some years, though always liable to recurrence of the same severe symptoms from very slight causes. The condition, therefore, is less serious than regurgitant disease of the aortic valves, though much more dangerous than either of the forms of obstructive disease.

The danger connected with these several forms of disease I place, therefore, in the following order, beginning with those which are most serious:—

Aortic regurgitant disease.
Mitral regurgitant disease.
Mitral obstructive disease.
Aortic obstructive disease.

It has, however, previously been stated that two or more sets of valves may be coincidently affected, and it has been shown that combined disease of the aortic and mitral valves is by no means of uncommon occurrence. It is evident that such combination must constitute a very serious form of disease, as the various sources of danger incidental to each particular form are in such cases very greatly aggravated.

In estimating the probable result in any given case of valvular affection, other circumstances besides the special form of disease must also be taken into consideration. Such are—

1. The cause of the disease, its duration, and the rapidity with which the symptoms have advanced, as indicating its probable nature and its active or passive character.

2. The degree of impediment to the circulation which it occasions, and the power of the heart to overcome the obstruction, as indicated by the force and regularity of its beat and the relation of its impulse to the pulse at the wrist, and by the amount of congestion in the lungs and other organs.

3. The presence or absence of serious complications—as of the lungs, liver, brain, kidneys, etc.,—the existence of dropsical symptoms, of a gouty or rheumatic diathesis, and of an anæmic or purpurous condition of the blood.

4. The circumstances in which the individual is placed, as affording the means of obtaining rest of body and mind and protection against atmospheric changes, together with the proper regulation of diet and facilities for medical treatment. The sex, age, occupation, residence, and previous habits of the patient may all, also, affect the prognosis.

In reference to the means of ascertaining the degree of impediment to the circulation, it must be understood that the intensity and character of the murmur attendant on valvular disease afford but little information. For the production of a murmur two elements are necessary: there must be a source of obstruction to the circulation, and the blood must be propelled with power through such constriction. A loud murmur may be produced by a very slight amount of obstruction, and a very

great degree of obstruction may be attended by little or no murmur. The former must be supposed to be the explanation of those cases in which murmurs are heard for many years, though perhaps during this time the patient has remained entirely or nearly free from symptoms of cardiac disease. Of the latter we have frequent examples in hospital practice. A patient is admitted with bronchitis and a very embarrassed circulation, the action of the heart and the pulse being very irregular both in force and frequency, and the different viscera and the system generally congested, with usually more or less dropsy. On listening over the heart, however, no murmur may be heard. After a time, when, under the influence of rest, a genial temperature, and suitable treatment, the bronchitic symptoms have subsided and the action of the heart has become stronger and more regular, a mitral regurgitant murmur is detected, and increases in intensity with the improvement in the condition of the patient and in the power of the heart, till, at the time of discharge, when the patient considers himself perhaps well, there is a loud murmur heard over a large portion of the front of the chest. So, also, it often happens that in cases of advanced mitral regurgitant disease the action of the heart is extremely irregular, there being two or three very imperfect contractions followed by one of greater power; and while with the former no murmur will be heard, there will be a short whiff with the more powerful beat.

In cases of chronic valvular disease which have for some time been almost entirely latent, more active symptoms are often excited by cold, giving rise to bronchitis, and so to great aggravation of the congestion in all parts of the system, and to various secondary affections of the viscera. Often, also, from the same cause, the kidneys become congested and dropsical symptoms suddenly set in.

In cases in which there is a combination of renal and cardiac symptoms, it becomes an important question, in estimating the probable result, to know which of these affections has been the primary one. If the renal disease have been the first, the cardiac affection must almost necessarily advance; if, on the contrary, the cardiac were the primary defect, the renal symptoms may be only due to congestion of the kidneys, and the general condition may admit of very great alleviation, and the patient may recover the state of comparative health which preceded his attack. In deciding this point, the state of the urine will afford great assistance. In cases of simple renal congestion, though the quantity of urine passed may be small, the specific gravity does not generally fall below the healthy standard; whereas in those cases in which the renal disease is primary, the specific gravity of the urine is usually low whatever be the quantity of water passed.

As regards the importance to be attached to the dropsical symptoms in cases of valvular disease, there is some difficulty in making a general statement. The occurrence of a certain amount of puffing of the face and swelling of the lower extremities, if the heart be not very seriously embarrassed and the viscera not much involved, and especially if the kidneys be free from disease, is often readily recovered from; but the occurrence of considerable anasarca, of effusion into the tissue of the lungs and pleural cavities and into the pericardium and peritoneum, with marked congestion of the viscera, must always be regarded as involving immediate danger, and affording but little prospect of material relief.

In men valvular affections most commonly originate either in active inflammation or in over-strain of the valves from violent and long-continued muscular exertion, and they generally follow an active and rapid course, and the heart readily becomes hypertrophied. In females, on the other hand, though rheumatic affections are also a common cause of disease, a considerable proportion of cases originate in emotional causes. In them, also, the disease most commonly assumes a passive form, and the cavities of the heart have a tendency to dilatation, and the muscular walls to become atrophied and undergo interstitial changes.

In early life valvular affections are almost always either congenital or occur in connexion with rheumatism. In middle age they originate frequently both in inflammation and in injury or gradual yielding during muscular efforts, and at both periods they are apt to assume an active form and to progress rapidly; while in advanced life they are generally the result of fatty or atheromatous disease of the valves and muscular structure, or occur in combination with renal disease or with a gouty state of system. In advanced age, in addition to the valvular mischief, the cavities are generally dilated, and the heart affection is often passive in its character, and sometimes, indeed, entirely latent.

The residence of the patient, especially if that be in a hot climate and malarious district; his occupation as exposing him to the weather and to alterations of temperature and so rendering him liable to rheumatic or other inflammatory affections, or requiring the exertion of great physical force, or causing prolonged and severe mental labour; and his habits, if at all intemperate,—are all influential on the progress of valvular disease.

Treatment.

The time at our disposal precludes the possibility of my entering fully into the treatment of cases of valvular disease, and will only allow me to give a brief summary of the principles which should guide us in our efforts to afford relief to the various different forms.

1. In aortic obstructive disease we must endeavour to regulate the action of the heart, which in the earlier stages may be excessive, and in the latter may, on the contrary, be unequal to overcome the obstruction.

2. In aortic regurgitant disease the power of the heart is always defective, and our efforts must be used to enable it to maintain the circulation and to avoid the tendency to exhaustion and to death by syncope.

3. In mitral obstructive disease the danger is also partly from failure of muscular power and partly from congestion of the parts anterior to the seat of constriction.

4. In mitral regurgitant disease there is great impediment to the onward flow of the circulation, but the especial sources of danger lie in the engorgement of the lungs and parenchymatous viscera, and we must endeavour to invigorate the action of the heart and remove the visceral congestion.

In all the forms of disease the means employed to accomplish these indications must be partly hygienic and partly medicinal. The patient must be directed to avoid active exercise, and especially anything of the nature of athletic sports; his mind must also be occupied, but severe mental labour must be avoided. He must live on nutritious but unstimulating and easily digestible food, and must either avoid stimulating beverages altogether or take them only in a dilute form and in very limited quantity—claret, sherry, or brandy being preferred to port or malt liquors.

In the first and third forms of disease, in addition to the hygienic means, the digestive organs should be regulated by mild alteratives and bitter tonics: blue pill or grey powder with rhubarb may be taken as required, with alkalies and bitter infusions—colombo or gentian; and when the power fails and the patient is anæmic, iron, more particularly in the form of the citrate, phosphate, or carbonate, may be given. Hydrocyanic acid is also often very useful in quieting the action of the heart and relieving dyspeptic symptoms in cases of this kind.

In the second form of disease, while similar regulations, both dietetic, regimenal, and medicinal, should be enforced, the power of the heart must be upheld to guard against the special danger of syncope. Food must be taken small in quantity and at frequent intervals, and stimulants must be given, those before referred to being selected. The special remedies also for this condition are tonics—more particularly iron—given in combination with quinine, etc.

In the fourth form, and especially when there is marked congestion of the lungs or other viscera and dropsical symptoms, we must endeavour to promote elimination, more particularly by the bowels and kidneys, while upholding the muscular power of the heart. Mild alteratives and aperients—mercurials, rhubarb, the alkalies,—and diuretics—the acetate or nitrate of potash, nitric ether, etc.—may be given, and must be combined with or followed by the employment of iron and other tonics, the perchloride of iron being in these cases preferred.

In carrying out these several indications the greatest care will be needed not unduly to depress the power of the patient. There are, indeed, few classes of cases the treatment of which so severely taxes the powers of the physician.

It is well known that digitalis exerts special action on the heart, lessening the frequency of its pulsations and proportionately increasing their power, and it has been supposed to be particularly efficacious in the treatment of cardiac affections, especially those in which the action of the heart and the pulse are weak and irregular. I cannot, however, but think that its use has been too generally and too indiscriminately had recourse to. For a time it unquestionably does produce the

effects mentioned, but if long continued, even in small doses, it exerts a very depressing influence, and I have repeatedly seen cases in which it has very greatly aggravated the symptoms. Indeed, I believe it to be much more useful as a diuretic than for its special action on the heart. It is probably the most efficient diuretic which we possess, and is especially useful and valuable in cases of dropsy, and particularly when dropsy occurs in cases of mitral regurgitation, while it is injurious in cases in which the power of the heart is deficient, as in cases of incompetency of the aortic valves. In all cases in which it is employed, and especially if its use be long continued, even in small doses, it requires the greatest care. In some cases where there is very great congestion of the lungs and right side of the heart, as in mitral regurgitation, it has been proposed to have recourse to small general bleedings to relieve the overloaded venous system. I have known a small bleeding, combined with the exhibition of stimulus, to be the means of rallying, when in most extreme danger, a patient labouring under asthenic bronchitis, and it is obvious that the treatment is equally applicable to cases of heart disease.

Generally speaking, the causes which in chronic cases of valvular disease entail the greatest suffering on the patient, and tend most to aggravate his malady and accelerate the fatal event, are increased pulmonary congestion or renal complication resulting from cold, or disorder of the digestive organs originating in various ways, or excitement of mind and over-exertion of body; and special care should be exercised to protect him against these influences. In many cases, if the patient be placed in favourable circumstances, life may be prolonged and a large amount of health and vigour be enjoyed for many years. As, however, he is little likely to submit to the requisite restraints, unless made aware of their imperative necessity, it is right that he should so far be informed of his state as to make him see the importance of the regimen advised; but it would be alike wanting, both in consideration for his feelings and in sound professional policy, abruptly to tell him that he was labouring under serious cardiac disease.

ORIGINAL COMMUNICATIONS.

NOTE ON

AMPUTATION THROUGH THE KNEE-JOINT.

By C. F. MAUNDER,
Surgeon to the London Hospital.

The opportunity of performing amputation through a healthy knee-joint occasionally presents itself, and many surgeons avail themselves of it. From observation of such a case recently under care, the question of removing the patella or not has forced itself upon me. My own experience does not enable me to answer the question, being too limited, and the evidence for and against, numerically considered, being evenly balanced. On the one hand, a case progresses favourably to recovery; on the other hand, acute synovitis results: and this is the point to which I wish to draw attention now. On visiting the above case some few days subsequent to operation, the stump to the unpractised eye looked very well—indeed, too well. It was nicely rounded, the natural depression above the patella being lost. This even surface aroused suspicion, the more especially when it was stated that the patient had that day lost appetite, had vomited, and had a high temperature. The synovial prolongation above the patella was doubtless distended with inflammatory effusion, which could not escape. A free incision was made in the mesian line above the patella, and a quantity of offensive semi-purulent fluid escaped. The bad symptoms quickly subsided. In the course of a few more days pus had gravitated upwards along the outer side of the limb, and a "drainage"-tube was introduced. The detention of secretion above the patella after section of the synovial sac below is explained by the probability that fluid must accumulate both above and below this bone in order to lift it from the groove in which it lies in the femur, but under the altered circumstances it acts as a plug. Fluid readily escapes below through the wound. Against the possible uninterrupted favourable progress after this method of operation when the patella is left, we must put the complication alluded to, and certainly it gave rise to much pain, slight septicæmia, and retarded recovery. On the other hand, cutting away the patella adds something to the severity of the operation; and, other things being equal, the knife should be employed as sparingly as possible. To perform this operation satisfactorily, great attention to details is requisite.(a) At present I incline to removal of the patella.

16, Queen Ann-street, Cavendish-square.

SUBCUTANEOUS URETHROTOMY

FOR TWO STRICTURES OF THE URETHRA WHICH HAD PREVIOUSLY BEEN TWICE OPERATED ON BY THE SO-CALLED METHOD OF IMMEDIATE DILATATION—GOOD RESULT.

By W. F. TEEVAN, B.A., F.R.C.S.,
Surgeon to the West London Hospital; Surgeon to St. Peter's Hospital; and late Lecturer on Anatomy at the Westminster Hospital.

The operation of subcutaneous urethrotomy is little known or practised in this country, but it is the one which strongly recommends itself to us for adoption whenever an operation may be required. It may be safely said that if a stricture be large enough to admit of the introduction of a dilator or urethrotome, you can cure the complaint by gradual dilatation without the slightest risk to the patient's life. There are, however, a few cases where, although the stricture may be dilated to the fullest extent, it yet so rapidly contracts again that an operation is indicated; and there are also instances of hard, horny strictures complicated with abscesses and fistulæ where an operation is called for, as much for the purpose of giving a free vent to suppurating tissues as for the enlargement of the canal to its natural calibre. In the first case subcutaneous urethrotomy is indicated, but in the latter instances external urethrotomy. The subcutaneous division of strictures, introduced into practice by Dr. Henry Dick, is the only operation which holds out any prospect of a real cure for stricture, as it is the only method that is in unison with the teachings of surgical pathology and experience; it possesses all the advantages of external urethrotomy or perineal section without the disadvantages of an external wound, and it is superior to internal urethrotomy because it always insures a complete division of the strictured parts, which that operation does not.

J. N., a strong, healthy sailor, aged 52, came to St. Peter's Hospital as an out-patient on June 1, 1872. He stated that he had suffered from strictures for upwards of twenty years, and that eight years ago he had been operated on at a hospital in London, where his stricture were forcibly split and an instrument regularly passed for some time afterwards. The complaint, however, returned as bad as ever, and one year and a half ago he visited the hospital where he had previously been, and submitted to a repetition of the former operation, a catheter being regularly introduced for some weeks afterwards. In the meantime the patient had learnt to pass the instrument himself, and used it twice every week till he was forced to desist through the occurrence of some heavy weather at sea. After an interval of ten days he again tried to pass the catheter, but failed, as the strictures had in the meantime contracted. When the patient came under my care I could only pass a No. 3 bougie, and that with considerable difficulty. Examination showed that there were two strictures encircling the urethra like iron rings. The distal stricture was half an inch broad and four inches from the orifice; whilst the other one was a quarter of an inch broad and two inches and three-quarters down the urethra. By the end of the month the urethra had been enlarged by gradual dilatation to No. 9; but when the patient came to the hospital, ten days later, the strictures were found to have again contracted, and would only admit No. 4. He was then admitted into the hospital, and a No. 4 elastic catheter was passed into the bladder and left there for an hour, when it was replaced by a larger instrument. By continuing this method of treatment for six hours the patient's urethra was dilated to a No. 8, when the patient could no longer persevere, on account of the increasing pain. Next day the strictures were again found to have contracted, so that only a small instrument could be introduced. It was now clear that an operation was called for, and accordingly on July 26, in the presence of Dr. Henry Dick, Dr. Green, and Dr. Magrath, I passed a fine straight staff through

(a) *See* "Operative Surgery," second edition, p. 228. By C. F. Maunder.

the strictures, and completely divided both of them, subcutaneously, with a small tenotome, which I introduced beneath the skin by making a small puncture. The contracted tissues were so dense and hard that their division was attended with a creaking noise plainly audible to those present. A very large catheter was then introduced into the bladder and left there for half an hour. Blood oozed away from the urethra for ten minutes after the operation, but none escaped through the valvular puncture made by the tenotome. The patient's urine was drawn off the same evening and three times the next day. On the third day the use of the catheter was relegated to the patient, who passed it once a day till he left the hospital, on July 31—five days after the operation—not having had a single bad symptom nor having been confined to bed. The patient came to the Hospital on September 2 to report himself before sailing. He was then passing No. 14 elastic catheter with ease twice a week, and was in all respects quite well. The ends of the divided strictures could be plainly felt beneath the skin united by bands of supple and non-indurated tissue.

The strictures were in the first instance the result of a long-continued gleet, and the splitting (lacerating) operations to which this man had been subjected had only given temporary and delusive relief, for each operation had been followed by a more speedy return of the complaint. One point of great interest was that the patient had had his strictures treated thirty years ago on board the *Dreadnought* by the system of gradual dilatation. It would thus appear that the results of that treatment were more abiding than those produced by immediate dilatation, which was in reality complete rupture or laceration. The strictures became converted into traumatic ones by the surgical lacerations to which this patient had been subjected; for such strictures as his, uncomplicated as they were with abscesses or fistulæ, were rarely seen unless produced by accidental or surgical injury. No two operations were so dissimilar in character as forcible dilatation and subcutaneous urethrotomy, for the former was an exhibition of blind force, whilst the latter was a demonstration of applied skill.

10, Portman-square.

CASES OF

POISONING BY LEAD IN DRINKING-WATER.

By J. W. VON TUNZELMANN, M.D. Lond.

Sir,—Having recently attended some serious cases of lead poisoning in private houses of the best sort in this neighbourhood, which I found, after considerable anxiety, to be owing to the drinking-water (derived from a well in each of the cases) having become contaminated with lead to a dangerous extent, I take the liberty of sending them to you for publication, as they may serve as a hint to others who may be required to attend similar cases in this neighbourhood, or in other places where, the geological nature of the district being similar, the same deleterious action may be going on, resulting in the poisoning of the drinking-water from its solvent action on the leaden pipe by which it is drawn from the well.

I am, &c., J. W. von Tunzelmann, M.D. Lond.

10, St. George's-road, Wimbledon, September 18.

Case 1.—I was requested, on June 11 this year, to see the cook in one of the best houses in the outskirts of Wimbledon, and found that she had vomited everything that she had taken (according to report) for about three weeks. She vomited also a green bilious-looking watery fluid frequently, but mostly at night. There was a yellowish tint of the skin of the face, and the conjunctivæ were decidedly yellow. There was also constipation, but there was no pain either in the right hypochondrium or at the epigastrium. The region of the liver was not tender to pressure or even strong percussion, and the region of hepatic dulness was not increased. The urine high-coloured, but not saffron-coloured. The case seemed a puzzling one. I was told that she had had a similar attack four years previously, which was then attributed to the smell of fresh paint in the house. In a few days the vomiting was considerably relieved, and she was able to retain some cold beef-tea, but only in very small quantities at a time. This went on till July 14, when she was so much better—the bowels also acting regularly—that I expected soon to leave her quite well, and found her still progressing on the 21st. But on the 23rd the vomiting returned, and on the following day she was worse than ever. The weather meanwhile had set in very hot, and I could only attribute this relapse to that; but still there was no pain in the region of the liver or at the epigastrium, and none in the abdomen except, when she retched much, in its lower part, evidently of a myalgic nature, from fatigue of the abdominal muscles. The vomiting continued for some days, and she became so weak that I was obliged to give her champagne, which she relished greatly, taking about half a bottle a day without vomiting it. This she continued about a week, and then began to take beef-tea in small quantities; and subsequently, the weather becoming cooler, she improved rapidly, and up till August 6 there had been no vomiting. On the 9th also she was still free from it, but complained of a loss of power in her hands, so that she could scarcely do anything with them. All this time the patient had not been confined to bed, though obliged to lie on the bed the greater part of the day on account of excessive debility. As this form of paralytic weakness of the arms is a well-known effect of lead among painters, and as this illness had been very anomalous throughout, I examined her gums and found the "blue line" most distinct along the alveolar border of the lower jaw. I therefore took home some of the drinking-water furnished by a well in the house, and, testing it with a solution of sulphuretted hydrogen, found that the water became of a distinctly brownish tint, showing the presence of lead. I also took a specimen to Dr. Frankland, of the Royal College of Chemistry, who tested it, and stated in his report to me about it that it contained "so much lead as to render it quite unfit for domestic use"; but he also told me that he had never had to analyse well water for lead before.

The house is a semi-detached one, and there is a common well midway in front of the two houses, from which a leaden pipe leads to the kitchens, a distance of about twelve yards on each side.

Case 2.—In the adjoining house the housekeeper had in the winter (in February) anasarca of both legs, which continued for about three months. There was no albumen in the urine. The anasarca was relieved by treatment, and she continued free from it from the end of May till the beginning of July, when it returned, and was again relieved in about a fortnight; this also, I have no doubt, was caused by the lead. She used to complain frequently of excessive nausea. She has not the "blue line" on the alveolar border of the inferior maxilla, but she has a leaden hue of skin, and the buccal mucous membrane also has a leaden hue.

August 18.—I was sent for to-day in great haste to this patient because she was suddenly seized with a loss of power in her hands while occupied with household duties (she awoke last night with a numb feeling in them which frightened her). The mistress feared a paralytic stroke, but I was able to relieve the mind of the lady by telling her that the state of the servant was owing to the lead with which her system had become saturated, and that I did not expect it would get worse now, as the water from the pump had not been used for four days.

19th.—Better, but complains of a numbness in her legs as well as in her arms.

After this she quickly improved, and now (September 18) only complains of neuralgia in her legs.

In the adjoining house (No. 1), where I had the case of "lead jaundice," I have been since told that a young gentleman, a relative of the family, was seriously ill last summer with what was described as "most severe colic, almost amounting to inflammation of the bowels"—evidently lead colic, though not recognised as such by the medical man in attendance on him (from London).

The lady told me that at Christmas, having for some time had great difficulty in getting the pump to act, they had it examined, and found that the pipe (a leaden one) was completely "corroded away" in some places. It was replaced by a new leaden one. The owner of the houses is now going to have the leaden pipes removed, and replaced by patent pipes of lead lined with tin, on the recommendation of an architect of eminence.

Case 3.—I have at present also under my care a young lady who has had diplopia to a most alarming extent for about three months, owing apparently to a sluggish action of the muscular apparatus of the eye (it is very apparent in the movements of the iris), which at first puzzled me completely, the health otherwise being perfectly good. I now find that this case also is owing to the water of the well being strongly impregnated with lead. She suffers from excessive languor. The house is about half a mile from the other two, but on the same

hill, and no doubt the water is of the same quality. When the symptom first showed itself, after having existed for about three weeks, she was sent to Hastings for a while (about three weeks), and improved while there. When she returned home the improvement ceased to progress. She then went away again (to Chislehurst) for three weeks, and improved so much as to be able to drive a pony phaeton, which she could not do even while at Hastings, on account of the double vision. After being away for three weeks she returned, and again the improvement ceased to progress. She is now going to the Lakes for six weeks, which will, I have no doubt, remove the remaining trouble, while the well will be made fit for use by having the leaden pipe, by which the water is drawn from it, replaced by a pipe of galvanised iron.

Case 4.—The mother of this young lady consulted me on August 15 for pain in the back (lumbar region), with very abundant pale urine. I had not then tested the water of this well, but suspected it to contain lead. After I had tested it and found the lead, I told her of the other cases which I was attending, and she then informed me that she had for some time had an unpleasant numb feeling in her hands and arms, evidently the commencing lead palsy.

These cases remind one strongly of the celebrated Claremont poisoning cases which happened in the same county, being almost within sight of this place.

August 30.—Dr. Frankland has determined the quantity of lead contained in the water of the well which supplied the semi-detached houses in which Cases 1 and 2 occurred. He finds it is 1·547 grain per imperial gallon—*i.e.*, 55 per cent. more than the water which caused the alarming symptoms among the late ex-royal family of France at Claremont about twenty-five years ago.

The general quality of the water is shown by an analysis, with which I have been favoured, of the water of the well of a house situated about ninety yards from the house in which Cases 3 and 4 occurred, made by Dr. Medlock at the end of last year. Two specimens were examined; one was dipped directly out of the well, the other drawn through the pump, but the water had been allowed to lie all through the night in the pipes before it was drawn off. "The specimen taken direct from the well contains about twenty-five grains of mineral ingredient per gallon, consisting of chloride of sodium and sulphate of lime; there are only traces of carbonates; there are present traces of ammonia, nitrous and nitric acids, which cause it to act very strongly on lead. *Per se* the water is in every respect fit for domestic use, but the sample which had been left in the leaden pipe all night contains a dangerous quantity of lead, and ought not to be used either for drinking or cooking."

Dr. Medlock advised the substitution of block tin pipes for lead. The owner of this house was led to suspect the presence of lead in the water of his well by perceiving an unpleasant effect in his throat after drinking the water, together with having heard that in a house close by the leaden pipe of the well had become corroded. This is the fourth well to my knowledge, in a small area, where the same deleterious influence has been at work. The houses in which my cases occurred have been built about fifteen years. The soil of the hill on which they stand is a light gravel of considerable depth resting on clay (the "London clay" of geologists); it contains, no doubt, lime in very small quantity only.

The importance of these cases consists in the fact that the character of the water of surface-wells is now known to depend entirely on the nature of the soil through which the rainfall percolates; and as there are other districts, especially in the neighbourhood of London (all the different commons and heaths for instance), where the geological formation is essentially the same, the same deleterious influence may be at work in houses supplied by wells in them, though in many cases no doubt unperceived, on account of the quantity of lead held in solution by the water not being so great as in these cases, and consequently not having produced such grave disturbance of the health in any of their inmates.

I should recommend that wherever obscure cases of gastric disturbance or of paralytic or dropsical symptoms occur, the drinking-water should forthwith be tested for the presence of lead.

The Board of Health at Gibraltar has decided that all vessels from Marseilles, Toulouse, Cette, and other southern ports of France shall be subjected to five days' quarantine.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

FRACTURE OF SKULL—SUPERFICIAL LACERATIONS OF CONVOLUTIONS OF BOTH CEREBRAL HEMISPHERES — REMARKABLE GYRATORY MOVEMENTS OF LEFT ARM—HIGH TEMPERATURE.

(Under the care of Mr. HULKE.)

Injuries to the head affecting the brain are at all times interesting, and not less so to the physiologist than to the surgeon. The following case offers two features worthy of notice—a singular gyratory movement of the upper limb of the opposite side to that where the cerebral convolutions were more deeply and widely torn; and a remarkable rise of temperature, which was attributed to cerebral inflammation, of which, however, after death, no indications were found. The greater damage to the brain on the side opposite to the fracture and scalp wound is also worthy of notice.

A strong, very muscular labourer, aged 30, was found insensible in a doorway at 11.45 p.m. on February 1, 1873, and shortly afterwards brought to the Hospital. He was completely insensible; blood trickled from the left ear; and slightly behind, and to the left of the vertex, was a scalp wound about one inch long. It was dressed antiseptically, and a bag of ice was placed on the head.

February 2.—A restless night; unconscious. Temperature and pulse have risen. ℞. Calomel gr. iij., haust. sennæ co. ℥j.; six leeches behind left ear.

3rd.—1 p.m.: Right upper limb straight, rigid, lying parallel to trunk; its thumb flexed on palm, and fingers also bent. Left upper limb: Fingers flexed, and thumb bent into palm; forearm slightly flexed on arm; rigid. When touched, as when pulse is felt, a rapid and repeated circular movement of limb obliquely across the trunk (somewhat as in turning a wheel) occurs. This movement is repeated about twenty times, the excursions becoming less rapid and less forcibly made towards the close, when the arm remains still and rigid until again touched. At about the tenth act there is also marked opisthotonos. Pulse 144; quite insensible; occasionally moans; purge has not acted; temperature rising. Twelve leeches behind the ears. 9.45 p.m.: Breathing laboured; slightly stertorous. Bled from arm to ten ounces, after which respiration became easier. ℞. Ol. tiglii ♏ij. 11 p.m.: Temperature, 103·9; breathing quieter.

4th.—9 a.m.: Pulse 180, temperature 103·5°, respiration 62. 3.30 p.m.: Temperature 104·4°. 5.30 p.m.: Temperature 104·2°. 7.30 p.m.: Temperature 105·1°. 9.30 p.m.: Temperature 105·7°. 11 p.m.: Died. The croton oil had not produced any stool. Ice had been continuously applied, except for a short interval, during which the pulse was very weak.

At the examination of the corpse next day an extensive starred fracture of the skull was found beneath the external wound. It radiated through the squamous and petrous portions of the temporal bone, crossing the tympanum, and ending in or very near the foramen lac. med. basis cranii. The dura mater was not torn; a large blood-clot, apparently proceeding from some branch of the middle meningeal artery, separated it from the inner surface of the cranium. Beneath this the convolutions at the outer and upper surface of the middle lobe of the left cerebral hemisphere were superficially but extensively lacerated, and the surface of the brain was flattened by the pressure of the clot outside the dura mater, and also by hæmorrhage in the pia mater. The outer surface of the right middle cerebral lobe was rather more extensively lacerated than on the left side, and the rents were also deeper. The meshes of the pia mater and the sulci were here also distended with blood-clot. The base of the brain and also the corpora striata bore no trace of injury, and around the lacerations there were not any appearances indicative of inflammation.

COMPOUND FRACTURE OF SKULL WITH PROTRUSION OF BRAIN SUBSTANCE—SIMPLE FRACTURE OF LEFT THIGH AND LEFT FOREARM—SEPARATION OF LOWER EPIPHYSIS OF RIGHT RADIUS, RESEMBLING A COLLES FRACTURE—DEATH.

(Under the care of Mr. MORRIS.)

[For notes we are indebted to Mr. Lewis, Senior House-Surgeon.]

The following case is of interest as showing the muscles which were concerned in preventing the reduction of a fracture exactly resembling a Colles fracture. It is not often that an opportunity occurs for examining the cause of the deformity of this kind of fracture:—

T. S., aged 5, was admitted on August 13, about 12 midday, moribund, having a few minutes previously fallen out of a third-floor window. On admission the patient was profoundly collapsed. Breathing stertorous. Both eyeballs fixed, the right being turned inwards. Pupils contracted almost to a pin's head, and did not respond to light. On examination the roof of the left orbit was found to be quite detached, and the frontal bone of the same side comminuted. Over left parietal bone was a contused lacerated wound about one inch and a half long, running transversely and leading down to a fracture, and through which brain substance and blood oozed. There was bleeding from left nostril and ear. No suffusion of conjunctiva, but much ecchymosis of both eyelids, including the skin over frontal bone. Besides the above injuries, there was a simple transverse fracture of left thigh, an impacted right Colles, and a simple fracture of both bones of left forearm. Death took place within an hour after admission into the Hospital.

The post-mortem examination was made by Mr. Smith twenty-two hours after death. Considerable effusion beneath pericranium and on surface of brain. Several other fractures were seen involving the great wing of sphenoid, ethmoid, and occipital and temporal bones. Extensive laceration of convolutions of brain of left side. On dissecting down upon the fracture, there was found to be nearly complete separation of epiphysis of lower end of radius, the periosteum upon the extensor surface of bone being unruptured. The displacement exactly resembled that of a Colles. The extensor ossis metacarpi and primi internodii tendons, the radial extensors, and supinator longus, were all tense; the last and first were divided without result. Some amount of reduction followed the division of radial extensors, but *complete reduction* was not effected *until the tendon of flexor carpi radialis was divided.*

CASES UNDER THE CARE OF MR. HULKE.

Case 1.—*Laceration of Forearm, with Compound Fracture of Ulna, caused by the Bite of a Bear.*

Lacerated wounds inflicted by the larger carnivores are not often seen in this country. They do not present any peculiar features, but exhibit the common characteristics of torn wounds—relatively slight bleeding and much sloughing, the latter being caused by the tearing through of immense numbers of capillary bloodvessels when the soft tissues are stretched beyond the limits of their elasticity.

An Irishman, aged 65, visiting the Zoological-gardens, thinking, as he afterwards said, that bears were harmless, and not savage as lions and tigers, stepped inside the railing, and, putting his hand between the bars of the cage, courteously offered a brown bear a biscuit, and proceeded to pat him. Bruin, not accustomed to such familiarity, perhaps also preferring a mixed diet to one exclusively vegetable, seized his forearm with his mouth, and with his forefeet hugged him, and tried to pull him into the den. With some difficulty the Irishman was rescued from his painful embraces and brought to the Middlesex Hospital. The skin, with the fascia and cutaneous venous net, was torn off the flexor muscles from the middle of the forearm nearly to the wrist, from which it was hanging as a ragged flap. The muscles also were very much torn, and the long, thin tendon of the palmaris longus was severed. At the outer side of the forearm, just beyond this great laceration, were two punctured wounds, and below it were two other punctured gashes near the wrist—one over the ulna, which at this spot was broken. At and above the elbow from the shoulder downwards were several long grazes, evidently made by the beast's claws. The ulna artery was felt pulsating, but no beat could be detected in the radial at the wrist and amongst the lacerated parts; what appeared to be this artery completely severed was discernible. He said that he had lost an immense quantity of blood, but there was no evidence of this, his clothes and the dressings which had been temporarily applied not being much wetted. The slight shook seemed mainly due to fright, and it soon passed off after taking a little brandy and an opiate. The shreds of torn tissue were trimmed with scissors, the flap laid down again on the forearm, after it and the wounds had been thoroughly washed with a solution of carbolic acid, and an antiseptic dressing was applied. Most of the flap sloughed, and the grazes at the inner side of the elbow festered, but at the end of a month cicatrisation was well advanced, and the wound had become so small that he was made an out-patient. The broken ulna had united.

Case 2.—*Acute Glossitis—Leeching—Recovery.*

Acute glossitis is a rare affection, and its causes are not usually very apparent. In the following case no mercury or any other of the substances commonly assumed capable of producing it had been taken, but the patient had been out of health for three weeks before its accession. She was unable to state certainly whether the lymphadenitis, which complicated the case, preceded the onset of the glossitis or the reverse. Assuming the former to have happened—and her account rather favoured this view,—possibly stasis in those glossal lymphatic vessels which were in communication with the inflamed glands, and a retrograde infection of these vessels from the glands, inducing angioleucitis, followed by extension of the inflammatory process to the other tissues of the tongue, is the true explanation of the case. The preponderance of the swelling on the left side of the tongue favours this view. The benefit from leeching was decided.

A stout blonde, aged 36, was admitted into Regent ward on June 12, with an acute swelling of the tongue, which had begun five days previously. The tongue was hard, purple, and so swollen that it distended the mouth and projected beyond the teeth, preventing the jaws being closed. The teeth were encrusted with tartar, and the gums were red and slightly swollen. Under the left angle of the lower jaw was a tender, painful, lobulated swelling, like a cluster of lymphatic glands. The soft parts beneath the chin were swollen, hard, and tender. She said that she had had the glandular swelling from childhood, adding that in early life two pieces of it had been cut out. After being out of sorts for three weeks—pains in head, neck, and shoulders—her tongue rapidly swelled, so that very soon she could hardly swallow even fluids and scarcely speak. With an effort she got down haust. sennæ co. ℥j. Four leeches were put on her tongue; they drew well, and their bites bled very freely. The purge produced three stools.

13th.—Tongue much less swollen—it has receded inside the teeth; glandular swelling more tender. Four leeches to be put on it.

14th.—Glandular swelling smaller; great pain in the tongue in the night; the tongue is not so fixed. Three more leeches to be put on it.

16th.—Tongue paler and much smaller. The finger can now be passed into the mouth, and the swelling and hardness are found chiefly to affect the left side of the tongue. Swallowing is less difficult, and speech is not so indistinct. She has little pain—this is in the neck, below the chin.

17th.—Tongue rather more swollen than yesterday; pain under chin is greater; constipated. Haust. sennæ co. ℥j.; three leeches.

After this the tongue quickly diminished, and it soon became naturally soft and mobile, with corresponding improvement of speech and swallowing; but a tender, brawny hardness spread from the chin downwards to the sternum, and from the left across to the right side of the neck. This subsided more slowly, without suppurating, under leeches and hot poultices. She went home convalescent on July 19.

Case 3.—*Inflammation of the Sacro-Iliac Joint.*

Inflammation of this joint is of unfrequent occurrence. It may be mistaken for sciatica and for coxitis, but a careful examination will usually suffice to prevent such errors of diagnosis.

A *petite* brunette, aged 37, was admitted into Regent ward, October 7, 1871. Over her right sacro-iliac joint was a tender, oblong, fluctuating swelling, deeply seated, and not movable upon the bones beneath, whilst the superficial tissues were freely movable upon it. Pressure on the trochanter major or on the crest of the ilium in a direction perpendicular to the spinal column caused sharp pain in the swelling: but when

the haunch-bone was firmly fixed the thigh could be freely moved without pain. Careful and repeated measurements showed that the limb was not shortened.

The patient stated that one year previously, in the place of the present swelling she began to feel an aching pain, which she attributed to rheumatism. A medical man thought it sciatica, and treated her for this.

The swelling was painted with iodine, and the ilium with the sacrum were fixed with a stout, closely fitting belt, and pot. iod. gr. iij. were given her three times a day.

With occasional remissions the pain decreased, the swelling perceptibly lessened, and she became able to bear without discomfort firm pressure on the ilium, and even rather rough handling. She went home at Christmas with injunctions to rest several weeks longer. This order was very imperfectly obeyed, and a slight relapse occurred, the pain returning and the swelling becoming larger, but they soon again yielded to complete rest.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 27, 1873.

THE EXCLUSION OF CHOLERA.

Public attention was called to a fatal case of cholera, which was said to have been imported from Havre into Southampton, by a letter which appeared in the *Times* of September 17. Further information as to the case is given in a letter from the Deputy Chairman of the Sanitary Committee of the Southampton Corporation, which appeared in the same paper on Friday last week. It seems that the vessel in which the patient arrived was visited by Dr. Wiblin, the medical officer of the port, on Sunday, the 7th inst., who was assured by the captain that he had no case of sickness of any kind on board. The captain attached his signature to this statement. The history of the case is suggestive. It is well known that there is cholera at Havre. On September 6 the vessel in question—the steamship *Allianee*—was lying in Havre dock when the man fell overboard. His head is said to have stuck in the mud, and after his rescue an emetic was given, and he is reported to have vomited a quantity of black muddy water that he had swallowed. For a day or two he showed no particular symptoms of any ill effect; but by Wednesday, the 10th instant, when the ship had arrived at Southampton, he had become very ill. He was put on shore, and left in a cab for his own lodgings. Thence he was taken to the infirmary, where he died, and his death was certified as from "cholera." The cab, bedding, etc., have since been disinfected, and the town continues healthy. The fact of the man having swallowed a quantity of the filthy water of the Havre harbour, and dying within a week afterwards of cholera, is at least a curious coincidence. The writer of this article recollects a similar case, which occurred during the prevalence of cholera at the East-end of London in the last epidemic. A man who had been previously quite well fell into a creek of the river in the neighbourhood of the docks. On being rescued he said he had swallowed a quantity of the dirty water. Vomiting and purging soon after supervened, and he was brought to the Great Northern Hospital with all the symptoms of Asiatic cholera, rice-water dejections and vomiting, cramps, and blue surface. He survived to the stage of secondary fever, when he died with arrested renal secretion.

As we have said, such cases at least suggest that the choleraic poison may have been swallowed in the dirty water of the harbour, which received the impurities of the infected neighbourhood. It is at least certain that symptoms resembling Asiatic cholera do not ordinarily result from an accidental ducking. That drinking-water is one ordinary channel by which choleraic poison is distributed we hold to be proved as certainly as any fact in the whole range of etiology, and therefore it must be considered at least as most probable that in such cases as those we have related the poison was thus introduced into the system. These cases, moreover, suggest a caution to the inhabitants of seaport and riverside towns during the prevalence of cholera. Men and boys should not bathe in sewage-polluted streams and harbours during the continuance of an epidemic.

The other lesson which the Southampton case affords is one of vigilance to the medical officers of ports. It appears that in this case the captain on Sunday, the 7th, was justified to a certain extent in returning his ship's crew to Dr. Wiblin as healthy, for the unfortunate man who on the previous day had fallen into the Havre water was not then complaining, nor was he much unwell until the Monday, when the ship sailed for Cherbourg. On Wednesday he was again at Southampton, and was put on shore with the symptoms of cholera. The case affords evidence of the extreme difficulty of maintaining safety by any means short of imposing quarantine on all vessels arriving from infected ports. Had Dr. Wiblin seen each of the ship's crew on Sunday, the 7th, it is not improbable that the man in question would have presented no symptoms that would have aroused his suspicion, and yet it can scarcely be doubted that he at that time was in the incubative stage of the disease. Of course quarantine would be felt as a most irksome and severe penalty were it imposed upon the Channel steamers. The voyages occupy only ten or twelve hours, and a quarantine of less than five or six days would be comparatively valueless. The deputy chairman of the Southampton Committee observes in his letter that if it were considered advisable to impose it, the local sanitary authority has not the power. We have no doubt that Dr. Wiblin at Southampton, and other medical officers at ports, will do all that experience can suggest or vigilance accomplish, but, with cholera in nearly every seaport town from the Baltic to Havre, their watchfulness will be severely tried. In consequence of the case at Southampton, we learn from the letter already referred to that Dr. Wiblin now inspects every ship arriving at Southampton from whatever port before any of the crew and passengers are permitted to disembark, and Dr. Tarrell, quarantine medical officer at Havre, inspects all emigrants before embarking by steamers for Southampton. But still, with the disease so close to our shores, and the daily traffic that unites us with the Continent, we cannot but think that our chief hope of safety is in the

advanced period of the year and the generally improved sanitary state of our large towns.

THE MEDICAL USES OF ELECTRICITY.—No. IV.

Therapeutical Use of Electricity.

Electricity has been successfully employed in the treatment of some painful affections besides those mentioned in our last article, as in the pains excited in strained, lacerated, or over-fatigued muscles, and the suffering of chronic fibrous rheumatism. But the use of this agent in these affections is not yet clearly defined, and we shall therefore not treat of it here.

The widest field for the application of electricity, and especially for the "localised employment" of it, is no doubt in the treatment of paralytic conditions; and we will now treat of its application in these various affections.

In paralysis from cerebral disease, great care must be taken not to employ it too soon. If the paralysis has come on suddenly, or if, though it has come on gradually, there is giddiness or pain in the head, or any sensation of weight or fulness of the head, too much caution cannot be used—some fresh mischief may occur under such circumstances, and its occurrence will be attributed to the electrical treatment, though it may be merely and entirely a coincidence. It is far better, in such cases, to wait for a time—for four or more months—before resorting to the employment of electricity, as it is advisable to wait before using any other kind of treatment that would disturb or excite a patient. If none of these head symptoms are present, and the disease has only gradually come on, no such degree of caution is necessary, though then also care should be taken, as we have before said, not to alarm or agitate a patient by a parade of the electrical apparatus or by the mode of using it.

When it is decided to employ electricity, the first step to be taken is to test the excitability of the muscles by the faradic and interrupted-voltaic currents; and the mode in which this is to be done we have already described. The manner in which the muscles respond to the test—that is, the amount of contractility they show—will tell what good may be looked for from the employment of electricity. If the contractility is normal, though voluntary power is abolished, electricity will do nothing towards restoring the power of the will over them; if the contractility is somewhat, but only slightly, diminished, the condition of the muscles may be improved; and when the contractility is found to be markedly reduced, but not abolished, great good may be achieved—the contractility may be gradually brought back till it equals that of the healthy muscles, and then it may be that the paralysis will be found to have been lessened, and now and then even cured. And in all cases this good at least will most likely have been obtained: the nutrition of the muscles will have improved, and colour and warmth have been restored to the skin. This is by itself a gain of great importance, for the muscles and the neighbouring tissues are thus kept in a proper state of fitness and readiness in case the disorder of the brain or of nerve-power that caused the paralysis be restored, and the influence of the will over the muscular part of the locomotive apparatus be regained. And further, it appears to be certain that electrical action on the muscles, peripheral electrical excitement, as it may do harm to, so also may aid the recovery of, the nerve-centres. That it does act on them is shown by the fact that peripheral galvanisation of the limbs is often observed to excite a peculiar sensation of taste.

Having tested the excitability of the muscles, it will be best, as perhaps the most useful general rule, to treat them by means of the current to which they most readily answer; or to employ the interrupted voltaic current where the excitability is normal, and the faradic where it is diminished.

If voltaism is employed it must be by the interrupted, not the continuous current. Large-sized sponges should be used, well wetted with salt and water, and one (the upper one of the two—that is, the nearest to the central organs of the nervous system) being kept steadily on one spot, the other should be moved slowly down along the course of the muscles; so that every part of each of them is successively brought into the circuit of the current, and by the movement of the lower sponge the current is *interrupted*. And here we may again remark that, therapeutically, it does not matter whether the current is direct or inverse; only it must be remembered that the direct current acts more strongly on the muscles than does the inverse, and that the current must not be so strong as to excite pain: it must be just strong enough to cause contraction of the muscles not strong enough to hurt.

This rule applies also to the employment of faradisation. The patient is not to be hurt or wearied; and whenever, during the use of any form of electricity, the patient feels faint, or giddy, or sick, or has pain in the head or a sensation of sinking or uneasiness in the epigastric region, the application must be stopped for a while.

If the faradic current is the form of electricity selected, sponges or metallic buttons covered with chamois leather are to be used; and they must be *well* wetted, or the current may only irritate the skin, instead of penetrating to the muscles. Moreover, the rheophores should never be widely separated; it is important to localise the action of the current as strictly as possible; and, with this view, it is best to use poles of such shape and size that both can be easily held in one hand. Then the muscles are to be faradised *seriatim*, each being picked out, and, according to its size, the current being passed through the whole at once, or through different parts successively, so that no portion of it shall escape being electrised. Particular points will be found in the arm and leg (and in other parts, as in the face), at which, on application of the current, the effect on the muscles will be stronger than when it is applied elsewhere. These, called by Duchenne "points of election," are the places at which the motor nerves entering the muscles lie most superficially.

Electrisation may be successfully employed to relieve, or even cure, the "late rigidity" of hemiplegia. In an early stage of it the tendency to cramp may be removed, and the rigidity cured; and even in old and severe cases, when the nails have dug into the palm of the hand, considerable alleviation and benefit may be obtained. Either the faradic or the interrupted voltaic current, applied to the antagonising muscles, will do good, but the greatest benefit will be gained by applying faradisation to the antagonistic muscles, and aiding it by sending a continuous voltaic current down the rigid muscles; voltaise the flexor muscles, and faradise the extensors.

In *paraplegia*, from myelitis, meningitis, or hæmorrhage into the cord, electrisation must not, of course, be used while any active mischief exists; and there will be often much difficulty in determining when it may be safely employed. But the affected muscles may be now and then tested by the interrupted voltaic and the faradic currents, and when it appears that the time has arrived when electrisation may be used, one of the forms, or perhaps both, may be applied in the manner already described. In some of these cases, the only good that can be gained is an improvement in the power of the sphincter of the bladder and rectum: if their power for retention has been lost, electricity will sometimes restore it. To act on the sphincter of the rectum, one sponge-pole, well wetted, of the faradic current, is to be placed on the sacrum, and the other applied to the anus; if the vesical sphincter is to be treated, apply one sponge to the perineum just behind the scrotum, and the other above the symphisis pubis. This will in some cases, to some extent at least, prevent involuntary evacuations, and thus give considerable relief. Or the paralysis may be incomplete, and then larger benefit may be obtained. The

good to be looked for may be measured by the state of electro-excitability of the muscles; if entirely abolished, no good can be done, and none if it be normal; but where it is diminished more or less, the nutritive condition at least of the muscles may be improved.

In the "essential paralysis" of infancy and childhood electrisation may be of considerable use if employed before the muscular tissue is too much degenerated. In this form of infantile paralysis the affection comes on suddenly, the faradocontractility of the muscles is more or less diminished, they waste, and their tissue undergoes the fatty degeneration; and they are affected by secondary contractions. Not rarely it will be found that when the affected muscles answer but little, or not at all, to the faradic current, they will respond to a slowly interrupted voltaic current, and are even more than normally sensitive to it. The good that electrisation can do here is to improve and to preserve the nutrition of the muscles, and so prevent wasting, degeneration, and contraction; and in some cases even more than this may be done, for if the affection of the cord can be cured, the peripheral electrical treatment may forward the cure. Where there is still response to faradism this form of electricity is the best to use, care being of course taken not to frighten or pain the child. Where the irritability to the interrupted voltaic current is *increased*, it will be best to treat the case at first with this current. In a little time it will be found that the reaction to the faradic current is restored, and that the excitability to the interrupted voltaic current lessens; then faradisation only may be employed. The disease is almost invariably a tedious one, and the treatment must be continued for a very long time—for months, or years even. But so long as there is any response to electrisation there is a hope of benefit. Dr. Radcliffe says that "if the paralysed muscles retain their electro-contractility and sensibility, and so show that they have not passed into that state of fatty degeneration into which they always tend to pass eventually, there appears to be scarcely any limit to the time in which improvement, and even complete recovery, is possible."

CHANGES IN THE ARMY MEDICAL DEPARTMENT.

We last week published a statement which had appeared in a contemporary on the subject of a contemplated reduction in the *personnel* of the Army Medical Department. We took occasion at the same time to remark that no intimation of the projected alteration had reached us. Further inquiry has tended to confirm the opinion we formed on reading the paragraph alluded to—namely, that the intentions of Mr. Cardwell had been, to say the least, anticipated by the journal in question.

We have every reason to believe that the Medical Department itself has not even been consulted in the matter; and although the random legislation of the present day does not certainly appear to aim at producing popular reforms in the various departments of the army, we can scarcely conceive it probable that the authorities would go out of their way to render the medical service of the army more uninviting than it is at the present moment.

The agitation on the subject of the unpopular changes which have been brought about in the service by the promulgation of the last Medical Warrant has not yet subsided, and may only be said to slumber until such time as Parliament reassembles, when, unless Mr. Cardwell previously decides to modify the obnoxious portions, the whole matter will again be brought forward in the House of Commons. The projected scheme for extending the plan of employing private practitioners to take charge of troops at outlying stations is in itself open to many objections. It has for many years been the custom to obtain the services of resident medical men where detachments have consisted of insignificant numbers, and in these cases, as the demands to be met have been comparatively few, the service has in no way suffered; but at larger and more important depôts it is not so clear that the troops would command that constant and undivided attention which the peculiar exigencies of the Service require. There are numerous details to be carried out by medical officers in charge over and above the mere hospital attendance. One rule of the Service, for instance, stringently enforced, provides that a medical officer shall invariably be present during ball practice. It will thus be seen that a resident practitioner would have but little time left to him for private practice, and one set of patients—either the military or his own—must suffer. Again, barracks are not unfrequently situated at some distance from the different towns to which they are attached, and in these cases much delay would ensue in summoning the surgeon should his services be necessary at inconvenient times. Even granting that the chaplain's department of the army is worked on this system, we scarcely think that the two cases admit of comparison, the cure of bodies requiring, as a rule, a prompter attention than the cure of souls.

We have merely thrown out these few hints as showing, in our opinion, some of the objections which we imagine to exist against the plan spoken of by our contemporary; but we presume that the authorities themselves, more especially the heads of the Medical Department, are sufficiently alive to the best method of providing medical attendance for our soldiers; and we must again express our conviction that the changes which have been announced are, at all events for the present, merely speculative.

THE WEEK.

TOPICS OF THE DAY.

The meeting of the British Association—of which we give elsewhere an extended report—has been signalised this year by the contribution of several very remarkable papers in biology. The inaugural address of Professor Allman, the President of the Biological Section, was, we think, especially valuable, inasmuch as it indicated with great fairness the present value and position of the evolution theory in biological science. Dr. Allman is an advocate for the admission of the theory as a practically useful one to the scientific biologist, and as a theory capable of leading on to splendid generalisations. But amongst its difficulties the greatest seemed to him "the unbroken continuity of inherited life, which it necessarily required through a period of time whose vastness was such that the mind of man was utterly incapable of comprehending it"—a period of time so immeasurable that from the chalk formations to the present era was merely like a swing of the pendulum in comparison with it. Was the faculty of reproduction so lasting as this? His comparison of the evolution hypothesis to an algebraic fiction, which, although not really true in itself, might prove of great value as a working hypothesis, was an especially happy one.

Of Professor Ferrier's experiments on brain function we have already expressed our high opinion; they are certainly amongst the most remarkable physiological researches of modern times. The objections to them are, however, numerous: in the first place, they seem not to be confirmed by pathological facts observed in the human subject; in the second place, the brain is in an unnatural condition, the calvarium being partially removed and the brain in contact with atmospheric air; thirdly, the circulation through the organ must be affected by the operation and the resulting conditions; fourthly, the stimulus applied is electricity, which is not the same as nerve-force; fifthly, the animal is placed under the influence of chloroform, the sensory functions are abolished, and the blood is temporarily poisoned. All these

circumstances must be taken into consideration before the value of the results can be justly estimated.

The experiment as to female doctors in the Bristol Children's Hospital has come to an abrupt termination by the resignation of Dr. Eliza Walker, the cause of the heartburning. In the daily papers is published a correspondence, including apologies to Dr. Ward Bush, interference with whose functions was the prime cause of offence. This correspondence ends with a letter from Dr. Eliza Walker, from which we make the following characteristically feminine extract :—

"They (the members of the staff) must have known how important it was to the cause I represent that the experiment of my appointment should prove successful. It behoved them, as gentlemen, to be lenient to a fault which few men have not at one time or another been guilty of, in consideration that in compelling my resignation they would injure not so much an individual as a just cause which has as yet too few supporters. Moreover, although an outbreak of anger placed me at the mercy of Dr. Bush—of this as a natural consequence of my weakness I do not complain—it did not place me in the same relation to the rest of the staff. I am of the same profession as themselves ; common courtesy, common fairness, commanded that I should be heard in my defence. The worst criminal is not judged unheard, and I think I could have shown that all the provocation was not on my side. I decline altogether to submit to their code of honour ; their position I unhesitatingly challenge. Much as I may be to blame, I cannot charge myself with injustice, unfairness, or neglect of duty. To me they have been unjust, unfair; and, as to neglect of duty, you know that without any notice they left the entire medical charge of the hospital and dispensary to chance and me."

We learn from Vienna that up to September 19 there had been 2755 cases of cholera in the city, of which 1111, or two-fifths, have proved fatal. On the above date forty-one fresh cases were announced, indicating an abatement of the malady.

Our Madras correspondent writes, under date August 27 :— "Latest advices represent cholera decreasing in Siam, but raging at Singapore; quiet in India. Small-pox is still wandering from place to place where it can find new victims."

Mr. Erichsen will deliver the Introductory Lecture at University College on October 1, in place of Dr. Roberts, who, we regret to say, has been prevented by indisposition.

THE CASE OF ALLEGED CONSPIRACY.

The case of William and Mary Tuckfield, which has been before the magistrate of the Westminster Police-court on several occasions, came on again for hearing on Wednesday last. It will be remembered that the above defendants, together with Dr. Edgcombe and Mr. Webb, a solicitor, were charged with conspiring together to defraud the Metropolitan Railway Company of £2000, as damages for injuries stated to have been received by Tuckfield on the Company's line. We cannot do better than reproduce the following report of the last examination from the *Times* newspaper :—

"The cross-examination of Dr. March (the medical man who had attended the case throughout, Dr. Edgcombe having been called in as consultant), resumed after a lapse of three weeks, showed that Dr. Cooper, one of the doctors employed by the Company, on May 3, 1872, had endorsed the view of the matter taken by the witness. Dr. Kellett had also approved the treatment prescribed, and it was considered beneficial. The cupping over the spine seemed to do Tuckfield good, and witness's assistant had, like, Dr. Edgcombe, believed in the case as genuine. Mr. Webb had also always been led to believe the case was genuine, and, in fact, the injuries seemed likely to have been caused by a railway accident. The witness hesitated when the question was put to him whether he believed Tuckfield had been in the accident or not, but at length he gave an opinion in favour of the defendant. After this evidence, Mr. Montagu Williams said he had heard the evidence that day, and, looking to all the circumstances of the case, he felt it his duty to say that he could not carry on the case of conspiracy any further ; he would therefore withdraw from the prosecution. Mr. Lewis said Dr. Edgcombe and Mr. Webb had courted a full investigation. Dr. Edgcombe had been in the profession forty-five years, and in 1828 was surgical prizeman at Guy's Hospital. Mr. Woolrych said he perfectly agreed with the remarks of Mr. Lewis, and from the first he had had some doubts upon the matter. After what they had heard that day he was bound to acquit the gentlemen charged of all complicity in anything like a conspiracy or fraud with the Tuckfields ; the medical gentlemen employed by the Company were proved to have agreed that the symptoms and injuries were those of a railway accident, and the Company had offered to compensate the defendant Tuckfield. Mr. Williams said the charge of perjury against the Tuckfields would still stand, and, as he was not prepared with the country evidence that day, he should ask for a remand. Tuckfield was sent to the House of Detention, and his wife liberated on bail."

We heartily congratulate Dr. Edgcombe on his entire and honourable acquittal. We have received several communications respecting some severe and, as has now been proved, unjust comments made upon him while the subject was still *sub judice*. We agree with our correspondents that such remarks were not only premature but unjust. It is a wholesome axiom of English law that every man should be considered innocent until he has been found guilty.

MEDICAL PREPARATIONS FOR THE GOLD COAST.

Further supplies of medicines and instruments are being got ready for despatch, at an early date, to Cape Coast Castle. The medicines are ordered to be put up in small quantities for the use of detachments, and also to render them as portable as possible. It is of course probable that in a march upon Coomassie the only means of transit would be the shoulders of the natives, or at best the China barrows, as they are called, which are being got ready at the Royal Arsenal, Woolwich ; in either case the more reasonable the size and weight of the packages to be carried, the less risk they will run of actual loss or damage. Another of her Majesty's ships, the *Victor Emmanuel*, is being fitted as a hospital ship to be stationed off Cape Coast Castle, and she will leave this country for her destination with every modern appliance for the care and comfort of the sick and wounded which can be devised. The latest reports from the Coast are much more satisfactory as regards the amount of sickness prevailing ; the most unhealthy season may now be said to be over for some time ; and it should be borne in mind that the exceptional amount of sickness amongst the first detachment of the Royal Marines sent out was entirely due to the fact of their arriving on the Coast just at the commencement of the rains, and must not be taken as a criterion of what we are to anticipate when the regiments about to be sent out are landed. The 86th Regiment at the Cape of Good Hope is announced as likely to be added to the force to be despatched. The men of all three regiments are to be furnished with clothing adapted for operations in a tropical climate; and we may venture to hope that if Sir Garnet Wolseley can organise a scheme for prompt and rapid action, if the troops can be brought off the Coast at the identical moment they are required, without any long and tedious waiting, the dreary anticipations of enormous sickness and mortality may not be verified. The cunning of the savages will of course be exercised in delaying our operations as much as possible, so that the next unhealthy season may find us on the Coast with the work still undone ; but this must be avoided at all hazards. The capture of Coomassie will have the same effect in Africa that the taking of Magdala produced in Abyssinia : our prestige has only to be decisively established to bring all the various tribes into subjection. And when we have once more restored peace, it would be well if the governing powers were to turn their attention to the sanitary improvement of the stations on the West African Coast. The climate is certainly about the worst to which Europeans can be exposed, but that is scarcely a

reason why no steps should be taken to stop all sorts of customs and abuses which at the present moment tend to swell the death-roll of the settlements.

DEATH OF M. NÉLATON.

The great French surgeon, whose painful illness has excited in the professional and public mind an interest raising it to the rank of a national event, has at length, after several times being on the verge of death, expired. We shall furnish our readers with a memoir of his career at a future period, and in the meantime transcribe the following notice from the *Union Médicale*:—

"On Sunday, September 21, at nine o'clock in the morning, a great medical intellect passed away. After several months of a lingering and painful illness, M. Nélaton has succumbed to an organic affection of the heart. The considerable place which he occupied in contemporary surgery will make him the object of a detailed appreciation; and at present we can only render our homage to the character and the qualities of heart of the *confrère*, the friend, and the private individual. There can be but one voice raised in praise of the benevolence, the simplicity, and the modesty of this eminent man, who, having attained the highest honours, took as much pains to dissimulate his elevation as others would have to make a vain display of it. M. Nélaton was good and charitable. Never did any misfortune knock in vain at his door, and often he went in search of it; and we ourselves have many times had the honour of being the vehicle of his good confraternal works, when these had to be undertaken simply and discreetly.

"Member of the Institute and of the Academy of Medicine, M. Nélaton also belonged to almost all the learned societies in the world. He descended voluntarily from his chair of Clinical Surgery as soon as he found his sight failing him, and no longer belonged to the Faculty which his teaching had rendered so illustrious other than as Honorary Professor. Raised by the Emperor to the dignity of Senator, he lost this at the September Revolution. He was Grand Officer of the Legion of Honour—a distinction which has been accorded to none others of the medical profession than himself, M. Rayer, M. Ricord, and M. Lévy. There is no example of any practitioner having enjoyed the public confidence to the extent of M. Nélaton. Neither Boyer, Marjolin, Dupuytren, Roux, Velpeau, nor Jobert ever approached the vogue of M. Nélaton. M. Ricord alone has nearly reached the same level."

BONES FROM DISSECTING-ROOMS.

An extraordinary quantity of human bones has been found in the excavation for the foundation, upon which workmen have been for some time engaged, of the new wing of the London Hospital, the site of which will be the old Medical College. A shed which stands in a corner adjoining the works is filled to the roof with these bones. Besides these, no less than fifty-two coffins, filled with bones, have been removed to Ilford for reinterment. It is calculated that what remains will fill thirty more coffins. The contents of each coffin weigh two hundredweights, making in all about eight tons of bones. Taking the average weight of a human skeleton to be fourteen pounds, it is found that this shed contains all that now remains of no less than 1280 human beings. They are in an excellent state of preservation, though they have evidently been beneath the ground for a great number of years. It may be mentioned that at the time the great Windmill-street School of Anatomy ceased to exist an immense quantity of bones was found in deep, dry wells, the accumulation from the dissecting-room of probably half a century.

MANUAL OF FAMILY MEDICINE FOR INDIA.

The prize offered by the Government of India in Resolution No. 431-40, dated October 31, 1871, for the compilation of the best Manual of Family Medicine for India, has been awarded to Surgeon-Major W. J. Moore, of the Rajpootana Political Agency.

CONVICTIONS UNDER THE ADULTERATION ACT.

During the past week the magistrates at the various metropolitan police-courts have inflicted heavy fines on milkmen who have added water in quantities more or less to their milk. There is no evidence that any other kind of adulteration had been practised. The fines varied from £20 to £1 and costs. One of the magistrates stated "that if the milk had been adulterated with anything injurious to health he should have fined the defendants in the full penalty of £50." It would be difficult to determine what *could* be more "injurious" than the addition of bad water.

LODGING-HOUSES AND DISEASE IN BLOOMSBURY.

Dr. Ross, the Medical Officer of Health, thus describes the common lodging-houses of Bloomsbury:—

"Tramps, wife deserters, beggars, pickpockets, and woman of bad repute occupy the common lodging-houses in this quarter—the southern portion of St. Giles's. There are more than 2000 of these persons, the large majority of whom are single, or at least live as celibates. They are nevertheless prolific. A considerable amount of sickness and mortality in St. Giles's, and a large proportion of the cost for supporting its pauperism, are caused by the occupants of these houses. It would be a mercy to the labouring poor to scatter these people from their haunts. Only a limited number of houses harbouring them should be allowed in each district. By massing these outcasts together as they are in St. Giles's, they are effectually cut off from all humanising influences, and their moral corruption only becomes more aggravated."

PRESCRIBERS AND DISPENSERS.

A committee which had been appointed by the Pharmaceutical Society to make a suggestion as to the best way in which practitioners should indicate that any large dose they order is done so intentionally, have suggested that the initials of the prescriber should be placed against the ingredient. It has been resolved that this suggestion should be communicated to the heads of the various medical societies throughout the country. This is a very good precaution, and one which, we hope, will be generally carried out. It will prevent such unseemly contests as that which lately took place at Ramsgate.

THE ST. LUKE MEDICAL ASSOCIATION.

The sermon in connexion with the anniversary meeting of the religious society for students and practitioners bearing the name of "St. Luke the Physician," will be preached by the Rev. Dr. Irons, rector of St. Mary Woolnoth, Lombard-street, at St. Thomas's Church, Regent-street, on the evening of Monday, October 20. The general meeting will be held in the adjacent school-rooms immediately after the service. Professor Bentley, of King's College, London, will preside.

DECLINE OF TYPHUS FEVER IN LIVERPOOL.

Dr. Trench, the Medical Officer of Health, reported to the Liverpool Health Committee last week that there had been no death from typhus in Liverpool—an exemption which had not been reported since 1848.

SNAKE-POISON.

The *Times of India* says the Snake-poison Commission has sent to Australia for a quantity of Australian snakes in order to give Mr. Halford's remedy a fair trial.

FROM ABROAD.—PROFESSOR PETTENKÖFER ON OZONE—ABUSE OF MEDICAL CHARITIES IN THE UNITED STATES—DALTONISM IN RAILWAY EMPLOYÉS.

Professor Max von Pettenköfer (Berlin *Klin. Woch.*, No. 34), writing on the subject of "Ozone and Cholera," observes that it is to be expected that during the new outbreak

of the disease the often-repeated question will be asked again, Whether there is any connexion between the localities of the epidemic and the amount of ozone contained in the air?—a position that has been both denied and maintained. In fact, the inquirer is not yet in possession of the means of proof, as the methods hitherto employed only show the amount of ozone approximatively—they are rather ozonoscopes than ozonometers. A principal defect consists in the fact that in the usual method by exposing ozone papers no account is taken of the quantity of air which in a given time comes in contact with them. Believing that to this circumstance—the too small ventilation—the absence of ozone reaction in closed dwelling-places is due, Professor von Pettenköfer induced Dr. Wolfhügel to examine the amount of air that is needed in the open air to obtain the ozonic reaction on the iodised paper as compared with that required within buildings. One thousand litres of air in the open constantly induced obvious reaction, while the air of the different rooms of the Munich Physiological Institute—even those of them that were quite uninhabited and spacious—did not induce the slightest reaction, even when from 10,000 to 12,000 litres were brought in contact with the paper. This is the more remarkable, as it is well known that the air of rooms, even when the windows and doors are closed, constantly undergoes change, if in only a slight degree. As we, therefore, live in our dwellings for the most part without ozone in the air, the smaller or greater quantity in the open air cannot exert any great direct influence on our well-being. It is not, however, asserted that the amount of ozone in the free atmosphere may not play an important part in the economy of nature; but we are in want of some method for indicating with exactitude the variations in this amount.

The subject of the "Abuse of Medical Charities" excites a good deal of attention on the other side of the Atlantic, as well as among ourselves, and an editorial article in the number of the *Medical Record* for September 1 contains some observations that have, to some extent, their application to ourselves. After adverting to the mean advantage often taken of the liberality of the profession, the writer adverts to the important point of the encouragement held out to these abuses by the profession itself:—

"To blame the profession for much of this state of things appears at first rather startling, but we believe that the charge can be fairly substantiated. . . . . It has often occurred to us that there is altogether too much said by ourselves about the charity of our profession; that if the public are not aware that we profess and exercise this virtue, it has certainly been no fault of ours. The public hear so much of our charity that they are beginning to think they are conferring a favour upon us by giving us an opportunity to exercise our propensity in that respect. We not only tell them of our Samaritan virtues, but are too much inclined to force their exercise upon the people. This disposition is seen in the struggle for hospital and dispensary appointments. If a new dispensary is founded or a new hospital projected, the most strenuous efforts are made to secure a place on the medical staff, and the trustees are at once impressed with the belief that of all the services that can be rendered to the institution, the purely professional ones are the cheapest. The public are not backward in having the same idea. No sooner are these institutions opened, than every facility is offered to the public to avail themselves of the privileges; and, if all other means fail to make a show of patronage, regular advertisements are issued for patients. These institutions must make a show of the number of patients treated, else there will be no reasonable excuse for their establishment, and no encouragement to the benefactors. It is easily seen that this very system encourages an abuse of charity which the medical profession directly abet by the very eagerness with which they serve these so-called charities.

"Many medical men go still further, and, we are sorry to say it, under cover of charity, found institutions for the cure of a specialty, and advertise for patients. We have known of more than one institution of this sort where, patients were actually coaxed to come, that the number of applicants might prove it to be prosperous, and offer an excuse for seeking an appropriation from the legislature. In view of this state of things, is it right to assume that none but the pure charity-patient was treated?—is it fair to presume that even ordinary measures were taken to guard against fraud on the part of the applicants?"

The injustice and injury committed by many of these institutions upon young rival and struggling practitioners are forcibly dwelt upon. All these abuses we are familiar enough with here, but there is one which the writer adverts to that has not yet become developed amongst us. It is the practice with the American hospitals to receive other patients besides the pauper class on payment of a stipend for board; and, in some of the poorer institutions, any patients who are willing to defray these charges are admitted whatever their means may be, "no further questions being asked."

"There are cases in which the attempts to cheat the profession of legitimate fees are too open to admit of question; and yet the practice is tolerated in all our large institutions, the authorities of which appear by this open defiance of ordinary justice to own the medical staff body and soul, by compelling them, on pain of jeopardising their positions, to attend these patients the same as if they were deserving paupers. Now, we claim that there is in this way of doing things a little too much of institution, and too little of doctor. But can we expect anything more of managers who are made to believe that medical men are so eager to give their services to these charities, that they will resort to all sorts of intrigues for influence to obtain positions, and all sorts of subterfuges to retain them afterwards? The supply of medical men is so much greater than the demand, that directors and managers can afford to be independent. Such is the only explanation of the paradox that the most useful men to the institution are the ones who have the least to say in its general management, and are servants to all. Some of the hospitals, not satisfied with meeting their expenses in this way, have dared to go further in their unfair dealings towards the medical staff: not only have they received patients well able to pay medical fees, but they have made an extra item in the patients' bills for medical services, which services, as an institution, they received gratis! As an offset to such a practice, it is a rule that no physician or surgeon shall use his position in the hospital for the sake of making money. Under the circumstances just mentioned, we fail to see where the justice of this arrangement is. The doctor is not a hireling of the house, but in the relation to it of a benefactor; and if any attempt be made to remunerate for medical services pure and simple, to whom do they belong? If the doctor dare not expect such rewards, what interpretation can we give to the right of the hospital to demand them?

"In view of a state of affairs like the above, it is in vain to look for much help from hospital authorities towards correcting abuses of medical charity; all we can do in a professional way lies in ourselves. We cannot cure the evils, but we can do a great deal towards preventing them. It may not be possible to overturn the present hospital management, but there is much to be done to make the managers feel the worth, influence, and power of the medical staff; and, by the right sort of action, desirable reforms can be instituted. In dispensaries, physicians are in a more independent relation to the authorities, and can exercise an almost absolute right to refuse aid to the undeserving. Much more is this the case in our college clinics. We are by no means jealous of the amount of real charity done to the poor of New York, but we do not care to have it overdone. When the profession can claim to treat gratuitously 300,000 paupers annually in New York City, not counting those in hospital, and it knows at the same time that not one out of every ten of the young medical men in that city can barely earn a living, we think that it is about time to look into the matter, to consider whether the occasion is not opportune for proving the force of the proverb—'Charity begins at home.'"

In the Medical Section of the French Association for the Advancement of Science, M. Favre read a very interesting memoir (since published in full in the *Lyon Méd.*, September 14), on "Daltonism in relation to the Working of Railways." From his statistical account the affection would seem to be of

considerable frequency, although no accidents are recorded as having arisen from its presence. He gives the particulars of several cases both of congenital and of traumatic Daltonism, and arrives at the following conclusions :—1. Candidates for employment on railways should be carefully examined with regard to their power of perceiving colours. 2. Those who cannot distinguish red with ease should be rejected. 3. Those (who are more numerous) who mistake other colours than red may be admitted, but their infirmity should be carefully noted in order that they may be made the subjects of ulterior examination. 4. Agents or *employés* who receive bruises or wounds of the eyelids, eyes, or head, or have suffered from cerebral concussion, should be examined as regards colours, both at the commencement and the termination of their interrupted service. 5. After any serious disease, before the *employé* is allowed to resume his service, an examination as to colours is absolutely necessary. 6. Those who are suspected of addiction to drinking, or who make an excessive use of tobacco, should have the condition of their vision frequently examined. 7. A periodical examination of colours should be instituted, especially for those charged with special and laborious tasks.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Forty-third Meeting.

(*From our Special Correspondent.*)

The departments of the Association devoted especially to the exposition of anatomical, physiological, and sanitary science have excited a very great, and indeed unexpected, amount of attention. The second Sub-section of Biology—namely, that of Anatomy and Physiology—has attracted a great number of visitors, and, uninviting as discussions on the theory of spontaneous development, or on the functions of the brain, or similar topics may appear to the general public, these subjects seemed to possess some especial charm for the members and associates, who crowded the rooms where they were introduced. Professor Ferrier's address on the Localisation of Functions in the Brain, indeed, appeared to be pre-eminently attractive, for not only was the hall in which it was delivered filled to excess by an audience, fully one half of which consisted of the fair sex, but the assembled multitude listened with the utmost patience and apparent interest to anatomical details with which many a tyro in the medical schools would have found it difficult to grapple. It is only justice to Dr. Ferrier to state that his address was able in the extreme, and that, although he spoke without the aid of any notes, his exposition was as luminous as if he had written out all the details beforehand.

Dr. Allman's Inaugural Address on Biology.

The business of the Section on Biology was opened by an inaugural address by Professor Allman, M.D., which was characterised by extensive learning and no less an impressive eloquence. In reference to the hypothesis of evolution, he spoke with the enthusiasm of a lover of nature and with the caution of a philosopher, and, while admitting the splendid generalisations to which the subject might lead, he yet regarded the deduction of the necessary conclusions as beset with difficulties. One of the chief of these, he said, in the way of the doctrine of evolution, when carried to the extreme length for which some of its advocates contended, was the unbroken continuity of inherited life, which it necessarily required through a period of time whose vastness was such that the mind of man was utterly incapable of comprehending it. They had no reason to suppose that the representative faculty in organised beings was endowed with unlimited power of extension, and yet, to go no further back than the Silurian period, the hypothesis required that in the same period the ancestors of the present living forms must have existed, and that their life had continued by inheritance through all the ramifications of a single genealogical tree down to our own time. Was the faculty of reproduction so wonderfully tenacious as all this? Had the strongest which had survived in the struggle for existence necessarily handed down to the strongest which should follow them the power of continuing as a perpetual heirloom the life which they had themselves inherited? or had there been many total extinctions and many renewals of life? or finally, was the doctrine of evolution only a working hypothesis, which, like certain algebraic fictions, might yet be of inestimable value as an instrument of research, furnishing the biologist with a key to the order and hidden forces of the world of life. What Liebig, and Newton, and Hamilton had been to the physicist, was it not that which Darwin had been to the biologist? But even accepting as a great truth the doctrine of evolution, they must not attribute to it more than it could justly claim. No valid evidence had yet been adduced to lead to the belief that inorganic matter had become transformed into living otherwise than through the agency of a pre-existing organism, and there remained a residual phenomenon still entirely unaccounted for. No physical hypothesis founded on any indispensable fact had yet explained the origin of the primordial protoplasm, and, above all, its marvellous properties, which rendered evolution possible. Natural selection, the struggle for existence, the survival of the fittest, would explain much, but not all. The properties with which the primordial protoplasm was endowed, its heredity and its adaptability for these properties, were their cause and not their effect. For the cause of this cause they had sought in vain among the physical forces surrounding them, until they were at last compelled to rest upon an independent volition, a far-seeing, intelligent design. Science might yet discover among the laws of physics the cause it looked for. It might be that light, heat, electricity, magnetism, when manifesting themselves through the organisable protoplasm, became converted into the phenomena of life, and that the poet had unconsciously enunciated a great scientific truth when he spoke of

> "Gay lizards glittering on the walls
> Of ruined shrines, busy and bright,
> As though they were alive with light."

Dr. Rutherford's Address on Anatomy and Physiology.

Dr. Rutherford's address to the Sub-section on Anatomy and Physiology comprised a general sketch of the present condition of those sciences, showing how closely they were connected with one another, but urging that, owing to the great development of physiology, they required to be taught by separate professors. Physiology, indeed, unlike anatomy, which was a science of demonstration only, rested upon a tripod consisting of anatomy, physics, and chemistry; and the most minute anatomy, the most recondite physics, and the most complex chemistry must all be taken into account in the study of the physiology of living beings. He strongly insisted upon the necessity of establishing practical schools of physiology throughout the country, and pointed to the efforts already made in the London medical schools, in Edinburgh, Cambridge, Manchester, and elsewhere in this direction. He thought that the endowment of a dozen such laboratories would immensely aid in the development of physiological research amongst us. We might, he said, anticipate great benefit to the community not only from an advance of physiology, but from a diffusion of a knowledge of its leading facts amongst the people. This is now being carried out in our schools on a scale which is annually increasing. Thanks to the efforts of Huxley, the principles of physiology were now presented in a singularly palatable form to the minds of the young. The instruction communicated does not consist of technical terms and numbers, but in the elucidation of the principal events which happen within our bodies, together with an explanation of the treatment which they must receive in order to be maintained in health. Considering how much may be accomplished by these bodies of ours if they be properly attended to and rightly used, it seems to be a most desirable thing that the possessor of the body should know something about it, not only because such knowledge affords him much material for suggestive thought—not only because it is excellent mental training to endeavour to understand the why and the wherefore of the bodily actions, but also because he may greatly profit from a knowledge of the conditions of health. He concluded by remarking that thorough adoption of hygienic measures—in other words, of measures which are necessary to preserve individuals in the highest state of health—cannot be hoped for until a knowledge of fundamental physiological principles finds its way into every family. This country has taken the lead in the attempt to diffuse a

sound knowledge of physiological facts and principles among the people, and we may fairly anticipate that this will contribute not a little to enable her to maintain her high rank amongst nations; for every step which is calculated to improve the physiological state of the individual must inevitably contribute to make the nation successful in the general struggle for existence.

Professor Ferrier on the Localisation of Functions in the Brain.

As we have before remarked, Professor Ferrier's communication excited very great interest. It was probably expected that his researches, and the conclusions to which they have led, would lend some countenance to the system of phrenology, but such is very far from being the case. It is not too much to say, however, that the facts disclosed by Dr. Ferrier are of the highest importance to physiological science, and if they shall be confirmed by subsequent observers, or extended by future experiments of his own, they will throw almost an entirely new light upon the connexion of the different parts of the brain with the actions, the sensations, and the instincts of living beings. The great interest and importance of this communication are our apology for introducing Dr. Ferrier's views at some length, the more especially because, as his experiments were very numerous, they require individual explanations to render their meaning intelligible.

All are agreed, he said, that it is with the brain we feel, and think, and will; but whether there are certain parts of the brain devoted to particular manifestations is a subject on which we have only imperfect speculations or data too insufficient for the formation of a scientific opinion. The general view is that the brain as a whole subserves mental operations, and that there are no parts specially devoted to any particular functions. This has been recently expressed by so high an authority as Professor Séquard. The idea rests chiefly on the numerous facts of disease with which we are acquainted. There are cases where extensive tracts of brain are destroyed by disease, or removed after a fracture, apparently with no result as regards the mind of the individual. Along with these facts we have others which are very curious, and which hardly seem to agree with this doctrine. One of these is that when a certain part of the brain is diseased, in aphasia, the individual is unable to express himself in words. Other curious phenomena have been well described by Dr. Hughlings-Jackson—viz., that certain tumours or pathological lesions in particular parts of the brain give rise, by the irritation which they keep up, to epileptiform convulsions of the whole of one side, or of the arm or leg or the muscles of the face; and from studying the way in which these convulsions show themselves he was able to localise very accurately the seat of the lesion. The great difficulty in the study of the function of the brain has been in the want of a proper method. When we study the function of a nerve, we make our experiments in two ways. In the first place, we irritate the nerve by scratching or by electricity, or by chemical action, and observe the effect; and in the second place, we cut the nerve, and observe what is lost. In regard to the brain and nervous system, the method has been almost entirely, until recently, the method of section. It has been stated by physiologists that it is impossible to excite the brain into action by any stimulus that may be applied to it, even that of an electric current; they have, therefore, adopted the method of destroying parts of the brain. This method is liable to many fallacies. The brain is such a complex organ that to destroy one part is necessarily to destroy many other parts, and the phenomena are so complex that one cannot attribute their loss to the failure only of the parts which the physiologists have attempted to destroy. About three years ago, two German physiologists, Fritsch and Hitze, by passing galvanic currents through parts of the brains of dogs, obtained various movements of the limbs, such as adduction, flexion, and extension. They thus discovered an important method of research, but they did not pursue their experiments to the extent that they might have done, and perhaps did not exactly appreciate the significance of the facts at which they had arrived.

I was led (said Dr. Ferrier) to the experiments which I shall have to explain by the effects of epilepsy and of chorea, which have been supposed to depend upon irritation of parts of the brain. I endeavoured to imitate the effects of disease on the lower animals, and determined to adopt the plan of stimulating the parts of the brain by electricity after the manner described by Fritsch and Hitze. I have operated (he said) on nearly a hundred animals of all classes—fish, frogs, fowls, pigeons, rats, guineapigs, rabbits, cats, dogs, jackals, and monkeys. The plan was to remove the skull, and keep the animal in a state of comparative insensibility by chloroform. So little was the operation felt that I have known a monkey, with one side of the skull removed, awake out of the state induced by the chloroform, and proceed to catch flies or eat bread and butter. When the animal was exhausted I sometimes gave it a little refreshment, which it took in the midst of the experiments. Referring next to his experiments on cats, Professor Ferrier stated that on applying the electrode to a portion of the superior external convolution the animal lifted its shoulder and paw (on the opposite side to that stimulated) as if about to walk forward; stimulating other parts of the same convolution, it brought the paw suddenly back, or put out its foot as if to grasp something, or brought forward its hind leg as if about to walk, or held back its head as if astonished, or turned it on one side as if looking at something, according to the particular part stimulated. The actions produced by stimulating the various parts of the middle external convolution were a drawing up of the side of the face, a backward movement of the whiskers, a turning of the head, and a contraction of the pupil respectively. A similar treatment of the lower external convolution produced certain movements of the angles of the mouth; the animal opened the mouth widely, moved its tongue, and uttered loud cries, or mewed in a lively way, sometimes starting up and lashing its tail as if in a furious rage. The stimulation of one part of this convolution caused the animal to screw up its nostrils on the same side; and, curiously enough, it was that part which gave off a nerve to the nostril of the same side. He then explained in like manner the results produced by the stimulation of corresponding or homologous parts of the rat, the rabbit, and the monkey. Acting upon the anterior part of the ascending frontal convolution, the monkey was made to put forward its hand as if about to grasp. Stimulation of other portions acted upon the biceps, or upon the zygomatic muscles. The part that appeared to be connected with the opening of the mouth and the movement of the tongue was homologous to the part affected in man in cases of aphasia. Stimulation of the middle part of the temporo-sphenoidal convolution produced no results; but the lower part of the temporo-sphenoidal, when acted upon, caused the monkey to shut its nostrils. No result was obtained in connexion with the occipital lobes. These experiments, he said, had an important bearing upon the diagnosis of certain kinds of cerebral disease, and the exact localisation of the parts affected. He was able to produce epileptic convulsions in the animals experimented upon, as well as phenomena resembling those of chorea. The experiments were also important anatomically, as indicating points of great significance in reference to the homology of the brain in lower animals and in man, and they likewise served to explain some curious forms of expression common to man and the lower animals. The common tendency, when any strong exertion is made with the right hand, to retract the angle of the mouth and open the mouth on the same side, had been stated by Oken, in his "Natur-Geschichte," to be due to the homology between the upper limbs and the upper jaw; the true explanation being that the movements of the fist and of the mouth are in such close relation to each other that when one is made to act powerfully the impression diffuses itself to the other parts of the brain, so that the two act together. The experiments had also a psychological significance. There was reason to believe that when the different parts of the brain were stimulated, ideas were excited in the animals experimented upon, but it was difficult to say what the ideas were. There was, no doubt, a close relation between certain muscular movements and certain ideas which would prove capable of explanation. This was supported by the phenomena of epileptic insanity. The most important guide on the psychological aspect of the question was the disease known as aphasia. The part of the brain which was the seat of the memory of words was that which governed the movements of the mouth and the tongue. In aphasia the disease was generally on the left side of the brain, in the posterior part of the inferior frontal convolution, and it was generally associated with paralysis of the right hand; and the reason might be supposed to be that the part of the brain affected was nearly related to the part governing the movements of the right hand. It was essential to remember that the movements of the mouth were governed bilaterally from each hemisphere. The brain was symmetrical, and he held it to be a mistake to suppose that the faculty of speech

was localised on the left side of the brain. The reason why an individual lost his speech when the left side of the brain was diseased was simply this:—Most persons were right-handed, and therefore left-brained, the left side of the brain governing the right side of the body. Men naturally seized a thing with the right hand, and they naturally therefore used rather the left side of the brain than the right, and when there was disease there the individual felt like one who had suddenly lost the use of his right arm. After describing some further experiments on pigeons, Professor Ferrier alluded to the results of stimulating the different ganglia. Stimulation of the corpora striata caused the limbs to be flexed; of the optic thalami produced no result; of the corpora quadrigemina produced, when the anterior tubercles were acted upon, an intense dilatation of the pupil, and a tendency to draw back the head and extend the limbs as in opisthotonus; while the stimulation of the posterior tubercles led to the production of all kinds of noises. By stimulating the cerebellum various movements of the eyeballs were produced.

Dr. George Harley alluded to the effect of mental emotion on the bodily functions, and the possibility of producing disease by simply acting upon the nervous system. Referring to phrenology, he said it was one thing to localise function in the interior of the brain, and quite another to specify functions by manipulating the external cranium; and he quoted a saying of Flourens with reference to phrenology—"Les hommes qui la pratiquent sont des charlatans, et les hommes qui la croient sont des imbéciles."

Dr. Carpenter congratulated Professor Ferrier on the success of his experiments, and congratulated science on the possession of such an able exponent. He remarked that the great work of the brain is done in the cortical substance, and in Dr. Ferrier's experiments the first effect of the stimulus is upon that particular substance, producing an intensification of the circulation through it: being in that respect different from the ordinary stimulation of a nerve which acts upon the fibrous substance of the medullary matter of the brain. His explanation of Dr. Ferrier's experiments was that a kind of ideational state was produced, of which the instrument is a certain portion of the cortical substance—that state acting not directly upon muscular movements, but upon the automatic apparatus, telling it to perform certain actions. He had long since expressed his disbelief in phrenology, which maintained that the animal functions were placed at the back of the head, and the intellectual at the front. Dr. Ferrier's experiments tended to show that the real seat of the intellectual functions was in the posterior part of the brain.

Dr. Brunton alluded to the faculty of will and of self-restraint as distinguishing man from the lower animals, and said that this faculty was probably situated in the anterior part of the brain. It was noticeable that criminals, who were deficient in that faculty, possessed only a small portion of brain in front of the head. Speaking of the importance of a bleod supply to the brain, he mentioned that he had on one occasion found himself unable to write and compose in consequence of a state of exhaustion, and on laying his head on the table, instead of sitting upright, the better supply of blood thus obtained enabled him to pursue his task. The dyspepsia common among literary men he attributed to the want of an adequate supply of blood to the digestive organs, in consequence of too much going to the brain for its intellectual work.

Professor Burdon-Sanderson said that the stimulation in Dr. Ferrier's experiments was, contrary to Dr. Carpenter's supposition, exactly like the ordinary excitation of a nerve, and the effect was produced in an extremely short space of time.

Dr. Crichton Browne thought that the labours of Gall and Spurzheim ought not to be overlooked in a discussion on the localisation of functions of the brain—a principle which they distinctly enunciated. It was a curious fact that Dr. Ferrier located the memory of words in the very part indicated by the phrenologists as the organ of language. He had witnessed the experiments of Dr. Ferrier, and was astounded at the marvellous manner in which the response was given (as predicted) to the stimulus applied.

A paper was read by Sir Duncan Gibb

On the Vocal Organs in Living Centenarians.

The subject, he said, was one of interest, for it was determined during life, and presented some new facts, necessitating a modification of the views generally entertained regarding such old people. He had visited and examined nine living and undoubted centenarians in various parts of the kingdom, and he gave their names, residences, dates of examination, and authentic records of their birth, two being males and seven females. The thyroid cartilage, felt in the neck, was more prominent in the males, but in all it was freely movable, and possessed a resiliency and softness that showed that the changes of old age as usually seen were absent; and this was so with the other cartilages and the rings of the windpipe. With a little reflecting mirror the interior of the vocal organs was found to be in a condition more approaching that of the young than the old, with free motion and activity of the vocal cords, the colour of which showed an absence of what are known as senile changes. The voice therefore was good, clear, soft, and melodious in all, but rather loud in two cases. The chest capacity was fairly good in all, and the breathing unimpeded, for not only was the epiglottis vertical, but the cartilages of the ribs were not ossified. The movements of the chest therefore corresponded to persons of the age of twenty-five or thirty. Every organ in the body being healthy, and the special senses for the most part perfect, the conclusions were arrived at that there was a complete absence of those changes which are usually seen in most persons of seventy or eighty, such as calcification of the vocal cartilages and the bloodvessels and ossification of the costal cartilages. It is the fact of the absence of such changes that permits the attainment of the great age of ninety-five or a hundred years; and therefore the views heretofore held regarding old age must be modified, at any rate so far as centenarians are concerned.

Dr. J. Milner Fothergill read a paper on

The Heart and Brain.

He said that while the brain had always been regarded as the organ representing intelligence, the heart had been held to be the centre of emotions, and especially such as were associated with endurance. Talent was a cerebral endowment, but courage was a cardiac quality. Fixity of purpose and energy depended largely upon a firm and well-acting heart. There were numerous nerve-branches connecting the nervous system with the heart and furnishing it with motive power. Through the sympathetic nerves the heart was connected with the emotions, and when the nerve-force was discharged freely the heart's action was in unison with it, and the contractions were powerful. In addition to this there was the vagus nerve, which controlled, regulated, or inhibited the heart's action. When the roots of this nerve were flooded with blood, the heart's action was held back or inhibited and its contractions controlled. This was often instanced when a person rose from a recumbent attitude to an upright posture, and the opposite was the case when resuming again the recumbent posture. By the beautiful backward and forward play of the inhibitory fibres of the vagus the brain was secured against any failure of blood supply, as also it was guarded from an overflow, which would threaten its integrity. In disease, however, this balance was disturbed, and when this was the case failure of the brain was the consequence. Several instances of this had been furnished by medical experience, such as inability in some persons to study unless in certain positions, attacks of loss of consciousness, extraordinary delusions, etc. The author then touched upon the several causes, both natural and artificial, of insanity, and the mental peculiarities of patients suffering under heart disease, and instanced the case of Charles V., when he abdicated in the great hall of Brussels, as a case where disease, not being brain disease, had an effect over the mind. Sustained action in the brain was only to be secured by a full and efficient blood supply, as was instanced in the case of sleep, where the blood supply of the brain had to be largely cut down in order to admit of sleep or cerebral inactivity, or in the temporary brain failure which occurred when the blood-stream was cut off by the garotter. However powerful a brain might be, it always depended for its powers on the arterial current supplied to it by the circulatory centre. Intelligence halted when the brain was crippled by an insufficient blood-stream. It might be therefore concluded that the waves of nerve-force, which resolved themselves into either psychical resolution or sustained muscular effort, were dependent in their turn upon a well-maintained succession of blood-waves, supplied by a firm and vigorous heart.

Dr. Burdon-Sanderson on the Electric Phenomena which accompany the Contraction of the Leaf of Venus's Fly-trap (Dionæa Muscipula).

Professor Sanderson showed that certain electrical phenomena which accompany the contraction of muscle and the activity

of nerves in animals, also occur in those parts of plants which exhibit similar functions, and stated that Mr. Darwin had made observations (not yet published), which coincided with the views held by Mr. Bennett, that the leaves of Dionæa possessed the power of digesting, just as the stomach digests food. Although it was much easier to experiment upon plants than animals, from the fact that the former could be kept longer alive, it was strange that, although the subject of electrical currents in animals had been thoroughly investigated, the question of such currents in plants had been overlooked.

Professor Williamson regarded the paper read by Professor Sanderson as one of those little straws which showed how the wind was likely to blow for many a year to come. Taken in connexion with the paper read yesterday by Professor Ferrier, he could see that it would be the opening up of a new era in animal and vegetable physiology. These two channels of inquiry were likely to lead to as important results as the spectroscope in other parts of science. Nothing had been so much neglected in England as vegetable physiology.

Professor Rutherford said he was specially interested in the subject of the origin of electrical currents in living tissues. Professor Hermann, of Zürich, who had confined his attention to muscle and nerve, contended that electricity was not generated in the living tissue, but was only produced when the tissue was injured in some way. He was glad that the experiments made by Professor Sanderson would tend to put an end to this idea, inasmuch as he had found that electricity was generated without any injury being inflicted to the tissue at all.

Microzymes as Partial Bionta.

A paper on this subject was read by Dr. John Ross. Microzyme is a general term employed by Béchamp to designate those lowest organisms which are found in putrefactive fluids, and are now known to be present in all infective fluids. Microzymes are minute, more or less spheroidal specks of protoplasm, not more than the 1-20,000th of an inch in diameter. The object of the paper is to show that although the microzymes of putrefaction and those of infective fluids are morphologically of the same order, yet physiologically they are of different orders. Hæckel uses the same term (*βιων*) to designate a physiological individual, and he divides bionta into three orders—1. The actual bion, which represents the highest developed form of the individuals of the species; 2. The potential bion, which includes all the forms of the individual till the highest developed form is attained; and 3. The partial bion, which represents a portion detached from a higher organism, that has the capacity of maintaining an independent existence for some time, but is not able to develope into an actual bion. The microzymes of putrefactive fluids are either actual or potential bionta, but there is good evidence to prove that those of infective fluids are merely partial bionta. When vaccine lymph and hay infusion a few days old are examined, the living particles found in each are very different. The former do not elongate into the staff-shaped bodies called bacteria; their motions are semi-rotatory instead of oscillatory, and they form clusters very similar to those which blood corpuscles form. Pus-corpuscles are said to be from the 1-2500th to the 1-3000th of an inch diameter, but in reality pus contains living units of all sizes, from the 1-2500th of an inch down to the minutest speck of protoplasm. If those units which vary from the 1-15,000th to the 1-20,000th of an inch are to be regarded as corpuscles, those which pass the limit of 1-20,000th of an inch must be of the same essential nature, even if we call them particles. Again, pus-corpuscles may be seen to cast off buds from the surface, and some of these are not more than the 1-20,000th of an inch, and are morphologically indistinguishable from vaccine particles. These buds are undoubtedly partial bionta, and this renders it probable that the others are of a similar nature. After death from some diseases the fluids of the body contain numerous microzymes, and are highly infectious; in a few days the microzymes multiply in myriads, but the fluids soon lose all infective power. This shows that the physiological relations of the first set of microzymes are very different from those of the second. The first set are more allied in their action to pus, tubercle, and cancer; while the second have no powers but those possessed by the microzymes of ordinary putrefactive fluids. Several experiments upon frogs show the close relationship which exists between infective microzymes and white blood and pus-corpuscles, all of which tend to prove that these microzymes are merely partial bionta.

Remarks on Professor Huizinga's Experiments on Spontaneous Generation.

Under this title, Dr. Sanderson communicated some new experiments relating to the debated question of spontaneous generation. In the well-known work of Professor Charlton Bastian on the "Origin of Life," the author recorded an experiment which had attracted much attention from physiologists. This experiment consisted in charging a flask having a capillary orifice with an infusion of turnip, to which cheese had been added in very small quantities, and then boiling the flask and closing it hermetically after ten minutes' ebullition. Dr. Bastian found that although the liquid contained in the flasks so prepared had been subjected to the temperature of 212° Fahr., bacteria were always produced. The result had been confirmed by Dr. Sanderson himself, and more recently in another form by a Dutch observer, Professor Huizinga, of Gröningen. But Dr. Sanderson, in a communication made to *Nature* in June last, showed that if, by performing the ebullition under increased pressure, the temperature was correspondingly increased, the result was different. The experiment, in short, failed, the liquid remaining free from living forms, although it was placed under all the conditions which were favourable to their development. Recently, Dr. Sanderson had subjected Dr. Huizinga's experiment to similar repetition. Huizinga used, not turnip, but an artificial mixture of very complicated composition, contrived for the purpose of obviating some of the objections which had been made to Dr. Bastian's employment of turnip infusion with cheese. On subjecting flasks charged with this liquid to the ebullition under pressure, he found that here, as before, the liquid remained barren. Dr. Sanderson further stated that in order to show that the fluid treated in the way described was still capable of supporting living forms when they were introduced into it, he added to some of such liquid a drop of distilled water, and in twenty-four hours bacteria were developed in large quantities. In conclusion, he stated that he did not hold that spontaneous generation was impossible—he did not regard the heterogenists as scientific heretics, but he was not aware that up to the present moment there was any proof that they were right.

As both the above papers involved the question of spontaneous generation, the discussion on both was taken together.

Mr. Ray Lankester, speaking of Professor Sanderson's paper, said that he himself had tried the same experiments, and in every case where ebullition was resorted to no bacteria were produced. When proper precautions were taken to boil for a sufficient length of time, life was never developed. Referring to Dr. Ross's remarks, he said the word "microzyme" was applied rather vaguely to things which were physically different from bacteria. Microzymes were particles which were found in disease and septic matter; while bacteria were a crop of minute plants which made their first appearance as minute spherical particles which might easily be mistaken for bacteria. The proposition, therefore, about microzymes appearing in putrefying infusions related not to bacteria, but to particles in the bodies of the animals diseased.

The President, Dr. Rutherford, referring to Dr. Sanderson's experiments, said there remained one important question, as to whether the heat had been so great that the organic matter had been altered in such a way that it could no longer produce spontaneous forms. The main point, as Dr. Sanderson had informed them, was that he found that although the fluid, after ebullition, produced no living forms, it was capable of supporting them after they were introduced, just as they could be supported in a glass of distilled water. He thought, however, that more facts on this subject should be obtained before a decided opinion could be pronounced on either side.

Professor Sanderson, in reference to the important question suggested by Professor Rutherford, said that experiments were made in June last with Dr. Bastian's liquid and the turnip-cheese liquid. In each case, after the liquid had been kept for a certain time, and it had been ascertained that no change had taken place, the flask was opened and a small drop of distilled water was put into it. The liquid at once became turbid, and bacteria were produced, showing that the liquid still retained its capability of maintaining bacterial life. Referring to Dr. Ross's paper, Professor Sanderson said that lately it had been found that in a great many diseases bacteria existed in diseased products, but the question still remained whether these were specific bacteria or not—whether they were morbid poison or accidental products. With reference to the question of vaccine, he had always had considerable doubt. There was no difficulty in seeing the organic forms which

existed in vaccine fluid. Dr. Ross had given a correct description of them; but he (Professor Sanderson) could never come to the conclusion whether these round particles were characteristic of vaccine or not, as they were to be found in other products of the organism which did not possess definitely a morbid character. Dr. Obermeyer, who unfortunately died of cholera in the course of investigations he was making on the subject, had discovered a characteristic form of bacteria in relapsing fever. He found that these bodies existed and appeared to have definite forms; and the accuracy of his description had since been confirmed by high medical authorities. There were various other diseases in which such forms were found, and they were also discovered in cattle disease. In this disease, which was a most fatal one, it had been found that bacteria were present in the blood in great numbers. It had also lately been proved, by the most careful investigations, that bacteria also existed in the blood of certain perfectly healthy individuals. He thought the words bacteria and microzymes were very confusing to those unacquainted with the subject. Another fact in relation to bacteria was that they did not develope into any other forms. The most careful observation showed that they did not go beyond the form which they first assumed, which would in some measure negative the view advanced by Dr. Ross.

The Purification and Utilisation of Sewage.

This very important question was introduced and discussed in the Chemical Section on Monday. As we mentioned last week, the town of Bradford is placed, by its geographical conditions, in a very difficult position in relation to its drainage and sewage, and plans which are adopted successfully elsewhere are inapplicable to this large manufacturing centre situated in the heart of England, at a considerable distance from the sea on either side, and unconnected with any great river except through the medium of one or two insignificant streams. If the enormous mass of excreta from the crowded population of Bradford, together with the drainage from the extensive manufactories, were allowed to pass into the small river Aire, they would poison its waters, and be especially obnoxious to the neighbouring town of Leeds, through which the Aire flows in its passage towards the Humber. Again, any attempt to utilise the sewage in the most productive manner—namely, by spreading it over the land, and thus fertilising the soil—would be unsuccessful, on the ground of the enormous expense which such a scheme would involve, considering the dense population of the area from which the sewage is derived. Hence a number of expedients of various kinds are and must be adopted, with greater or less success, to effect the double object of draining the town and at the same time preserving the health of the inhabitants; and it cannot be said, notwithstanding the zeal of the Corporation and the ingenuity of its engineers, that either of these objects has hitherto been successfully accomplished. At present it is found that, comparing the small tributary stream, the Bradford Beck (which runs into the Aire), with the outflow of the sewage itself, the former is the more unwholesome stream of the two, and consequently it is out of the question to overload the natural current with the artificial drain. The sewage therefore is purified, as far as possible, by artificial means, and by the application of mechanical works and chemical agencies, which to a great extent deodorise and purify the enormous mass of waste material continually flowing from the town and the suburbs. The whole question is too extensive to enable us here to consider it in all its bearings, and we can only direct attention to some parts of the report on the general subject of the purification and utilisation of sewage which was presented to the British Association, especially selecting those portions which bear upon the sanitary condition of the population. With this view we present the following substance of an abstract, presented by Dr. Corfield, of all the reports presented by the Committee of the Association on the Treatment and Utilisation of Sewage. The final opinions of the Committee were in substance as follows:—

I. All conservancy plans, including midden, heap, and cesspool systems, dry ash, and dry earth closets, pail closets, etc., are quite incompetent as solutions of the general question of the removal of the refuse matters of a population; they only deal with a small part of the liquid manure; towns which resort to one of them require to be sewered, and the sewage requires to be purified. The manure produced is in all cases (except in that of simple pails or tubs, where no extraneous materials are added) poor, and will only bear the cost of carriage to a short distance, taking into consideration the cost of collection, that produced by the dry earth system being, even after the earth has been used three times over, merely a good garden mould. Moreover, these plans all violate one of the most important of sanitary laws, which is that all refuse matters which are liable to become injurious to health should be removed instantly, and then be dealt with afterwards. With all these plans it is an obvious advantage on the score of economy to keep the refuse about the premises as long as possible, and the use of deodorants of various sorts, or even of disinfectants, proves that this is the case, and that these systems all depend upon a fallacious principle. They should therefore be discouraged as much as possible, and only resorted to as temporary expedients, or with small populations, in very exceptional instances.

II. The water-carriage system, on the other hand, is based upon a sound principle—that of removing all the refuse matters at once and in the cheapest possible manner by gravitation,—and ought to be resorted to in all but the most exceptional cases. The opinion of the Committee that all sewers should be made of impervious materials, and that separate drains to dry the subsoil should be constructed where necessary, has already been most emphatically expressed. The freest possible ventilation of sewers, house drains, and soil pipes, in order to prevent accumulations of foul air, is also essential. With regard to the utilisation of sewage, the Committee has come to the conclusion that the precipitation processes that it has examined are all incompetent, and necessarily so, to effect more than a separation of a small part of the valuable ingredients of sewage, and that only a partial purification is effected by them. Some of them may, however, be useful as methods of effecting a more rapid and complete separation of the sewage sludge.

The upward filtration process only effects a clarification of the sewage, and is therefore no solution of the question.

By properly conducted sewage irrigation a solution is afforded to the question of sewage utilisation. It has already been stated that a precipitation process, or some clarifying process, may be found useful. In all instances it is essential that the land should be well underdrained, and that the sewage should all pass through the soil and not merely over it; otherwise, as has been shown, it will only occasionally be satisfactorily purified. The catch-water, or, as the Committee has termed it, the "supersaturation" principle, is not defensible either on agricultural, chemical, or sanitary principles; an irrigation farm should therefore carry out intermittent downward filtration on a large scale, so that the sewage may be always thoroughly purified, while at the same time the maximum of utilisation is obtained.

It is certain that all kinds of crops may be grown with sewage, so that the farmer can grow such as he can best sell. Nevertheless, the staple crops must be cattle food, with occasional crops of corn; and it is also certain from the analysis of the soil that it has become very much richer, and that the manurial constituents of the sewage accumulate in it. Cattle should be fed on the farm, which leads to a vast increase in the production of meat and milk—the great desiderata of the population producing the sewage. Thus the system of farming must be specialised and capital concentrated, the absence of which conditions has proved a great barrier to the satisfactory practical solution of the sewage question.

In reference to the influence of sewage farms upon the public health, the following important information is given:—The Committee has not been able to trace any ill effects to the health of the persons living around sewage farms, even when badly conducted; nor is there any proof whatever that vegetables grown thereon are in any way inferior to those grown with other manure. On the contrary, there is plenty of evidence that such vegetables are perfectly suited for the food of man and beast, and that the milk given by cows fed on sewaged grass is perfectly wholesome. Thus Mr. Dyke, Medical Officer of Health for Merthyr Tydfil, states that since the abundant supply of milk from the cows fed on irrigated grass the children's mortality has decreased from 48, 50, and 52 per cent. of the total deaths to only 39 per cent., and that so far from diarrhœa having been made more prevalent by the used of sewaged cabbages, "last year the Registrar-General called attention to the fact that diarrhœa was less prevalent in Merthyr than in any place in England and Wales." And he expressed his belief in "the perfect salubrity of the vegetable food so grown."

With regard to the assumption which has been made that

entozoic disease would be propagated by irrigation, all the evidence that the country has been able to collect, and more especially the positive facts obtained by experiments, are against such an idea; and the Committee is of opinion that such disease will certainly not be more readily propagated by sewage irrigation than by the use of human refuse as manure in any other way, and probably less if the precaution be taken of not allowing the animals to graze, but always having the grass cut and carried to them.

The reading of this report was followed by an able paper by Mr. McGowen, the Town Clerk of Bradford, showing that the local conditions prevented that town from following out the suggestions and recommendations of the Committee, but that all the steps had been taken which were hitherto practicable to render the excreta innocuous. Whether eventually some plan may not be devised for rendering the valuable materials derived from the populous town of Bradford available for the improvement of the land of the adjacent parts of Yorkshire, is a subject well deserving of the most careful consideration. It was urged by many of the speakers that it is very easy for theorists at a distance to devise plans and to enact laws for the disposal of excrementitious matter, but it is practically very difficult to determine what is best to be done in each special locality with its peculiar geographical features, its meteorological conditions, the habits and pursuits of its population, and other considerations.

The President and members of the Bradford Medico-Chirurgical Society on Saturday evening entertained at dinner, at the Victoria Hotel, a number of members of the British Association belonging to the medical profession, and at the present time visiting the town of Bradford. There were present Dr. W. B. Carpenter, the retiring President of the Association; Professors Allman, Balfour, Rutherford, Struthers, and Binz; Sir Duncan Gibb; Drs. Beddoe, Fothergill, Harley, Semple, Leet, R.E.; and of non-medical visitors there were Dr. A. W. Williamson (the President of the Association), the Right Rev. Bishop Ryan, Rev. Dr. Campbell, etc. Dr. J. H. Bell, the President of the Society, occupied the chair, and John Foster, Esq., F.R.C.S., occupied the vice-chair. After dinner the usual loyal toasts were proposed, followed by "The British Association," responded to by Drs. Williamson and Carpenter; "The Bradford Medico-Chirurgical Society," proposed by Dr. Carpenter, and responded to by Dr. Goyder; "The Universities and Colleges, British and Foreign," proposed by the Rev. A. G. Russell, M.D., and responded to by Professor Balfour (Edinburgh), Dr. Lauder Brunton (London), and Professor Binz (Bonn); and "The Guests," proposed by Dr. Brown, and responded to by Drs. Allman and Crichton Browne (of Wakefield). A very agreeable evening was spent by the party, and much satisfaction was expressed at the hospitality displayed by the Society and the rest of the local medical profession to their brethren.

The Bradford Medico-Chirurgical Society is established for the purpose of advancing the progress of medical science in the district, and this object is carried out by meetings and discussions held at stated intervals. It is also a medico-ethical society, and offences against professional morals are punished by exclusion (after due investigation) of the delinquents. The Society holds an anniversary festival, and the opportunity of the meeting of the British Association was seized for the double purpose of keeping the annual dinner and inviting as guests the members of the profession coming from a distance.

Tactus Eruditus. — At the last meeting of the Académie des Sciences, Professor Bouillaud made a verbal communication on the pulse in its normal condition. He stated that it is possible to distinguish four in place of two periods in the normal pulse—*i.e.*, a first pulsation separated by a period of rest from a second pulsation much more feeble than the first, and itself followed by a period of rest. The observation must be made upon a person with a slow pulse of not more than 40, in order to become convinced of the reality of this statement. M. Bouley observed that while his colleague was making his statement he had tried in vain to recognise this double pulsation on himself. M. Bouillaud replied that he could well believe this, for during thirty years he had never suspected the existence of this double pulsation, which can only be easily perceived in persons with slow pulse.—*L'Institut*, September 17.

GERMAN ASSOCIATION FOR THE ADVANCEMENT OF NATURAL SCIENCE AND MEDICINE.

(*From our Special Correspondent.*)

The forty-sixth annual meeting, which is held this year at Wiesbaden, commenced on Thursday, September 18. The German Association, which was instituted as far back as 1821, closely resembles the British Association in many respects; but there is this difference between the two societies specially important to our profession, that in Germany pure medicine in its various departments is fully represented at the meetings, no fewer than ten out of the twenty sections being strictly professional, and four more very intimately connected with medicine. Thus the German Association corresponds after a fashion both with the British Association and the British Medical Association. It differs, however, from the latter in several important respects. Members require no recommendation for election beyond their being authors in science or medicine, and in the same way anyone who is engaged in these pursuits may attend as an associate by paying the small fee of 12s. The Association possesses no collection of any kind, and no property. In a word, the primary aim of the German Association is to enable the scientific and medical men of the country to become personally acquainted with each other. The business is deputed annually to a president or commissioner elect and a secretary, who belong to the town in which the meeting is to be held, the place of meeting changing from year to year. The German Association is a very flourishing one, and this year at Wiesbaden the Congress is the largest that has ever met, the number of visitors reaching 1201. Its chief end, as expressed above, is steadily kept in view, and the members and associates spend their annual week together as much for the sake of social enjoyment as for the exchange of scientific opinion. It is said that the character of the Congress has already changed considerably since the fusion of German interests. Before 1870 there was more excitement in the meetings and round the dinner and supper tables over the subject of an united Fatherland than there can possibly be now with their most sanguine hopes fulfilled.

As we have said, this year's Congress is the largest that has ever met, and the reasons for this are not far to seek nor difficult to find. Wiesbaden is one of the very foremost of German watering-places, and this probably not only from the value of its warm springs and baths, but from the mildness of its climate and the wonderful beauty of its situation. It lies on the three or four low hills, and in the intervening hollows, at the foot of the famous Taunus mountains, which shelter it from the north, and but a few miles from the Rhine, which flows across its southern landscape. The town itself is handsome, interesting, and clean, and the newer streets are amongst the finest to be seen in Germany. The best part of the Rhine scenery is within an hour's journey of Wiesbaden, and about the same distance in the opposite direction lies Frankfort-on-the-Maine, one of the richest and most fashionable of Continental towns. Wiesbaden is accordingly full of life and gaiety. The once famous gaming-tables no longer keep the sensitive away, for they were closed on the last day of 1872—much to the benefit of the town, into which ever since that date there has been an influx of men of wealth and years who come when the poet promises them—"Verjüngt der sieche Greis." The cost of living at Wiesbaden is of course high, but on the present occasion this has not been allowed to stand in the way of a successful meeting of the Association. In fact, it has been all in the other direction, the administration having secured rooms in the hotels and lodging-houses at fixed prices, and some of these so moderate that they amount to almost nothing, the rooms being given gratis. Further, in case the reputed poverty of so many of the scientific men of Germany should still prevent them from making a long and somewhat expensive journey by rail to the western borders of the country, arrangements were made with many of the railways for a reduction of fares—some as much as one-half. The success of the Congress is further insured by the choice of September as the month of meeting, the weather in Germany being then perhaps the finest of the whole year. On the present occasion it is most pleasant and enjoyable: the days are bright but cool,

and the evenings so mild that the promenade concerts in the open air do not end till nearly ten o'clock.

With the wonderful combination of attractions before them—of scenery, fashionable living, recreation of every kind, and, to commence the day, a few hours of professional intercourse sufficient to create an appetite for relaxation—the German *savants* and physicians have naturally crowded to Wiesbaden. The President of the meeting is the well-known Fresenius, director of the chemical laboratory and professor in the agricultural institute in the town. He has already been so long famous in his own as well as in other countries that, as he said himself in his introductory address, he has held the presidency before, more than twenty years ago. Dr. L. Haas is associated with Fresenius in the presidency, and Dr. Arnold Pagenstecher and Dr. Haas, jun., are the general secretaries of the meeting. The universities and hospitals of Germany are well represented at the Conference. Among the most distinguished visitors are the following:—Professors Virchow, Langenbeck, Frerichs, and Westphal, from Berlin; Bartels and Kupfer from Kiel; Eberth from Zürich, Rindfleisch from Bonn, Gerlach and Ziemssen from Erlangen, Falck and H. Schmidt from Marburg, Meynert and Beigel from Vienna, Arnold and Simon from Heidelberg, His from Leipzig, Kollmann from Munich, Jürgensen from Tübingen, etc. Those who are familiar with German work and literature will miss several names from the preceding list. The winter session in the universities begins next month, and many of the professors are spending September at home, availing themselves of the quiet vacation to do private work. Austria sends but a very few of her many famous men to the Conference. But there are other and more sad reasons for the absence of other familiar names. Within a short time Germany has lost more than one of the most distinguished and promising members of our profession. Professor Czermak, well known, especially in connexion with laryngoscopy, is just dead. Obermeier, of Berlin, who was so rapidly making his reputation as a pathologist, as the profession well knows, fell a victim, only a few weeks ago, to his scientific zeal. Those who were best acquainted with Obermeier, and the facts of his fatal attack of cholera, are not surprised at the result, for it is not only certain that he kept specimens of choleraic discharges and organs in his room, but it can scarcely be doubted that he had injected blood from a cholera patient under his own skin. In the section of pathological anatomy, the name of Professor Cohnheim is wanting. We regret to say that Cohnheim has been unable to work for the last eight months from an affection of the larynx, which it is now feared may be of a more serious character than was at first suspected. The Congress is, however, mainly constituted, to all appearance, by the general medical profession of the land; and but for the unmistakable German features and the foreign tongue, one might almost fancy, in a sectional meeting, that one had slipped back into the second week of August in London. It is very different in the general meetings, and in the intervals of work, when the numerous representation of the fair sex reminds one rather of the British Association.

The programme of the meeting is briefly as follows:—The Congress lasts a week—from September 17 to September 24; three general meetings are held—the first on the first day, the second on the fifth day, and the last on the seventh; three forenoons are occupied with the meetings of sections for reading and discussing papers, the exhibition of patients and apparatus, etc.; Sunday is reserved for excursions to interesting places in the neighbourhood; and, finally, every afternoon and evening there is some special entertainment in the shape of a dinner, concert, ball, opera, or otherwise. A journal, published every morning, contains the programme of the day, a list of the subjects in the various sections, a list of the associates who have arrived at Wiesbaden, and a short account of the proceedings of the previous days. The general meetings at Wiesbaden are held in the large hall of the Kurhaus, one of the finest of its kind in the world; and at them the formal business of the Association is transacted, as well as the special addresses delivered. The sections meet in four different buildings in the immediate vicinity of each other, and the business here is conducted in a fashion very similar to that adopted at the British meetings. There is free discussion and provision for frequent reply. The amount of real work, however, got through in a forenoon is by no means great. The president of the several sections is changed from day to day; two secretaries in each section superintend the business part of the proceedings, and take brief notes of the discussions. The Germans are famed for their early habits, and here they fully sustain their character in this respect—at eight in the morning several of the sections begin their work, and one at least even half an hour earlier; by half-past twelve all is over; at one everybody is at dinner; and, after an afternoon and evening's relaxation and amusements, by ten o'clock, or shortly after, everyone is in bed.

(To be continued.)

ON HYSTERICAL ANOREXIA.(a)

By Dr. LASÉGUE,
Professor of Clinical Medicine in the Faculty of Medicine of Paris; Physician to La Pitié Hospital.

(Continued from page 266.)

The anorexia gradually becomes the sole object of preoccupation and conversation. The patient thus gets surrounded by a kind of atmosphere, from which there is no escape during the entire day. Friends join counsels with relatives, each contributing to the common stock, according to the nature of his disposition or the degree of his affection. Now, there is another most positive law that hysteria is subject to the influence of the surrounding medium, and that the disease becomes developed and condensed so much the more as the circle within which revolve the ideas and sentiments of the patient becomes more narrowed. The fault does not altogether lie in a pathological vitiation of disposition. Under the influence of sensations, which in more than one particular resemble the impressions of hypochondriacs and the delirious ideas of the insane, the hysterical constantly find themselves unable to resist this domination by a voluntary effort. At the most, distraction of attention enables them to forget at intervals, and these are the sole respites they obtain. The more their attention is intensified, the more does their idea of *malaise* become developed, and at the end of a variable time of this mischievous concentration the patient enters upon a new phase, and, systematising after the manner of certain of the insane, she no longer troubles herself in search of arguments. The responses become still more uniform than the questions.

Tired of supplications, if the endeavour be made to insist, the attempt will be still more fruitless than those which preceded it. In fact, what is to be said? The patient, when told that she cannot live upon an amount of food that would not support a young infant, replies that it furnishes sufficient nourishment for her, adding that she is neither changed nor thinner, and has never refused encountering any task or labour. She knows better than anyone what she requires, and, moreover, it would be impossible for her to tolerate a more abundant alimentation. When told that this inanition will at last induce disease of the stomach, she says that she never was better, and suffers in nowise, her state of good health contradicting all these fears. And, in fact, the pains attendant on the early stages have diminished or disappeared or only return at long intervals—an amelioration attributed by her to the regimen she has pursued. The fasting, indeed, is not absolute, and in nowise resembles the refusal of food in melancholia. The anorexia has not increased, and especially it has not become transformed into the analogous disgust for food felt by some phthisical and many cancerous patients. The patient willingly joins her family at meals, on the condition that she is allowed to take only what she wishes.

What dominates in the mental condition of the hysterical patient is, above all, the state of quietude—I might almost say a condition of contentment truly pathological. Not only does she not sigh for recovery, but she is not ill-pleased with her condition, notwithstanding all the unpleasantness it is attended with. In comparing this satisfied assurance to the obstinacy of the insane, I do not think I am going too far. Compare this with all the other forms of anorexia, and observe how different they are. At the very height of his repugnance, the subject of cancer hopes for and solicits some aliment which may excite his appetite, and is ready for all kinds of trials, although incapable of triumphing over his disgust. The dyspeptic, without organic lesion, exhausts his ingenuity in varying his regimen, and complains with all the bitterness habitual to those who suffer from affections of the stomach. Here we have nothing like this, but, on the contrary, an inexhaustible optimism, against which supplications and menaces are alike of no avail: "I do not suffer, and must then be well," is the

(a) *Archives Générales de Médecine*, April, 1873.

monotonous formula which has replaced the preceding, "I cannot eat because I suffer." So often have I heard this phrase repeated by patients, that now it has come to represent for me a symptom—almost a sign.

If I attach to this mental condition an importance that perhaps will appear exaggerated, it is that in fact the whole disease is summed up in this intellectual perversion. Suppress this, and you have an ordinary affection which at last yields to the classic procedures of treatment. Carry it to its extreme—and you will never go too far—and then you have a dyspepsia bearing no resemblance to others, which pursues a foreknown course, and which will not be relieved by habitual means. Moreover, I do not believe that gastric hysteria is any exceptional occurrence, for in other hysterical localisations we meet with at least an equal indifference, however inconvenient and painful their manifestations may be. The subject of hysterical convulsive cough does not demand relief from a spasm which is so irritating, and sometimes so ridiculous. She joins in the chorus of those who are pitying her; but when active treatment is in question, she is more indifferent than zealous in the matter. It is the same with paraplegic patients condemned to absolute repose, and who are willing to live in this way, without ever insisting that their attendants, exhausted in useless attempts, should have recourse to heroic measures.

[Professor Laségue, after adducing some interesting examples of other hysterical localisations, for which we have not space, continues thus]—

In the end the tolerance of the economy, marvellous as this is, becomes exhausted, and the disease enters upon its third stage. Menstruation, which up to then had been insufficient and irregular, now ceases, and thirst supervenes. An examination shows retraction of the abdomen, which has not been observed before, and palpation indicates a progressive diminution of its elasticity, an habitual symptom in prolonged inanition. The epigastric region has become tender to pressure, although the patient complains of no spontaneous pains. An obstinate constipation no longer yields to purgatives. The skin is dry, rugous, and without suppleness. The pulse is frequent. Emaciation makes rapid progress, and with it the general debility increases. Exercise becomes laborious, the patient remaining willingly lying down; and when she rises she suffers from vertigo, a tendency to sickness, or even attacks of syncope. The countenance is pale, without the lips being colourless. An anæmic cardio-vascular souffle is almost constant, and which, often existing in advance of the affection, rarely fails to appear at its late period. This sketch is far from representing exactly the individual diversities that are observed. Sometimes it is the emaciation, sometimes the debility, sometimes the anæmia, with its accompanying local or general accidents, that is most prominent; while exceptionally nervous spasmodic disturbances, neuralgias, etc., arise, the active symptoms seeming to become effaced in proportion as the strength of vital resistance is diminished.

The appearance of these signs, the import of which can escape no one, redoubles anxieties, and the relatives and friends begin to regard the case as desperate. It must not cause surprise to find me thus always placing in parallel the morbid condition of the hysterical subject and the preoccupations of those who surround her. These two circumstances are intimately connected, and we should acquire an erroneous idea of the disease by confining ourselves to an examination of the patient. Whenever a moral element intervenes in a disease, as here it does without any doubt, the moral medium amidst which the patient lives exercises an influence which it would be equally regrettable to overlook or misunderstand. True and sincere affliction has succeeded to remonstrances. By the force of sentiments as much as by the necessities caused by new sufferings, the hysterical subject has been constituted really a sick person, no longer taking part in the free movements of common life. It seems to me that this unconscious change in the respective positions of the patient and her friends plays here a considerable part. The young girl begins to be anxious from the sad appearance of those who surround her, and for the first time her self-satisfied indifference receives a shock. The moment has now arrived when the physician, if he has been careful in managing the case with a prevision of the future, resumes his authority. Treatment is no longer submitted to with a mere passive condescendance, but is sought for with an eagerness that the patient still tries to conceal. The struggle thus established between the past and the present is a curious one to observe, and easy of proof providing that the investigation is in nowise allowed to be suspected.

Two courses are now open to the patient. She either is so yielding as to become obedient without restriction, which is rare; or she submits with a semi-docility, with the evident hope that she will avert the peril without renouncing her ideas and perhaps the interest that her malady has inspired. This second tendency, which is by far the more common, vastly complicates the situation. It is no easy thing to re-establish the regular function of a stomach which has so long been condemned to repose. We meet with alternatives of success and failure, and frequently only obtain a very insufficient result. I know patients who ten years after the origin of the affection have not yet recovered the aptitude of eating like other people. Their health is not deeply affected, but their amendment is very far from representing a cure.

Sometimes some unexpected event comes to break through the course of the disease—a marriage, grief, or some great moral perturbation. At others it is some physical occurrence, as a pregnancy or a febrile affection; but there are cases which resist both classes of these modifying agents. As a general rule we must look forward to a change for the better only taking place slowly—by successive starts; and we should be on our guard against affirming beforehand the amount of amelioration with which we must rest content.

Well founded as anxiety in these cases may be, I have never yet seen an anorexia terminate directly in death; but, in spite of this experimental assurance, I have passed through repeated perplexities. It is probable that the pathological sensation—the primary cause of the inanition—disappears by the fact of the increasing cachexia. It is not only of fever that we may say that it resolves spasmodic action, for the same property appertains to a great number of other morbid conditions. Delivered of her sub-delirious pre-occupation, the hysterical patient passes into the condition of other dyspeptic patients, and only presents the same difficulties in her cure that we are accustomed to meet with. Hysteria, whatever extreme violence it may attain, is not itself mortal, but it may become the occasional or indirect cause of fatal diseases; and first among these is pulmonary tubercle. The hysterical anorexia itself is always cured more or less completely at the end of years, passing through the period of decrease with an appetite that is limited or exclusive, and occasionally fantastical. I attended with Trousseau a young woman who, having been thoroughly hysterical from the time of puberty, became, without appreciable cause, the subject of an invincible anorexia. She had reached such a state of emaciation and debility that she could no longer leave her bed. Her food consisted exclusively of some cups of tea with milk. Obstinate constipation had led to serous diarrhœa, with pseudo-membranous exudations. Nevertheless she became pregnant, and under the influence of that condition she set her wits to work to find out some article of food agreeable to her stomach. During six months she lived only on *café au lait*, into which she cut slices of pickled cucumbers, only adding very gradually some feculents to this singular diet. At the present time she is in a most satisfactory state of health, although always remaining excessively lean. Generally the appetite limits itself to aliments less singularly chosen, and then a free career is given to the fancy. I remember a patient 26 years of age, who, living in a distant province, neither would nor could eat anything but a biscuit made by a particular Paris baker. Many confine themselves to a particular kind of vegetable, refusing both meat and bread; while others will only take viands, the taste of which is disguised by spices. Although these capricious restrictions are a favourable sign, the patients continue to submit themselves without any desire to the diet they have chosen for want of a better. The anorexia persists indefinitely for long after they have returned to the ordinary regimen. I have never known the disease relapse, and, once established, the relative or complete cure is maintained. At the period when the hysterical affection had yielded, or had assumed other forms, I have endeavoured to obtain from the patients some more precise information concerning the sensations they had experienced, and which had induced them to avoid food. None of them have been able to furnish me with anything more exact than what I have reported. The typical formula employed during the course of the disease was reproduced—"I could not; it was too strong for me, and, moreover, I was very well."

The cases which have served me as a basis for this memoir are eight in number, all women, the youngest being 18, and the eldest 32. Hysteria manifested its presence in all by various symptoms, and in one only there had not been paroxysms.

She was chloro-anæmic, and her mother had suffered from two attacks of hysterical hemiplegia. It was easy enough to assign the date of the commencement of the affection, but the anorexia was lost while passing through such insensible shades that the precise period of its termination could not be fixed. Speaking as nearly to the truth as possible, we may say that the affection, comprising the various phases that have been indicated, has never persisted for a less time than from eighteen months to two years.

Although these cases are few in number, they so much resemble each other that the latter ones found me in no indecision in regard either to diagnosis or prognosis, and, in fact, all passed on according to rule. In describing this variety, I proposed to myself, as I said at the commencement, to detach a species or a fragment, but especially to signalise the considerable part that is played in certain forms of hysteria by the mental disposition of the patient, and to point out yet once more the intimate relation that attaches hysteria to hypochondriasis.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Cholera in Paris—Guérin on its Origin and Propagation—Relations of Summer Diarrhœa to Cholera—Treatment of Cholera—Diagnosis of Cerebral Mischief—Value of Results of Treatment as Diagnostics—Death of Professors Coste and Nélaton.

Paris, September 22.

The Parisians are greatly terror-stricken by the presence of cholera in their capital, and I have heard some well-meaning people here remark that the hand of Providence is evidently turned against the French, as no sooner had the Prussians evacuated the territory than they have been replaced by an enemy more insidious and much more certainly deadly. The cholera has invaded the capital, and its course has been traced to Havre and Hamburg, whence it was imported by a family who lately arrived from the latter place. Whether the importation took place exclusively by this family is rather hypothetical, but what is more certain is that the disease was imported from Hamburg by a vessel from that port which put in at Havre, and that soon after its arrival there the cholera broke out and has been reigning at Havre since July 19. Following the course of the Seine, it broke out at Rouen on August 5, and reached Paris about September 5, between which date and the 8th inst. there had been about sixty fatal cases reported in the hospitals and town. This naturally excited alarm, and, as is usually the case on such occasions among our Gallic friends, there was more talk than work, and, instead of taking measures to prevent the spread of the disease, they were trying to find out where it came from. The Academy of Medicine and other medical bodies have taken up the subject; and M. Jules Guérin, who is known as a caviller, but at the same time is a great *savant* and one of the most practical men of the profession, has opened a discussion at the Academy as to the origin of cholera, which he believes to be engendered spontaneously or locally (*sur place*), and that importation of the germ is not the only means of the propagation of the disease. "This last doctrine," he says, "was an unfortunate one, and was founded on a very restricted system of pathology and sterile therapeutics, which had the effect of overthrowing national interests, and induces governments to prescribe prophylactic measures scarcely worthy of the middle ages." M. Guérin's theory of the spontaneous or local origin of cholera would appear to be supported by the occurrence of isolated cases in persons who had no communication whatever, directly or indirectly, with the family supposed to have imported the disease into Paris. For instance, M. Raynaud, Physician to the Lariboisière Hospital, has brought to the notice of the Société Médicale des Hôpitaux that three persons occupying the same house were brought to the hospital affected with cholera, and that five patients who were in the same ward suffering from other diseases were also affected with the malady; but unfortunately the report does not state whether the five patients were seized before or after the admission of the other three. Dr. De Ranse, one of the editors of the *Gazette Médicale*, also brings to notice the fact of three patients in the Hôpital St. Louis having died from cholera on September 6, and that three or four others in the same hospital were undergoing treatment for the disease. These patients, Dr. De Ranse adds, had been admitted into the hospital long before the outbreak of cholera in Paris, and none of them had gone out after its appearance. These cases, Dr. de Ranse thinks, could not have been affected by importation; but unfortunately for the thesis of these learned physicians, they seem to have lost sight of the date of the arrival of cholera from Hamburg, where it was raging, which arrival, according to the official report, took place on August 27, and consequently ten days before its outbreak in Paris. The inference therefore is that the disease was imported by this family, and that the hospital patients above noticed were victims of this importation; but how it got to them is another question, which I must confess I am not prepared to answer. M. Guérin also believes the disease to be contagious, and very properly insists upon the isolation of cholera patients as one of the first and most important prophylactic measures that should be taken on an outbreak to prevent the spread of the disease. M. Guérin likewise treated of summer diarrhœa in its relations with cholera; and, so far as I can make out, he believes that diarrhœa not only constitutes one of the symptoms of cholera, but that an epidemic of the former might lapse into an epidemic of the latter—in other words, that summer diarrhœa, if treated in time, is more readily curable, but, if neglected, might, with the concordance of certain conditions of the "medical constitution," engender the choleraic poison. This is certainly far-fetched, and I do not believe he will have many followers either in or out of the Academy. In fact, M. Fauvel, whose works on cholera are well known, intends taking up the cudgels, and is to respond to-morrow to M. Guérin's arguments. The discussion will, I am sure, be most interesting, but whether the speakers will throw much further light on the subject remains to be seen—though I question it greatly, as I often think we know as much as we ever shall know about the nature of this dire affection; for since its first appearance, more than half a century ago, our knowledge has not much increased as to its real pathology, much less as to its therapeutics. M. Guérin divided his discourse as follows:—(1) Diarrhœa which precedes an invasion of an epidemic of cholera; (2) that which accompanies the epidemic; (3) the diarrhœa which precedes each particular case of cholera—into which latter he more fully entered.

This, I must confess, is to me not very intelligible, unless M. Guérin means to show that simple diarrhœa and cholera are one and the same disease. The worthy doctor forgets, however, that diarrhœa is a symptom of many affections, and that cholera is a disease *per se*—a morbid entity,—and that diarrhœa is one of its most constant and earliest symptoms.

As for treatment, there seems as much confusion about this as about the etiology or the pathology of the disease. Every variety and form of treatment is adopted in the hospitals here, such as emetics, purgatives, opiates, astringents, stimulants—in the form of tea and rum *ad libitum*, a most nauseous mixture at any time, but more particularly so in the time of cholera. It is, however, being used as a sort of universal remedy by the French for the disease, though I have heard many people say that the very idea of the mixture excites nausea and vomiting. Isolation of cholera patients to my mind constitutes one of the most essential of the prophylactic measures that should be taken to prevent the spread of the disease, but whether it is considered such by the French physicians or not I cannot say; one thing, however, is certain—that in an epidemic of cholera, as in an epidemic of small-pox or any other contagious disease, persons so affected are placed in the ordinary wards among the other patients, and it is only when the disease has spread somewhat and taken a firm hold in the place that they think of separating the patients. The hospital cases referred to in the first part of my letter are examples of this culpable negligence. There are others of which I am personally cognisant, but these facts are so well known that I need not trouble your readers with them.

But if French physicians in general are wanting in therapeutics, their powers of diagnosis are something wonderful, and much to be admired. I have just witnessed an example of this in a case under the care of Dr. Ball, who, by the way, is an Englishman, but was brought up in the French school. A woman, aged about 40, was suffering from facial hemiplegia of the left side, accompanied by amaurosis of the right eye. The patient was subject to epileptic fits, and the paralytic symptoms which first affected the left side were becoming

manifest on the right side of the face, when the patient was carried off by cholera, which she caught in the ward. In the lifetime of the patient Dr. Ball had diagnosed a tumour at the base of the brain over the petrous portion of the right temporal bone, and compressing the nerves that pass over and through it. The death of the patient offered an opportunity for verifying the diagnosis. But this was not the only point of interest in the case, for during the life of the patient it was not sufficient to diagnose a tumour in the brain, but what the nature of that tumour was, and in an able lecture by Dr. Ball on the subject he referred to the almost insurmountable difficulties that beset the question. One of the means employed for arriving at anything like a correct diagnosis consists in the use of certain therapeutic agents. For instance, where syphilis is suspected, as it was in the case under notice, notwithstanding the protestations of the patient to the contrary, the usual anti-syphilitic treatment should be adopted. Dr. Ball accordingly prescribed Gibert's syrup, composed of mercury and iodide of potassium, which was followed by marked and rapid improvement in the state of the patient. But what added to the difficulty of the diagnosis was, the patient had no marks of syphilis on her body, and even at the autopsy Dr. Ball felt some hesitation in pronouncing the tumour to be of syphilitic origin, so much did it resemble in size and consistence a glioma; but a small spot of disease on the internal surface of one of the parietal bones removed all doubt in the matter.

This reminds me of a case I witnessed some years ago at the Hôpital des Cliniques, in which M. Nélaton, experiencing some difficulty as to the etiology of a tumour of the breast in a married woman aged about thirty-eight, administered the iodide of potassium internally, applying mercurial ointment externally, and cured the patient. At the Hôpital Lariboisière, a man, aged thirty-seven, was lately admitted in M. Tillaux's ward with a suspicious-looking ulcer on the dorsum of the tongue, near its left border. M. Tillaux questioned the man, and thoroughly examined him, but could find no trace of syphilis, particularly as the man most strenuously persisted in denying that he had been exposed to contagion. Notwithstanding this, M. Tillaux pronounced the ulcer to be a chancre, as it bore all the characteristics of that lesion, and the result of the anti-syphilitic treatment to which the patient was subjected confirmed but too strongly M. Tillaux's diagnosis.

The medical profession and science in general have sustained a great loss by the death of Dr. Coste, the eminent physiologist of the College of France, which has just taken place from an obstruction of the bowels. He was born in 1807, and from a very early age took to the study of embryogeny; he was a great piscicultor, and the inventor and propagator of ostreiculture in France. In 1834 the Academy of Sciences awarded him a gold medal for his researches on the generation of mammifers and the formation of embryos; and to enable him to develope his ideas on these subjects, he was attached to the Museum of Natural History at the Jardin des Plantes, where the young *savant* so distinguished himself that a special chair was created for him at the College of France. In 1851 he was elected Member of the Academy of Sciences in the room of M. de Blainville, shortly after which he was made Chevalier of the Legion of Honour. M. Coste, having noticed the great loss of aquatic embryos that took place in the rivers of France, devoted himself to the study of the art of multiplying fish by means of artificial fecundation. In consequence of the favourable reports that he had made on his new experiments, a model piscine was founded at Huningue, in the Upper Rhine. This establishment furnished in two years nearly 600,000 salmon and trout, with which the river was peopled. In 1855 M. Coste was charged with the peopling the artificial lake and river in the Bois de Boulogne with fish, and in 1862 he was appointed Inspector-General of River and Coast Fisheries. He published a very important work on practical instructions in pisciculture, which has already passed through two editions, and constitutes the principal guide on the subject; and on the eve of his death he had just brought to a termination his work, intended to serve as a basis for regulating the sardine fishery on the coast of France.

Science and medicine, but principally that branch of the latter termed surgery, will have to deplore another great loss in the death of Dr. Nélaton, which, though long expected, took place somewhat suddenly at his residence at Paris, at 9.30 a.m. yesterday. August Nélaton, born in 1807, was certainly one of the most eminent surgeons of the age. He took his degree of Doctor of Medicine and Surgery in 1836, and attained the highest scientific and professional status that a man could aspire to. In 1856 M. Nélaton was elected member of the Academy of Medicine in the section of Pathological Surgery, and at his death was Grand Officer of the Legion of Honour and Honorary Professor at the Faculty of Medicine of Paris. Although from his numerous occupations and an immense *clientèle* M. Nélaton could not devote much time to writing, yet the science and art of surgery had benefited greatly by his rare contributions. But if he had no other title to eminence, his success in the extraction of the bullet from Garibaldi's foot would immortalise his name. M. Nélaton leaves a widow, two daughters, and a son to bemoan their loss; the latter, a lad about twenty-one, is a medical student, and promises to walk in the enlightened path of his father.

The mortuary returns for the week ending September 19 shows a mortality of 125 from cholera in town and hospitals, whereas in the week preceding the number was 150. The sanitary condition of Paris is in other respects excellent.

September 24.

In my obituary notice of M. Nélaton I omitted to mention, among his titles, that he was made Member of the Institute in the room of the late Jobert de Lamballe; and in 1868 he was raised to the dignity of Senator—a distinction hitherto accorded to only a few of the medical profession. He was also member of several learned societies throughout the world. His funeral took place yesterday, the service having been performed in the little church in the Rue de Chaillot, near the Champs Elysées. The church was so full that many of those who attended were obliged to wait outside to follow the procession to the cemetery. Notwithstanding the absence from Paris of many of the friends and admirers of the deceased, there were several notabilities in and out of the profession to be seen at the funeral, among whom may be mentioned General de Ladmirault, the Military Governor of Paris; General Vinoy, the Grand Chancellor of the Legion of Honour; Admiral Jurien de la Gravière; M. Léon Renault, the Prefect of Police; Doctors Ricord (who seemed very much affected), Demarquay, Baron Larrey, Conneau, Campbell, and many others of less note, among whom were also to be noticed several of the clients of all classes of the deceased. The procession started from the church about two in the afternoon, the pall being borne by Drs. Bouillaud, Bouchardat, Depaul, and Béclard. The son and brother of the deceased were the chief mourners. Both the Academies of Medicine and of Sciences, as well as the School of Medicine, were represented by deputations in their official costumes, and the deceased having been Grand Officer of the Legion of Honour, the due military honours were paid to his rank. All along from the church to the cemetery the streets were lined with people to witness the procession, and on its arrival at the Père la Chaise, the coffin, after a short service, was laid in a family vault. The funeral was much simpler than it otherwise would have been, not only from his social position, but from the high offices he held under Government. In accordance with the wishes of the deceased, no funeral oration was pronounced.

OBITUARY.

DONALD DALRYMPLE, M.D. and M.P.,

Died suddenly at Southampton on Friday week, aged 59 years. The deceased was born at Norwich in 1814, in which town he afterwards practised. He became a Member of the College of Physicians, London, in 1859, but retired from the profession in 1862. He was a magistrate and Deputy Lieutenant of Norfolk and Chairman of the Governors of the King Edward Schools at Norwich. The deceased gentleman represented Bath in the House of Commons, but had announced his intention not to seek re-election for that city. It is understood the deceased never quite recovered from the effects of his too hurried visit to the United States in the winter of 1871 and 1872; the fatigues he then underwent told, it is said, to some extent on his constitution. Dr. Dalrymple was a member of a family which shed lustre upon our art. His father was a great surgeon, and his brother John one of the ablest and most philosophical ophthalmic surgeons of the day. Dr. D. Dalrymple is not associated with any works on professional subjects. He will be remembered chiefly for a Bill which he introduced into Parliament on more than one occasion for the treatment of habitual drunkards. In this he was actuated by the most philanthropic motives. We have frequently, in the pages of this journal, expressed our opinion on the character and merits of this Bill—which, if

in some respects Utopian and impracticable, might, we think, form the foundation of a useful and practicable measure. The remains of Dr. Dalrymple were removed from Southampton to Norwich for interment.

ALEXANDER WORTMANN, L.R.C.P.L.,

A MEDICAL practitioner at Gibraltar, has, owing to a matrimonial disappointment, committed suicide. He sat down in a chair, placed the muzzle of his gun in his mouth, and pulled the trigger by means of a piece of string which he had previously attached to it, and his head was shattered to pieces.

MEDICAL NEWS.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BROWN, GEORGE, L.S.A.—Demonstrator of Anatomy to the Westminster Hospital Medical School, *vice* Mr. Ramsay, resigned.

LEVINGE, E. G., A.B., M.B. Univ. Dub., L.R.C.S.I.—Assistant Medical Officer to the Borough Lunatic Asylum, Newcastle-on-Tyne.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Robert Nelson, Surgeon to the *Serapis*.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon Edward M'Carthy, M.D., retires upon temporary half-pay; Surgeon Robert Edward Bredon, M.D., resigns his commissiou.

BIRTHS.

FEGAN.—On September 22, at 1, Charlton-park-terrace, Charlton, S.E., the wife of Richard Fegan, M.D., L.R.C.P., of a daughter.

HAYES.—On September 17, at 5, Villa-road, Brixton, the wife of Surgeon-Major W. H. Hayes, Bengal Medical Service, of a daughter.

MIDDLETON.—On September 14, at Dublin, the wife of Surgeon J. Middleton, M.D., Army Medical Department, of a daughter.

ROWLANDS.—On September 6, at 4, Spilman-street, Carmarthen, the wife of James D. Rowlands, M.R.C.S. Eng., L.S.A., of a daughter.

SPENDER.—On September 14, at Bath, the wife of John Keut Spender, M.D., of twins—a son and daughter.

MARRIAGES.

BEALES—COBB.—On September 11, at St. Peter's Church, Congleton, Robert Beales, M.D., J.P., to Sarah Georgiana, elder daughter of the late John Cobb, Esq.

HEATH—MAYNARD.—On September 18, at the Catholic and Apostolic Church, Bridgnorth, Christopher Heath, F.R.C.S. Eng., of 9, Cavendish-place, Cavendish-square, W., to Gabrielle Nora, third daughter of the late Captain Maynard, R.N., of The Croft, Bridgnorth.

HOPE—MARTIN.—On September 17, at Dowlais, Glamorganshire, John Hope, M.R.C.S., Elden-square, Newcastle, eldest son of Thomas Murray Hope, Esq., Westoe, South Shields, to Jessie Anne, only daughter of George Martin, Esq., Dowlais.

McMULLEN—PRINCE.—On September 17, at the Abuey Congregational Church, Stoke Newington, William McMullen, L.K.Q.C.P., L.R.C.P.I., Brixton, to Charlotte Maria (Lottie), eldest daughter of W. Prince, Esq., of Stoke Newington and Kingsland-gate.

RIDLEY—HALL.—On September 10, at the parish church, Hempnall, Norfolk, James Ridley, M.D., son of George Ridley, Esq., J.P., of Tullamore, King's Co., to Emily Elizabeth Sarah, daughter of the Rev. George Hall, vicar of Hempnall.

WITHERS—WHITEHOUSE.—On September 18, at Christchurch, West Bromwich, Richard Walter Owen Withers, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., of Shrewsbury, to Martha, third daughter of the late Joseph Whitehouse, Esq., of Handsworth.

DEATHS.

COOKE, JOHN CHARLES, M.R.C.S.E., L.S.A. Lond., late of Newent, Gloucestershire, at the residence of his son, Montague House, Hastings, on September 19, aged 66.

CRUICKSHANKS, JAMES, L.F.P.S. Glasg., at his residence, Ayton, Berwickshire, on September 9, aged 43.

DALRYMPLE, DONALD, M.R.C.P., F.R.C.S., M.P. for Bath, on September 19, after a few hours' illness, aged 59.

DYMOCK, ARCHIBALD, M.D., M.R.C.P. Lond., J.P., eighth son of the late William Dymock, W.S., of Edinburgh, at Louth, Lincolnshire, on September 17.

FENTON, EMILY, wife of C. D. Fenton, M.D., at Doncaster, on September 17, aged 57.

GIDLEY, GUSTAVUS, M.R.C.P., J.P. for the county of Kent, at 19, Durham-terrace, Westbourne-park, on September 22, nine days after the death of his wife, aged 64.

WILLIAMS, W. R., M.R.C.S. Eng., L.S.A., at 41, Finchley-road, South Hampstead, on September 21.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

CHELTENHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to E. T. Brydges, Clerk to the Urban Sanitary Authority, Public Offices, Cheltenham, on or before October 11.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimouials, to John Binks, Esq., Honorary Secretary, Wakefield.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Medical Officers Candidates must be duly qualified. Applications, with testimonials, to P. Goldschmidt, Esq., Chairman of the Board, 100, Albert-square, Manchester, on or before October 15.

QUEEN'S HOSPITAL, BIRMINGHAM.—Fourth Physician. Candidates must be duly qualified. Applications, with testimonials, to the Committee, on or before October 3.

ROYAL CORNWALL INFIRMARY.—House-Surgeon, Secretary, and Dispenser. Candidates must be duly qualified. Applications, with testimouials, to the Treasurer, Robert Tweedy, Esq., Truro, on or before October 8.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

West Ward Union.—Mr. Thos. J. E. Brown has resigned the Morland District; area 22,170; population 2575; salary £25 per annum.

APPOINTMENTS.

Carnarvon Union.—John Jones, M.R.C.S. Eng., L.S.A., to the Llanrug District.

Romney Marsh Union.—Richd. R. Daglish, M.R.C.S. Eng., L.S.A., to the Brookland District.

THE next session of the Bavarian Diet has been postponed on account of the prevalence of cholera.

IN Wolverhampton the typhoid epidemic is proving rather serious. In all twelve deaths have been reported. In two fatal instances the residence shows no defect, but the families in which these occurred received milk from a dairyman whose milk is suspected to be polluted.

WE are glad to see that the announcement of the death of the third child of the Rev. George Everard at Wolverhampton from typhoid fever is contradicted.

THE Portumna Board of Guardians have increased the salary of the Medical Officer of the Portumna Dispensary District from £100 to £120 per annum, and a proposition to increase the salaries of the other medical officers is to be considered at the next meeting.

TEN PERSONS were on Thursday week fined 20s. and costs by the Marylebone magistrates for refusing to have their children vaccinated. The Paddington Board of Guardians prosecuted.

AN outlay of £10,000 is to be made in improvements, hygienic and otherwise, in the North Surrey District Schools at Anerley. We hope these improvements will have the effect of greatly diminishing ophthalmia, which has so long been prevalent among the children at these schools.

THE Portuguese Government having declared the port of Hull infected with cholera, the Medical Officer of Health, Mr. Fearne Holden, has published a certificate that the port is entirely free from cholera.

AT an inquest held by Dr. Lankester on Saturday last, at Hampstead, on the body of a boy who was found drowned in the Vale of Health Pond, Hampstead Heath, the jury returned a verdict of death from accidental drowning, and, at the suggestion of the Coroner, added a rider to their verdict calling the attention of the Metropolitan Board of Works to the dangerous condition of the Vale of Health Pond, and strongly recommending to the Board the propriety of converting the ponds on Hampstead Heath into public bathing-places for comfortable and healthful bathing. The Coroner pointed out that the question was a metropolitan one.

DEATH OF PROFESSOR COSTE.—Science has sustained a terrible loss in the person of M. Coste, who has just died in his sixty-fifth year, in consequence, it is said, of intestinal strangulation. His magnificent works on embryogeny procured for him the creation of a special chair in the Collége de France. Born near Montpellier, M. Coste commenced studying medicine under Delpèch, but, becoming absorbed by his favourite embryological studies, he never took his doctor's degree. These studies, among other fertile results, led to his interesting researches on pisciculture which have of late years so familiarised his name with the public, and promise to open new and important sources of alimentation.

WHAT NEXT?—A committee of homœopathic physicians in Prussia, speaking for their branch, have addressed a formal petition to Prince Bismarck, requesting that professional chairs for homœopathy may be added to the universities.

and that medical inspectors may be appointed to insure proper supervision of the homœopathic practice.

ST. THOMAS'S HOSPITAL.—At a meeting of the Grand Committee on Tuesday, the 23rd instant (Sir Francis Hicks in the chair), Mr. Alexander Oberlin McKellar, F.R.C.S., of the Royal Free Hospital, was elected Resident Assistant-Surgeon in the vacancy occasioned by the promotion of Mr. Wagstaffe as Assistant-Surgeon. Dr. McKellar, who has seen considerable practice already, served also throughout the Franco-German war. The Committee of Management of this Hospital may be congratulated on the admirable selection of its medical and surgical staff. The inaugural address will be delivered on the 1st proximo by Dr. Harley.

DR. ALEX. S. MERRICK, the Assistant Medical Officer of the Cork District Lunatic Asylum, having been appointed Resident Medical Superintendent of the Donegal Lunatic Asylum, Letterkenny, the Governors of the former, at their last meeting, upon the motion of Sir Thomas Tobin, passed the following resolution:—"The well-deserved promotion of Dr. A. S. Merrick to the position of Resident Medical Superintendent of the Letterkenny District Lunatic Asylum necessarily deprives this institution of his valuable services: we, the Governors, feel we cannot allow his departure from us without recording the high sense of respect we entertain towards him, the confidence placed in him, and the great satisfaction we always experienced at the manner he discharged his very responsible duties during the period (nearly three years) he was connected with this institution. Many of us have had constant opportunities of observing the attention and regularity he invariably evinced in the working of this large Asylum—the largest (except Richmond) in this country,—more particularly since the decease of the late resident superintendent, Dr. Power, when the entire responsibility of the efficient management of the Asylum devolved on him. His uniform care and kindness to the unfortunate patients entrusted to his charge have invariably met with the cordial approbation of the Board of Governors. The promotion of Dr. A. S. Merrick from this Asylum we hail with feelings of pride and pleasure at the well-merited recognition of his services by his Excellency the Lord Lieutenant. At the same time we regret losing so valuable, so painstaking, and so efficient an officer, and we feel confident that he carries with him to his new sphere of duty the good opinion and best wishes of this Board for his future advancement and welfare in life."

EPIDEMIC OF ACUTE GOÎTRE.—An epidemic of goître, or thyroiditis, has prevailed for the last three months at St. Etienne, and the War Office has sent special inspectors to investigate the causes, which at present are quite obscure. The disease obstinately resists the iodine treatment, any amendment being followed by speedy relapse. At first the epidemic only affected the men of the 75th Regiment of the Line, but it has since extended to those of the 96th, as well as to the cavalry—the entire garrison, indeed, being menaced by it. In the neighbourhood of the barracks the civil population remains entirely free from the disease, not a single case among them having been met with.—*Gazette Méd.*, September 20.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Aqua.—The hospital for the non-alcoholic treatment of disease, in Gower-street, will be opened next month. Sir Walter Trevelyan is president.

An Army Surgeon.—The total area of British India is officially stated at 950,919 square miles.

Guest.—Received with thanks.

Titus.—The total cost of inquests in England and Wales, including salaries and expenses, last year was £78,534 18s. 7d., being an average of £3 1s. 1d. on each inquest; in the previous year it was £80,446 10s. 9d., or £3 2s. 1d. in each.

Dr. S., Guy's.—Mr. Bransby Cooper died suddenly at the Athenæum Club on August 18, 1853. The report of the post-mortem examination of his body will be found in the *Medical Times and Gazette*, vol. xxviii., p. 248.

H. M., Norwich.—The late Mr. Donald Dalrymple, M.P. for Bath, was admitted a Member of the Royal College of Surgeons on August 19, 1836, and a Fellow on June 1, 1854. With another member of the House of Commons, Dr. Brady, he attended the memorable meeting convened in reference to the Medical Acts Amendment Bill; and always took a great interest in the affairs of the College, and was present and spoke at the last festival of the Fellows at the Albion Tavern. A bust of his lamented brother adorns the Hall of the College of Surgeons.

The Carl Kidnappers.—The leading article in the *Times* on the infamous conduct of Dr. Murray and his associates, two of whom were sentenced to fifteen years' penal servitude, will surely induce the University of which he is graduate to remove him from its roll.

A Fellow.—There will be one absolute vacancy in the Council of the College of Surgeons next July, caused by the resignation of the last life member,—viz., Mr. J. F. South, who was elected so long ago as 1841.

D. Sussex, Kensington, inquires what progress has been made with regard to the "John Hunter Memorial Window" for Kensington parish church, to which he subscribed some time since. Messrs. Frank Buckland or J. J. Merriman, the honorary secretaries, are the gentlemen to whom he should apply.

Examination.—Excited Student: Did I pass my examination, Doctor? Doctor (with proud scorn): No, Sir. [Off dances student radiant with smiles.] Doctor: You misunderstand me; you failed, sir! Incorrigible Student: Ah! but I won a bet, you see. [Doctor staggers.]

Frank C. G.—The lines,

"I am an Englishman, and naked I stand here,
Musing in my mind what raiment I shall wear,"

are to be found in a work by Andrew Borde, a physician and miscellaneous author of eccentric character in the sixteenth century, entitled "A Right Pleasant and Merry History of the Mylace of Abingdon," etc.

A DOCTOR'S LOG.—No. IV.

(*Continued from page* 346.)

One hot, stifling morning in the Red Sea, when the glare of the sun, the feeling of being smeared with hot treacle, the sickening smell of sheep and garlick, were peculiarly oppressive, Mr. Hewlett, the chief engineer, kindly allowed me to visit the engine-room, stoke-hole, and the screw-alley, the latter (unless memory fails) 125 feet long. One officer, Mr. Kubbs, kindly answered medical questions, and in addition showed his registers, likewise explained all arrangements down below. The temperature of the engine-room was 100° Fahr., that of the stoke-hole 98°, and the sea water 76°; these numbers occasionally rising to 120°, 118°, and 84° respectively. There were forty-two European stokers in addition to thirty-six natives, the duties of the latter mainly consisting in filling the trucks with coals, each truck on a tramway overhead leading to the furnaces. Apparently the Europeans have to stand the most heat, and do so remarkably well, if temperate, careful as to flannel and the avoidance of chills. My informant, a water-drinker, had been four years in present ship without a finger-ache, enjoying life, sleeping well, not particularly thirsty, although constantly exposed to heat—a married man, his wife and children healthy. The only illness at all common amongst stokers appeared to be rheumatism; but as to skin diseases, ophthalmia, hepatitis, dysentery, apoplexy, or epilepsy, nothing could be ascertained beyond the fact that most of the present stokers had been three years employed, and beyond burns, scalds, and injuries, seldom complaining. It stands to reason, after prolonged absence on shore in England, the heat at first causes loss of weight and dyspepsia, conditions soon ameliorating. Incidentally, from other sources, it was very pleasant to hear that many of the sailors were water-drinkers, some married with comfortable homes, and not a few with money in the savings bank.

Whilst on the subject of temperature, as a matter of comfort, cleanliness, and convenience, white clothes on shore of course should be worn, but on board ship, with a limited kit, difficulties about washing, white jackets and trousers soiled only too rapidly; blue serge far more serviceable, the same going up country. The heat, say to-day, February 8, in latitude 17·31° N., longitude 40·23° E., is only 92° Fahr. in the sun, about 80° in the shade, about 83° in the cabins under the saloon on the starboard side; and before the hint is forgotten, in going out always try to get on the port side—the reverse coming home. The sirocco warm damp wind makes everyone feel wretched, in a bath of perspiration, greasy, and dirty. At night some officers sleep on deck, others out in passages under the poop, the ladies and remainder in their cabins. The ventilation (facilitated by steam) in some cabins and portions of the ship excellent, especially where there are ports in the centre; where light and air are limited rather trying—tossing, turning, steaming, or else feeling like a hot cinder, sleep for hours either vanished or obtained by fits and starts, the breathing becomes oppressed, a sensation as if suffering from pneumonia, the lungs will not expand, the heart's action laboured, the pulse slow and feeble; and as the long hours of the night drag on, the condition somewhat improves only when the gong sounds for breakfast. Many people would disbelieve all this, fortunate in their ignorance. Mr. Hewlett, who states that stokers are good for eighteen years' work in all climates, informs me that for years 140° of Fahr. have not troubled him—a perfect salamander! Writing without the advantage of book reference, it is impossible to compare the health of the soldiers with sailors, nor is the comparison fair, the latter commencing as children; and many a puny lad by good living, sea air, and healthy occupation has shaken off the infantile taint of scrofula, phthisis, debility, and what not when transformed into the jolly Jack Tar, who, in addition to partiality for rum, tobacco, hornpipes, and the succour of lovely woman in distress, is a first-rate man at his own business, obedient, respectful, brave, and contented, as remarked before.

Some people, too, have an idea that naval medical officers sometimes oscillate between brandy-and-soda and the microscope, unaware that from time immemorial naval surgeons have been the pioneers of medical science as well as distinguished naturalists and observers in far distant unexplored quarters of the globe; for the army doctor also has leisure and opportunity of seeing strange things and curious countries, but being on shore hunting, shooting, fishing, a thousand things divert his attention compared to his professional brother cooped up in a ship. In the way of sanitation but little to say, excepting that the men, pumped on with the hose every morning, appear on parade, their short sleeves rolled up, chest exposed, legs bare for medical inspection daily. The women and children are looked at, their quarters visited and meals attended; the ship authorities are very keen to detect and prevent any nuisances; the troop hammocks and blankets are brought up every morning (except Thursdays, reserved for women and children), and hung over the ship side-rails to be aired.

Whilst at dinner the alarm "A man overboard!" given; instantaneously a trigger pulled, lowers a life-buoy with a blazing port-fire attached indicating position at night; with almost equal rapidity, two boats quietly pull off, the engine stops, the huge vessel swings round. The lad, who fell about

thirty-five feet into the warm salt waves, swam to the buoy, which resembling a floating basket with bars underneath to keep off sharks, contains, in a locker, liquid suction food sufficient for twenty-four hours' sustenance. In 1870, out of a force of 46,710 sailors and marines, 478 were lost in the *Captain*, 41 in the *Slaney*, 28 fell overboard, 4 capsized, 2 washed overboard, 4 found drowned, 1 fell from a pier, another from a buoy, and 5 otherwise drowned.

The last evening in the Red Sea very oppressive. The wind rising, the ports unavoidably closed, whilst, to crown misery, a full-flavoured ayah sleeps close to the cabin door, vitiating the atmosphere; still further we think of the Black Hole at Calcutta, and of Messrs. Shadrach, Mesech, and Abednego. On deck the damp, moist, salt, sandy wind induces abdominal cramp and rheumatic pains (but Paradiso compared to down below, generally termed Pandemonium), whilst, the extraordinary indescribable splendour of the moon shedding a brilliant flood of quicksilver effulgence over the endless expanse of water—sleep vanished.

February 10: Pass between the mainland and a miserable island called Perim, containing a lighthouse, and a fort garrisoned by two companies of native infantry. Aden, a volcanic cinder with but one tree and no water is bad enough, but a gay and festive place compared to Perim. The Straits of Babelmandeb lead us into the Indian Ocean, with 1719 more weary miles to Bombay, and about 1000 miles up country after. Bring not the bagpipes to people in trouble. In spite of endless resources, time drags most wearily—ages apparently have elapsed since leaving England; besides, it makes all the difference which way the horses' heads are turned, some already wondering will they lose their health or their lives in Hindostan, or return to the old country to find themselves forgotten. We intend to be at Bombay in eight days *D.V. and weather permitting*, and as the Scotchman said, to reach final destination about a week after *anyhow*.

(*To be continued.*)

COMMUNICATIONS have been received from—

Dr. Von Tunzelmann; Dr. Ward Cousins; Dr. Hogg; Dr. Bathurst Woodman; Mr. Chatto; Dr. Semple; Mr. Lockhart; The Secretary of University College; Mr. R. Kershaw; Mr. Erichsen; Dr. Henry MacCormac; Mr. E. V. Levinge; Mr. J. Coone; Dr. Phillips; The Spleen; Mr. A. F. Barker; Mr. Walter W. Reeves; Mr. T. M. Stone; Dr. E. Symes Thompson; Mr. N. Alcock; Dr. Fayrer; Dr. Bruce; Mr. George Brown; The Principal of King's College; Mr. Matthew B. Sutton.

BOOKS RECEIVED—

Fawcett and Bazley's Speeches on the Factory Acts Amendment Bill—Smee's Letters on Milk, Typhoid Fever, and Sewage—English Matrons and their Profession, by L. F. M.—Wilson's Lectures on Dermatology, 1871-73—Fry's Royal Guide to the London Charities—Report of the Training Hospital, Tottenham—Wilson's Anatomist's Vade Mecum, ninth edition, edited by Buchanan—Nicholson's Outlines of Natural History—Flint's Principles and Practice of Medicine, fourth edition—Toulon: Its Advantages as a Winter Residence, by an English Resident.

PERIODICALS AND NEWSPAPERS RECEIVED—

Gazette Médicale—London Medical Record—Centralblatt für die Medicinischen Wissenschaften—Berliner Klinische Wochenschrift—Birmingham Morning News—Gazette Hebdomadaire—Pharmaceutical Journal—L'Union Médicale—Tribune Médicale—Gazette des Hôpitaux—Le Mouvement Médical—Le Progrès Medical—La Fraucc Médicale—The Grant College Students' Journal—Journal of the Scottish Meteorological Society, July.

APPOINTMENTS FOR THE WEEK.

September 27. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

29. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

October 1. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Royal Microscopical Society, 8 p.m. Mr. F. Kitton, "A Description of some New Diatomaceæ." Dr. Maddox, "On an Organism found in Fresh Pond-Water."

2. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

3. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 20.

BIRTHS.

Births of Boys, 1032; Girls, 1096; Total, 2178.
Average of 10 corresponding years 1863-72, 2095·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	655	578	1233
Average of the ten years 1863-72	639·3	596·4	1235·7
Average corrected to increased population	...	....	1359
Deaths of people aged 80 and upwards	...	...	38

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	2	2	2	...	6	1	27
North	751729	...	1	2	1	5	...	7	1	23
Central ...	334369	...	...	1	1	5	1	2	1	7
East	639111	1	12	5	3	8	2	2	3	37
South	967692	...	10	2	2	5	2	5	1	33
Total	3254260	1	24	12	9	25	5	22	7	127

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·613 in.
Mean temperature	55·0°
Highest point of thermometer	69·7°
Lowest point of thermometer	43·8°
Mean dew-point temperature	49·4°
General direction of wind	W.
Whole amount of rain in the week	0·97 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 20, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Sept. 20.	Deaths Registered during the week ending Sept. 20.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2178	1233	69·7	43·8	55·0	12·78	0·97	2·46
Portsmouth ...	118280	12·4	72	37	68·4	46·0	57·1	13·94	1·33	3·38
Norwich	81677	10·9	44	39	69·0	42·0	52·8	11·56	0·86	2·18
Bristol	189648	40·4	145	98	67·0	45·8	53·6	12·00	1·23	3·12
Wolverhampton ...	70084	20·7	50	42	68·1	43·8	53·6	12·00	0·89	2·26
Birmingham ...	355540	45·4	268	182	68·4	44·7	53·6	12·00	0·85	2·16
Leicester	102694	32·0	94	55	67·5	43·7	53·6	12·00	0·53	1·35
Nottingham ...	89557	44·9	68	49	66·1	44·3	52·5	11·39	0·78	1·98
Liverpool	505274	98·9	352	225	65·8	46·1	54·4	12·44	0·40	1·02
Manchester ...	354057	78·9	261	213	70·0	45·0	53·2	11·78	1·08	2·74
Salford	130468	25·2	96	78	68·3	43·5	52·8	11·56	0·86	2·18
Oldham	85141	20·4	54	32	62·0	...	...	...	1·09	2·77
Bradford	156609	23·8	101	61	63·6	46·0	52·6	11·44	0·82	2·08
Leeds	272619	12·6	219	143	63·0	44·0	52·7	11·50	1·09	2·77
Sheffield	254352	11·1	203	137	69·0	44·5	53·2	11·78	0·89	2·03
Hull	128125	35·9	99	68	69·0	43·9	52·4	11·33	0·90	2·29
Sunderland ...	102450	31·0	70	55	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	98	75	...	...	...	...	...	...
Edinburgh	208553	47·1	118	70	...	...	...	...	...	...
Glasgow	498462	98·5	319	222	60·7	43·4	50·8	10·44	2·03	5·16
Dublin	314666	31·3	186	135	65·0	40·3	53·6	12·00	0·23	0·58
Total of 21 Towns in United Kingd'm	7507575	34·5	5095	3249	70·0	40·3	53·4	11·89	0·93	2·36

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·61 in. The lowest was 29·08 in. on Monday at noon, and the highest 29·99 in. on Friday at noon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

THE

TENDENCIES OF MODERN SURGERY:

BEING THE INTRODUCTORY ADDRESS DELIVERED AT UNIVERSITY COLLEGE, OCTOBER 1, 1873.

By PROFESSOR ERICHSEN.

GENTLEMEN,—In no department of science has the intellectual activity of the present age wrought a greater change in a comparatively short space of time than in that of medicine.

In a period that is within the ready memory of many, which to me seems but as yesterday, though it is separated from us by a span of years equal to the lifetime of the generation, the changes that have taken place in medicine in almost all that concerns its pathology, and in much that relates to its practice, have been so continuously great, and their progress at times so rapid—indeed, so sudden and so unexpected—as almost to amount to a revolution.

For truly it has been by no slow and progressive movement, but by sudden leaps and great bounds, that medicine has been carried forward in its onward march since that time when the microscope first became an instrument of daily necessity in the elucidation of its pathology, and anæsthetics of hourly employment in its practice.

The study of the causes that have influenced in so signal and undoubtedly in so favourable a manner the onward progress of the science and art of medicine is full of interest—not as a subject of barren antiquarian research, but as one having an important and vital bearing on the future of our profession. And it is as interesting as it is useful to point out the circumstances that appear to have more directly and immediately led to the great changes that we see around us—to endeavour to gain from them an insight into the direction towards which modern medicine is tending, and to trace out those lines of thought and of action that may most profitably be followed in the immediate future with the best prospect of yielding the speediest and the richest harvest of practical results. But to do this with the whole of the great subject of medicine would not only occupy more time than I have at my disposal, but would lead me into paths with which I am but imperfectly acquainted; and I will therefore restrict myself to the consideration of these questions as they affect that department of medicine in the study and practice of which my life has been spent, and in the teaching of which I have been engaged in this College and in that Hospital for nearly a quarter of a century.

There are essentially and distinctly two great schools of surgery in this country—the *practical* and the *scientific*. But although I may broadly divide modern surgery into these two schools, I do not for one moment wish it to be supposed that I consider them as being absolutely separated by a hard and fast line. What I mean is, that there is a tendency in the mind of every surgeon to gravitate more or less distinctly in one direction or another towards the practice of the art or the study of the science of surgery.

We will examine briefly the more distinctive characteristics of each of these schools, trace their more recent advances, and endeavour to penetrate into their immediate future.

And first let us take the practical school. Rendered resplendent as it has been by the names of the Heys and of the Clines, of the Coopers and Aston Key, of Liston, Crampton, and Syme, it is that which is and ever has been the most popular in this country, for it is most in accordance with the practical genius of the British people, with their inborn and instinctive aptitude for mechanical pursuits and manipulative action, as it is also certainly that which is most in unison with the primary objects of a practical calling such as that of the surgeon.

In tracing the progress of surgery as a practical art, and determining the causes that have led to the great development of its mechanical and manipulative departments, I must carry you back with me for a short period in its history, and ask you to devote a few minutes to the contemplation of what operative surgery was but one generation back, how it has since progressed, and then to consider not only the main causes that have led to that progress towards perfection, but to direct our attention to the course which it is at present tending to take.

One generation back—say thirty-five years ago—the anatomical school of surgery had reached its acmé of development. Popular prejudice had been arrayed against the study of anatomy, but it had been prosecuted with zeal by a chosen few. Those practical anatomists necessarily became the operating surgeons of the day. By them surgical anatomy was assiduously studied, and those operations which had for the basis of their successful performance a thorough knowledge of the relations and structure of different parts of the human frame, such as the ligature of the larger arteries, the operation for strangulated hernia, and that of lithotomy, were often and doubtless skilfully practised. If we add to these the frequent performance of amputations, rendered necessary by the very imperfect knowledge that surgeons then possessed of the pathology of diseases of the joints and bones, the removal of some tumours, chiefly of the breast, and the performance of a few of the many minor operations which have now so greatly multiplied in frequency, we shall have a *résumé* of all that took place and that might be witnessed in the operating theatre of those days.

If one of those great men whose names we justly venerate as those of the giants of a past generation of surgeons; if the Clines or the Coopers—aye, even the Listons and the Aston Keys—were to revisit, not "the pale glimpses of the moon," but the scene of their former triumphs, and were to appear again in that bright light of professional observation and in the broad glare of that not altogether unfriendly criticism that is shed on the central figure in the operating theatre of one of our metropolitan hospitals, he would find that in many cases he would have to learn his work afresh, and that he would be more fitted to take his seat on the benches amongst the pupils than his stand in the area amongst the teachers of his art. But not only would this be the case during the operations themselves—it would be equally so when he witnessed the treatment of the wound: the arteries closed by torsion, acupressure, or carbolised catgut for ligatures, metallic wire for sutures, antiseptic muslin, guards and protectors for dressings, and skin-grafting for the promotion of cicatrisation.

By some of the distinguished surgeons of the period of which I am speaking, operations were doubtless admirably and skilfully performed; but it is equally certain that by a large proportion of surgeons they were done timidly, slowly, often in a slovenly manner, without definite or precise rule.

In fact, thirty-five years ago surgery had fallen in its manipulative art into a sluggish and almost stagnant state. In the two greatest operations in surgery—those for stone and for aneurism—there had been no advance in one since Cheselden, nearly a century before, had so successfully operated; or in the other since John Hunter, more than half a century previously, had linked his name inseparably with the operation for aneurism.

But this stagnation could not long endure, and the breath that gave new life to surgery, and that infused fresh vigour into its art, came from the north.

Whilst surgery slumbered in the south, it had for some years been endowed with an extreme degree of activity in the north, and it was rapidly becoming revolutionised and perfected in its art by the skill, the energy, and the teaching of a band of distinguished men—nearly cotemporaneous—who gave lustre to the great school of surgery which at that time flourished in the northern metropolis. To Lizars and to Liston, to Syme, and to the youngest, but not the least brilliant, of that bright constellation of northern stars, to William Fergusson, British surgery is undoubtedly indebted for much that is its peculiar glory and chief characteristic in its operative department; and it was at this period and from that school that modern British surgery drew its deepest inspiration, and received its first great and decided impulse in all that relates to its art and manipulative department. The great characteristics of this school of surgery were boldness in the conception, and rapidity, precision, and simplicity in the performance of operations. By the boldness of their conceptions, these surgeons were led to contemplate and successfully to execute operations that had never or but rarely been attempted in this country.

The rapidity with which these operations were conducted, was, in those pre-anæsthetic days, as much valued by the patient as it was admired by the surgical spectator.

But the great merit of this school, and that quality which has exercised the most marked and enduring influence on operative surgery in this country, was the introduction of the most perfect simplicity, combined with the most accurate precision in the method of operating. These surgeons used few and uncomplicated instruments, and they taught that the knife might be wielded in surgery in a practised hand with the same skill and the same certainty that the master of a craft exercises in the handling of any instrument that is employed in his calling.

In all these respects, Robert Liston, the then foremost member of that band of distinguished surgeons, was excelled by none. His influence was soon felt after his arrival in London, and his example is often unconsciously imitated in many an operating theatre at the present day. I would willingly, if time permitted me, pay a tribute of respect to his transcendent surgical genius, to which full justice has never yet been rendered. Cut off in the fulness of his matured experience and of his professional activity by a death as sudden as it was premature, Liston died too early for the full accomplishment of his fame, but not too soon for the fruition of his example.

Cotemporaneous almost with Liston's death, though preceding it by a few months, occurred that other great event which more than any other has tended to raise modern surgery in its manipulative department to the highest point of excellence. For the introduction of anæsthesia not only enabled the surgeon to practise many operations which the fortitude of a patient would hardly have enabled him to endure, but it tended to popularise operative surgery in the profession, and by inducing many men to become operating surgeons who would otherwise have shrunk from the daily infliction of suffering as a necessary part of their calling, it greatly extended the habit and the practice of operating, and made that the business of the many which had previously been the attribute of the few.

During the ten years which immediately preceded the introduction of anæsthesia, surgery partook of that great advance which characterised all the natural and physical sciences. In those days of mechanics' institutes and of societies for the promotion and diffusion of useful knowledge, surgery did not lag behind in the race, and the zeal with which surgery had been studied led to the establishment of various distinct departments within the precincts of the art itself, in each of which the treatment of numerous surgical affections by operative means was diligently and extensively carried out. That operation which had been devised by the genius and perfected by the skill of Stromeyer, became the foundation on which the great department of orthopædic surgery was reared. Ophthalmic surgery became an art in itself, rather than a branch of general surgery. Plastic surgery and the surgery of diseases peculiar to women had each their own special adepts, and conservative surgery had its limits widely extended. At this time, also, many operations that had previously fallen into disuse were revived, were frequently practised, and took an established place in surgery. Lithotrity came to be practised in the hospitals, and was slowly substituted there for lithotomy. That great triumph of the surgeon's art, ovariotomy, was frequently practised and greatly improved; and various other operations received a new and vigorous impulse. The whole of the art of surgery in its manipulative department was carried by the combined efforts of a number of active and zealous practitioners to a point of perfection far beyond any that it had heretofore attained, and very far in advance of what it had occupied but a very few years previously.

The gain resulting from this advance in our art can never be lost, and has been permanently secured to surgery and to mankind. There is no retrogression in surgery. Every conquest that has been made has been permanently secured. The march has ever been onward, and year after year some new position has been occupied—often, it is true, after a hot contest of opinion. But once gained it has never been lost, and thus our standpoint has ever been pushed further in advance. For skill in art is a tradition which is hereditarily transmitted, if not by the individual, yet by the profession to which he belongs, from which he has acquired and to which he transmits it.

What our predecessors have done we well know and can readily accomplish. In what we can do our successors will not fail.

That there must be a final limit to development in this department of our art there can be no doubt. The art of surgery, like all other manipulative, plastic, or imitative arts, can only be carried to a certain point of excellence. An art may be modified,—it may be varied,—but it cannot be perfected beyond certain definite limits. And so it must be with surgery. There cannot always be fresh fields for conquest by the knife. There must be portions of the human frame that will ever remain sacred from its intrusion—at least, in the surgeon's hand.

That we have nearly, if not quite, reached these final limits there can be little question. When we reflect that every large artery up to the aorta itself has been ligatured—that each of the six large articulations and many of the bones have been resected—that the amputation of each limb up to the shoulder- and hip-joints is a matter of ordinary surgical occurrence—that large tumours having the most intricate anatomical connexions have been removed from every surgical region in the body, from the base of the brain to the lowest organ in the pelvic cavity—when we reflect, I say, on triumphs of the surgeon's art that are expressed by operations such as these, we can scarcely believe that much remains for the daring of the boldest to devise, or the skill of the most dexterous to accomplish, in the extension of that art in the direction of the operative department of our profession, and that he must in future be content to repeat, though possibly in a modified and improved manner, those operations that have been inaugurated by the genius and perfected by the skill of his predecessors.

It is true there are yet regions that have rarely been successfully invaded by the scalpel, though they have been contemplated as possible seats of future surgical operations. But it has yet to be determined whether the extirpation of the kidney and of the spleen is more than a bold experiment on the power of endurance of the human frame; whether it is a surgical triumph or an operative audacity.

I believe, then, that we have at length reached something like finality in the mere manipulative art of surgery; though I hesitate much to use that word "finality," for I know well how apt a man is to suppose that art to the prosecution of which he has devoted his life to have attained its final limit of perfectness. Yet, looking at the question as dispassionately as I possibly can, I cannot but come to the conclusion that we can scarcely hope to pass far beyond the line at which we have arrived in the direction of extreme precision and almost absolute certainty in the mechanical performance of the operations of surgery, and that in this direction the progress of modern surgery is nearly barred. At the same time we may reasonably expect that the methods of practising operations may from time to time be materially modified and improved by the skill of individual operators, by the ingenuity of surgical mechanicians, or possibly by the introduction of new agents, such as electricity, as aids to our art.

But if operative surgery has attained its most brilliant results;—if the knife has been carried triumphantly, and with the most successful issues, into almost every part of the human frame; if the surgeons of this generation have gone far beyond their predecessors in boldness of conception as they have excelled them in precision and certainty of execution, so that we may look upon modern surgery as having attained in its operative department as high a degree of perfection as the most consummate anatomical knowledge and the extreme development of manual skill can carry it,—yet there is another direction that practical surgery has taken which is apparently so opposed to that which I have just been describing, that it is not easy at first to understand how it could have progressed simultaneously and cotemporaneously in both lines.

For strange and, at first sight, paradoxical as it may appear, whilst surgery was making rapid strides in its purely operative department, there has been *pari passu* a corresponding tendency to limit the number and to lessen the severity of those very operations, and to substitute for the knife manipulations of a gentler character, by which the same effects were sought to be effected. For it has now come to be considered as a truism that mere mechanical dexterity does not constitute true surgical skill, and that the perfection of surgery consists in producing the desired result by the smallest expenditure of force. Expenditure of force by the surgeon entails a corresponding exhaustion of power on the part of the patient. This signifies loss of vitality, and consequent diminution of reparative action.

I might adduce numberless illustrations of this marked tendency in modern surgery to lay aside the knife and to substitute for it other and milder methods of treatment. We see this every day in the minor departments of surgery—in the treatment of carbuncle, for instance, without indelibly marking

the patient with the sign of the cross; in the frequent successful application of electricity and elastic tension in the treatment of deformities as substitutes for indiscriminate tenotomy; in the substitution of escharotics for the knife and the gouge in the treatment of chronic caries of bones; in the whole of the so-called "conservative surgery," which seeks the preservation of the limb by the sacrifice of the diseased part only, just as by a ruder surgery the preservation of the body was sought to be effected by the amputation of the partially spoiled limb.

But the two most conspicuous illustrations that I can give of this remarkable tendency in modern surgery to lay aside the knife wherever and whenever possible, and to obtain the greatest possible result at the least expenditure of force, is in the treatment of those two diseases—aneurism and stone—which, more than any others, have occupied the thoughts and absorbed the attention of the most distinguished members of our profession.

There is no episode in surgery more interesting in itself or more closely illustrative of the truth of the proposition that I now advance, and more typical of the direction taken by modern surgery, than the history of the progressive changes that have of late years taken place in the treatment of aneurism. The surgeon has discarded the knife for the compressor; that instrument for the simple pressure of the finger or flexion of the limb; and, finally, it has been shown that the slower consolidation of decolorised fibrine is not necessary, but that the rapid deposition of dark clot is amply sufficient for the cure of the disease in its worst forms.

In looking to the future, so far as the treatment of aneurism is concerned, I cannot but think that there is yet an agent destined to play a great part; and that electro-puncture, or the process by electrolysis, deserves the fullest attention on the part of the practical surgeon. The experiments and researches of Dr. John Duncan and of Cineselli establish the undoubted fact that in electricity we possess an active agent for the cure of aneurism, which may succeed in many cases beyond the reach of knife, compressor, or finger; and that may in others be advantageously used in conjunction with these means.

Another conspicuous illustration of the tendency in modern operative surgery to substitute milder for the more heroic methods of treatment is in the general adoption of lithotrity in all practicable cases instead of lithotomy. But even in this direction the tendency is to still further attempt at reducing the frequency of the necessity for operating in cases of stone by endeavouring to prevent the formation of calculi, or, if once formed, to aid in their solution. For, as Simpson truly says, "Surely the time is not far distant when a higher chemistry will thus enable us to remove some calculi without the horrid necessity of the knife or lithotrite."

Thus, then, it would appear as if the practical school of surgery had nearly reached its final limit of development so far as the mere manual mechanism of the art is concerned, and that, after having attained to something like finality in this direction, the stream of surgical thought is turning aside into a new channel, the direction of which will tend to limit the unvarying use of the knife, to render its employment more restricted and exceptional, and to substitute for it other means for the accomplishment of those ends that formerly could only be attained through its instrumentality.

But if modern operative surgery has attained to so high a pitch of perfection in all that relates to boldness of conception and to precision of execution, so that we can scarcely hope to see any further progress in these directions; and, indeed, if the most advanced modern surgery is seeking to lay aside the scalpel and the bistoury for milder methods of treatment—if, in fact, the practical school of surgery has, so far as our present means and our present knowledge are concerned, reached, or nearly so, its final development, the case is widely different with the other great school of surgery—the *scientific*.

For here, truly, so far from having approached the final limits of our subject, we are but as yet halting on the threshold. And whether we regard the science of surgery in its relations to the essential nature, the character, and the pathology of surgical diseases and injuries, or whether we consider it in reference to all those circumstances which, independently of the mechanical skill of the operator, influence for good or for ill the results of his procedures, we have a field before us as vast as it has hitherto been little cultivated.

We have seen how the practical school of surgery has been developed of late years, and to what a point of perfection it has attained; now let us briefly examine the position and the immediate future of the scientific school.

The *Hunterian* or *scientific* school of surgery, though less numerously represented than the practical, has been illustrated since the days of its great founder—John Hunter—by names that are amongst the most brilliant in the annals of British surgery. The Bells and Abernethy, Travers and Brodie, exercised by their writings and their teachings a most potent influence on the surgical mind of this country, and laid the foundation of the British school of scientific surgery; and it is around this nucleus of surgical pathology that scientific surgery has gradually developed. But still this school could scarcely be considered as existing in a concrete and definite form until "surgical pathology" was consolidated into a system in those admirable lectures delivered nearly a quarter of a century ago at the Royal College of Surgeons by Sir James Paget, and which have never been surpassed for depth of philosophic research and comprehensiveness of scientific thought.

Since that period surgical pathology has been regarded as a distinct department of medical science, and has advanced with a rapidity that has fully kept pace with pathological science in its more medical aspect. And if I do not dwell upon these advances in a more special manner, it is because their consideration would lead me too far afield into the general domain of pathology, and too widely apart from that of surgery properly speaking.

It is easy to speak of, but indeed it is not easy to say in what the "science of surgery" actually consists. We are, I think, too apt to speak of it as a distinct and separate branch of the natural sciences; to regard it as existing in a defined and concrete shape, like the science of astronomy or of chemistry; as being something more definite than what in reality it is—merely a branch of general, biological, and pathological science—that portion of it which is specially connected with the *rationale* of surgical processes and operations. In many cases it consists, perhaps, rather in the application of knowledge, derived from the cultivation of other and collateral departments of science, to purely surgical ends.

We see this conspicuously illustrated in some of the more recent advances of surgical science and in its application to practice.

It is by this application that the science of surgery has made such great progress of late years, and it is in this direction that we may probably look for its most brilliant achievements in the future. Every department of physical and natural science may thus be, and has been, laid under contribution by the scientific surgeon to aid in the development of his own branch of knowledge.

Thus, by calling in the aid of physical science, we find that electricity is beginning to play a part destined, doubtless, before long to be a great and most important one in the diagnosis and treatment of various surgical ailments. The use of electricity in the diagnosis of the true nature and special cause of various kinds of deformity of the limbs and their treatment, by Duchesne, is one of the happiest applications of physical science to a surgical end. The application of the same agent to the cure of aneurism and nævus by electrolysis of the contained blood, or to the ablation of vascular parts without risk of hæmorrhage, by that instrument as beautiful as it is ingenious—the galvanic écraseur—are all instances of this application of a physical science to a purely surgical end.

It might be supposed that ordinary descriptive anatomy (if I can venture to dignify it as a science) had been so minutely studied that there were few, if any, applications of that science to surgery that had escaped practitioners of our art. But where can we find a more happy example of the application of an apparently dry and uninteresting anatomical fact to scientific surgery than in the study of the anatomy of the ilio-femoral ligament by Bigelow, and the complete revolution that this study has effected in our knowledge of the mechanism of the dislocations of the hip-joint and in their methods of reduction. A somewhat analogous application of a seemingly barren anatomical fact in surgery is to be found in Amussat's great operation of colotomy being dependent on the anatomical relations of so obscure a structure as the mesocolon in the left lumbar region.

Perhaps ophthalmology supplies the most copious and the most precise illustration of the combined application of physical and exact science to the elucidation of surgical phenomena. Donders truly says that "in the doctrine of the anomalies of refraction and accommodation the connexion between science and practice is more closely drawn together

than in any other part of medicine." At this point, in fact, and at this only, does surgery become an exact science. But here it is as exact as any other department of optics, and not only are its precepts based on exact rules, but its diagnosis and treatment are founded on laws that are as accurately determined as they are fixed and unvarying.

The application of the results of the more advanced doctrines of natural science have equally tended to the realisation of some of the most important achievements of which modern surgical science can boast.

Without entering into a discussion of the vexed question of generation—for whether that may be spontaneous or must be by germs I leave to the philosophers to decide,—I may say that the idea of one of the greatest triumphs of modern surgical science was furnished to Lister by the study of the doctrines of Pasteur on the production of diseases in some of the lower tribes of animals by the development of organisms, which in their turn when deposited on congenial media were capable of producing changes of a fermentative and disorganising character; and we owe the method of treating wounds known as the "antiseptic treatment" to the direct and happy application of these doctrines to the practice of surgery.

There is probably, however, no collateral branch of knowledge that has a closer and more direct bearing upon the advance of surgical science than has *hygiene;* and if I do not greatly err, it is in this direction and in its application that we ought to look for some of the greatest improvements in modern scientific surgery. Hygiene has a double relation to surgery: it may be considered—(1) in its application to the prevention of diseases and deformities that render surgical interference necessary; and (2) in its influence on the results of such interference or operations.

The influence of hygienic measures in the prevention of purely surgical diseases is well illustrated by the possibility of preventing the formation of certain forms of calculus, by the adoption of measures calculated to modify or to arrest those impairments of assimilation of which the ultimate formation of stone in the urinary organs is the last link in a lengthened chain of morbid actions.

That hygienic measures properly applied may even be influential in the prevention of congenital deformities and defects, there is every reason to hope. Take that most distressing congenital deformity, a cleft palate: what is apparently more hopeless so far as preventive hygiene is concerned? But yet, if we learn the lesson taught by the Rev. Dr. Haughton from some of the lower animals, we may possibly by its application to the human female prevent the occurrence of that most distressing defect, and possibly other similar ones, as spina bifida, in her offspring. For this curious fact had been noted, that the lion cubs born in zoological gardens were uniformly affected with cleft palate. This was attributed to the nature of the food given, the lioness being fed with masses of meat attached to large and strong bones, which the animal was unable to crunch and devour. It was thus deprived of its due supply of phosphates. These were afforded to the lioness in the Dublin Gardens by giving her rabbits and other small animals, the bones of which she could readily devour. The result has been that a litter of cubs has been born without the usual deformity, and with normally developed palates.

But it is by its influence on the results of operations rather than to their prevention that the application of hygiene to surgical science has been, and will be, attended by the most important consequences.

It is the study of those circumstances which, independently of the mere manipulative skill of the operator, influence the results of his operations, and often counterbalance all the good that the most advanced art, wielded by the most consummate skill, can effect.

And here I do not speak of the mere local results; so far as they are concerned, there is but little to be desired. The results of most plastic, conservative, and ophthalmic operations are as satisfactory as the most sanguine could hope for or the most critical expect. So also with respect to that multitude of minor operations that are practised for the relief of various distressing maladies, and which are followed by the happiest consequences. But when we come to consider the issues of those greater and graver operations by which the life of a patient is directly imperilled, we are constrained to admit that success in results has lagged far behind and borne no relation to perfection in the execution of the operation, and that in this respect the highly polished art of modern surgery far outshines its science. But success in the results is, after all, the thing to aim at, and no amount of manual dexterity can compensate for its want. Dexterity is only one element of success, and however important it is to be dexterous operators, it is better still to be successful ones.

We have, as has already been seen, carried the art of surgery to the highest degree of perfection of which, as an art, it is susceptible. But although we have undoubtedly immensely improved on the rapidity, the precision, and the simplicity of our operations, we are constrained to admit that we have not succeeded in rendering them proportionately less fatal. And here the surgeon has a wide field open before him in the future; and I can fairly say that there is no direction in which it can be cultivated that promises a more fruitful harvest than in endeavouring to make the success of the result balance the skill in the performance of an operation.

For it is useless—worse than useless, it would be criminal—to deny or to ignore the fact that the mortality resulting from or consequent upon the greater operations has not only not diminished of late years, but has, there is reason to believe, in some cases actually increased. The present death-rate after lithotomy—even when making allowance for the application of lithotrity to the more favourable cases—is quite as great as it was in the days of Cheselden or of the great Norwich surgeons. Herniotomy is at least as fatal as it was in the hands of Hey and of Cooper; and the result of the ligature of the larger arteries has actually in some cases—as in that of the common iliac—become more unfavourable of late years.

Whatever explanation we give of it, the fact remains certain, that the present rate of mortality after amputations of all limbs in the largest metropolitan hospitals of Great Britain is at least one in three; in those of Paris (Malgaigne and Trélat) nearly one in two; in Germany as nearly as possible the same—*i.e.*, nearly one in two. In military practice the recent experiences deduced from the results of operations on the wounded in the great wars of modern times is equally unfavourable. But to these I shall not do more than allude, as the disturbing and destructive influences at work during the progress of active war are so peculiar and so great that they remove these cases into a category of their own, entirely apart from amputations in civil practice.

But this fact is certain, and it is as melancholy as it is true and incontestable, that, taking the average mortality after amputations of all four limbs in the largest hospitals, in the hands of men of the most consummate skill in the great centres of civilisation, we come to this result, that the mortality calculated on large numbers varies from 35 to 50 per cent., but is steady and unvarying between these figures. This is a result that is but little creditable to surgery; and in some amputations, as of the thigh and at the hip-joint for injury, the mortality rises to the frightful and astounding height of from 60 to 90 per cent. In fact, so constantly do these numbers come out in hospital and army returns, that surgeons have almost come to regard them as representing the necessary or (so to speak) the normal rate of mortality after amputations.

But is this really so? Must hospital surgeons ever remain content in losing from one-third to one-half of *all* their amputation cases, and nine-tenths of some? Is this frightful death-rate the necessary result of the operation, and thus beyond the control of our science and the skill with which the art is exercised; or is it dependent on causes that are preventable, and which may be counteracted or removed? Surely here is ample scope for science to aid the operations of our art, and to supplement it where it ceases to be any longer efficient.

That this may be done Simpson has abundantly proved. Without going into details, which would here be alike unnecessary and tedious, it may be stated broadly that having collected a large and nearly equal mass of statistical returns of consecutive operations performed in large and in small hospitals, in country, mining, and private practice, he found that of 2089 cases of amputations in large hospitals in this country, 855, or 1 in 2·4, had died; whilst of 2098 in country and private practice the deaths were only 226, or at the rate of 1 in 9·2.

It is quite possible that Simpson's figures may not be absolutely but only approximately correct, and that certain sources of fallacy have introduced themselves into his tables. But making all reasonable allowance for every possible source of error, the difference is so great between the operation of amputation in and out of hospital that the material result cannot be affected—viz., that a mortality of 1 in 2·4, or in other words of more than 40 per cent., is not a necessary

result of amputations; that it is greatly the result of the circumstances in which the patient is placed after the operation; and that it may be materially reduced, according to Simpson, by nearly three-fourths, so as to amount to less than 12 per cent., by an alteration of these circumstances; and that the mortality so dependent on circumstances which admit of alteration, of modification, and probably of rectification, is certainly equal to that which exceeds 1 in 9, or 12 per cent.

But when we come to analyse these results more closely, some startling facts are elicited. Thus, amputation through the forearm cannot surgically be considered a very serious operation. It is not likely to prove fatal by any conditions dependent on or inherent in it—as, for instance, by shock or hæmorrhage,—but can only become fatal by the intrusion of other and adventitious circumstances dependent on causes existing outside the operation itself. Well, what is the result? That of 377 cases occurring in private and country practice only 2 died, whilst of 244 in hospitals no less than 40 died, being 1 in 188 against 1 in 6.

Surely here is a condition of things most unsatisfactory in itself, and not very creditable to modern surgery, and one in which we may hope that the further cultivation of the science may do much to aid the progress of the art of surgery.

But it would be an error to suppose that it is only in amputations that hospitalism exercises its injurious influences and leads to such disastrous results. It is doubtless more or less so with all operations by which extensive wounds are inflicted, and in none more so than in that which we may consider with justice and with pride as one of the greatest glories of the modern school of British surgery—I mean ovariotomy.

Nothing is more interesting and instructive than the early history of ovariotomy. It owes its origin and its establishment in practice entirely to the success that attended its performance in the hands of country and private practitioners. Almost all, if not all, the early successful cases were done on private, and not on hospital patients. It was tried in the London hospitals, but so great was the mortality following the operation when performed in hospitals, that there was the greatest danger of its falling entirely into disrepute and neglect. The operation was denounced as unjustifiable, and the operators were stigmatised in opprobrious terms by two of the most eminent, and ranked amongst the boldest, of the operating surgeons of that day—Lawrence and Liston. It has never taken its place as an operation practicable like others in large metropolitan hospitals. It has been proved by a sad and disastrous experience that if ovariotomy be practised in a large hospital, and if the patient be placed in a general ward—or even if she be secluded in a private one, but if she is exposed to hospital influences,—her chance of recovery is rendered so small that no prudent surgeon will now undertake the operation in such circumstances. For the mortality after ovariotomy in hospitals amounts to 76 per cent., whilst in private practice Spencer Wells at most has lost only 24 per cent., or less than one-third of the hospital rate of mortality. And this amount of loss is, with increasing aptitude and experience, actually still on the decline; and Keith, of Edinburgh, has achieved the marvellously successful return of 27 deaths in 144 cases, or about 18 per cent.

That which holds good with amputations and ovariotomy must surely be equally applicable to other great operations, and would doubtless be found to be so if their comparative statistics were worked out; and if the rate of mortality after amputations is nearly four times, and that after ovariotomy more than three times, as great in large general hospitals as it is in small institutions and in private practice, a more or less correspondingly high rate of mortality may be supposed to attach itself to other of the great operations by which life is directly imperilled.

Here, then, is a vast and most fertile field to which you who are commencing your studies may direct your attention with the greatest advantage, and which you who after this session will go forth into the world to practise, may cultivate with a double advantage to humanity and to yourselves.

In conclusion, then, gentlemen, although I believe that we have nearly reached to something like final perfection in the mere art of manipulative surgery, let me beg of you to do your best to acquire dexterity and precision in its operations, and not to undervalue their importance. These qualities are easily attainable in early professional life; they can never be acquired later. It is the simple physical education of the eye and the hand that is required: like all physical exercises, it is of ready attainment in youth.

But let me urge upon you most earnestly not to neglect the study of those sciences which I have shown you sublie even so practical a subject as surgery, and which are probably even of greater importance in their connexion with other departments of the profession. But unless you intend to become philosophers, do not study those sciences: interesting and, indeed, captivating as most of them are, for their own sakes, use them only so far as they are subservient to the great object of the studies of at least ninety-nine out of every hundred of you,—that of preparing you to become practitioners. And bear this in mind, that the foremost men in our profession have ever been, and still are, those who are the greatest practitioners of its art, and that there is no calling more interesting in its practice, and more independent and useful in its exercise, than that of medicine in its largest and highest sense.

ABSTRACTS OF

THE INTRODUCTORY ADDRESSES DELIVERED AT THE OPENING OF THE MEDICAL SCHOOLS.

GUY'S HOSPITAL.

Referring to the resignation of his post by Dr. Owen Rees, Mr. Hinton remarked that among the names of which Guy's Hospital was proud there was none which could be looked back upon with a deeper satisfaction, or which by universal consent was more closely identified with all that was most profound and helpful in the application of chemistry to pathology and practice.

The lecturer then proceeded to dwell on the connexion between medicine and other sciences and branches of life, illustrating the connexion there was with those sciences even which were apparently the most remote. The mind and its workings were also a most important field of study for the physician, for he must be able to separate what is mental and what bodily in the ailments which come before him. In this way man is approached under a new aspect. In science, in art, in social order, and in moral life man lives on from age to age. Society is an organism. If the structure of the lower creatures claimed our study, and we felt that we could not expect to understand aright the human frame unless knowing also these less perfect forms, how can we withhold our study from that grander life arising thus before our eyes, and to the progress of which we and our efforts are tributary powers. Moreover, could one molecule of our frame and its diseases be known if the life were ignored which it served or marred? How, then, could these atom-minds and bodies of our fellows be known save by knowledge of the life they helped to constitute? Thus it is that inevitably the student of life has for his study the whole realm of nature. "The tales of our ancestors tell us of a cup offered to Thor to drink: it seemed but a fair goblet—a few gallons, enough perchance to drown a man—such as he had often quaffed, and he took it laughingly; but for all his drinking the cup became no emptier,—it was the sea he drank. And to you also gentlemen is offered a cup—a fair sized cup, just the knowledge of the human frame; a fair goblet for a thirsty soul. But drain it, drink your fill, exhaust your power,—you will find it as full as ever. It is the ocean you are drinking."

They would feel a pleasure, almost as of a victory gained, when conducted through researches by which the hard-drawn line between the organic and inorganic effaced itself before their eyes, and laws of physics illumined the recesses of life. This process, he thought for his part, would go on indefinitely, until all that seemed distinctive of life had been included under physical laws. But not, therefore, would life be resolved into physics; rather, physics would be revealed as life. Having disproved the fiction of a vital force endowed with powers other than those of universal force, a triumph worth achieving would have been obtained over ignorance and false impressions. It would have been demonstrated that there is no dead world. A distinction drawn through partial seeing had been the cause of the deception. Of this there are other instances.

The unity of motion in every place is clear to us; but to the

Greeks, looking at motion as presented by the sense, it seemed diverse. The motions in the heavens, never ceasing, were "incorruptible"; the terrestrial ones, always ceasing, "corruptible." But we know that all motion is unceasing; and as all motion is incorruptible, so all nature is living. The reason it has not been so apprehended is, that in the organic world we are presented with wholes; in the inorganic with but fragments. Wherever the relations of force are seen in a complete form we tend to recognise life. Perhaps the organic world might be truthfully regarded as an organ put forth by nature, having as its office the storing up of force and its liberation for ulterior ends.

This storing up of force and its liberation is of constant occurrence throughout all nature, but when met with in the organic world it is called nutrition and function. Nor is this relation of force peculiar to the physical,—it runs through the intellectual and moral life. As such a view would add to the interest of their work, the lecturer said that he would try to present them with an outline, though necessarily a very brief one. If in studying any subject a false assumption be started with, there is only one way in which it can be corrected. The false assumption must be traced out in its consequences until through the weight of their unreasonableness they have to be let go, and a different thought accepted. The *reductio ad absurdum* of Euclid is an instance. An effort, a strain is put on the mind, and as it ceases the premiss is corrected. Force is stored up, and as it is set free a function comes which is the change in the fundamental thought. The discovery of the unity of force, the last great generalisation of science, came about in this way. The senses present to us a great many apparently different forces, and the results of examining nature on this assumption were traced out. The mind was surrounded with fictitious entities, imponderable fluids, and so on, without end. What a weight of supposition to bear! But it fell at last, and the strain and tension of the mind found relief in the thought of a simple constancy of action appearing under various forms. The identity of the raising of a weight with the nutrition of a muscle is recognised, and the fall with its contraction; but is there not an equally obvious parallel in the living process of the mind? The toilsome raising of the weight of false hypotheses, and its sudden downfall, effecting how plain a function.

The lecturer then quoted a passage from Shelley, showing that he had felt this relation in the mental life. Thus it is that knowledge comes by crises—sudden changes in thought gradually prepared for. In the moral life the same laws prevail. What was more striking in history than the false laws with which man had bound himself? As ignorance imposes falsity upon the thought, and makes even the powers of truth work error, so by a parallel necessity does lack of true goodness in the soul compel man to lay upon himself false laws, and make the very powers of good work an intenser evil. Nor arbitrarily is this done, nor wastefully, but through the same beneficence of life that rules in body and in mind to work the same end—by the toil of the nutrition to bring the gladness of the fruition. False laws, that make a tension in the life and set the soul at variance with itself, as they fall bring into the heart of man a true and better goodness, and even the darkness of superstition is preparation for the light.

Thus it was suggested that the studies of the physician placed him in a position which gave him a special advantage for every other study. "Like an heir just come of age, the physician of the present day is distracted with the wealth of his inheritance. It is for you to enter on its full and unembarrassed use. To the whole world of nature and of man the human body is the key, unlocking all its treasures. The physician stands at the centre, and sees all roads diverge, all roads clear and straight to him, because he holds in his hand a map of every land. His eye is fixed on the pattern to which all things conform. Into the very substance of his thought have grown, by long and loving search, the laws which speed the progress of the human soul, and breathe into the dust of earth the breath of life."

"Nor is this advantage one of theory alone, but eminently one of practice. The study of life must afford the best suggestions and the surest tests to every branch of human activity." This was illustrated in respect to society by one of the failures of medicine in the past—the excess to which bloodletting had been carried. The reason of the error was to be found in the apparent success which attended it. It was because that treatment did quiet the pulse, relieve pain, ease the breathing, cool the skin, remove the patient from a condition of intense distress and obvious danger to one of manifest relief, that men unsurpassed in intelligence and zeal for good persevered so long in methods which thwarted their own aim.

"But there is another living frame on which men also aspire to act the physician's part, the frame of the social organism; and is it not obvious how much our errors may teach men here? How strongly they tend to succumb to the very illusions which deluded us, and take no account of the living frame—victims like us of their own success; intent on meeting every evil by some direct force, as if this great life which man's heart and soul work out for themselves were a mere dead, mechanic thing. They do but follow in our steps, falling under the same temptation; but therefore should ours be the eyes to see for them." Finally, it was pointed out in how close a relation the physician stood to the moral life of man. As called upon to deal with his bodily necessities, he is the very revealer of the highest truths. "Of old there stood before a Man, on the one hand a law, enforced by the reputed wisdom and godliness of His age; this law on the one hand forbidding Him, and on the other a poor lame man's sorrow. The Man before whom the two claims came—God's, as all men said, and His fellows'—chose which He would heed;—and He gave us a new law. He cured the body; and mankind, never ungrateful, never unknowing of their friends, have called Him the Physician of the Soul. The needs of man interpret the laws of God.

"Thus, in the limitless extension of the knowledge which our art demands, we may see a proud meaning, a proud prophecy. In stretching out its hands on every side it does but establish channels through which into every department of life, even those which seem the most remote, it shall diffuse a vivifying and creative power."

The lecturer then concluded, after observing that the opening up of wider prospects after any advance should be no cause of discouragement. That harvest was no less rich which seemed to be absorbed in a larger seed-time.

KING'S COLLEGE.

The Introductory Lecture was delivered by Dr. Edgar Sheppard, who began by welcoming the students to a College which had furnished many of the metropolitan schools of medicine with able teachers, and would, he doubted not, continue the same career of usefulness and distinction. He should assume that though the motives were very varied which influenced men in the selection of a life calling, they had chosen the profession of which he was a member because they believed it to be a high and noble one, worthy of their ambition and their aims. There was a reason why he should not follow the common and legitimate course of giving a sketch of the allied sciences as bearing upon medicine, inasmuch as this had so recently been done within those walls by distinguished brain-workers, two of whom were members of their professional staff, at the most remarkable gathering of physicians and surgeons which had ever taken place in Europe. He would urge upon them the necessity of carefully studying those addresses, from which they would learn, among other things, that the investigations which were incessantly being carried on as to the causal phenomena of disease were leading to the conclusion that many existing maladies would, ere long, have neither a local habitation or a name. Meanwhile he would speak to them in a somewhat loose and desultory manner of what he should venture to term the "socio-political aspect of the profession." They must remember, after all, that it was in the drawing-room and the bedroom that they would learn the wear and tear of the thing—when brought into contact with my lord's prejudices and my lady's narrow and conventional thinkings. They must not only study medicine, but society—its varied character and phases. They must learn to adapt themselves in the largest sense to those with whom their avocation would bring them in contact. Many men failed in their profession—to wit, Dr. Lydgate in "Middlemarch"—because they could not temper their book-learning with a little worldly wisdom and a slight concession to conventional forms and prejudices. This was truly an age for making concessions, and a playful and polished way of making them would often effect a triumph over weaker brethren, and subvert a veritable stumbling-block in the way of progress which rigid philosophy would find it hard to displace. He could not help saying, in the presence of their respected Principal, that a large measure of the success that attended the career of a great and good bishop recently lost to the church of which Dr. Barry was a dignitary

and they were lay members, arose from this faculty of adaptiveness, manifested in a form of unusual grace and attraction.

Having further illustrated this subject, the lecturer proceeded to say that there was a certain critical attitude assumed by the lay element towards the three learned professions, at which they had no right to complain, for it exercised a wholesome corrective influence in scaring the empirical and pretentious. At the same time, he could not conceal from himself and them that in other ways it acted prejudicially and with results unfavourable to the progress of science. It was a mistake to make any profession common and unclean by spattering outsiders with a superficial knowledge of it. But this was done too frequently. Had not an ex-Lord Chancellor written a book by which one might learn to dispense with law altogether? And were not blank forms in the shop windows inviting them to make their wills and provide for those who were to come after them, before they had time and opportunity to provide even for themselves? Books about "Domestic Medicine," "Advice to Mothers," and such like, might be pregnant with kindly wisdom, but they did not bring forth fruit worthy of cultivation, or such as they would like to see growing upon their ideal tree of knowledge. It was this sort of thing, he feared, which had led to a recent experience which had no parallel in history, and had forced into opposition the liberal and time-honoured university of a northern capital. Heretofore it had been thought right to eliminate, during the educational processes to which all of us were subjected, everything that savoured of the masculine and ungentle from the sex to which they had not the privilege to belong, and everything that was effeminate from the sex to which had been given the lordly pre-eminence. But matters were undergoing a change. By fingers more delicate than theirs and his were now handled the test-tube and the scalpel. They who once thought it their highest privilege to "mind the house and bear children," had given themselves up to "quantitative analysis," and "minute cellular anatomy." The teachings of Fresenius and Virchow were superseding the injunctions of St. Peter and St. Paul. He trusted he should not be thought illiberal, for he had no desire to check the legitimate ambition of woman. It was only its unnatural development that he sought to stifle, and so in that College he protested against—

> "Prudes for proctors, dowagers for deans,
> And sweet girl-graduates in their golden hair."

Having alluded to the importance of contemplating women in a different aspect—as we used to know her, and should like to know her again,—and of insuring her good opinion, since so much of the success of the medical man depended upon it, the lecturer spoke of the modern doctrine of evolution, which places beyond a doubt the fact that "our mental and bodily structure is the direct outcome of that of preceding generations; and that we, the existing generation, are like the living fringe of the coral reef, resting on an extinct basis afforded by our forefathers, and shall in our own turn form a basis for our descendants." This is as much a socio-political as a physiological question, and therefore he put it before them. It had immense practical issues, and therefore merited from them the most careful study and consideration. "The morality of clean blood" (as Professor Tyndall expressed it) could not possibly be overlooked without involving the most serious consequences. They must not allow their feelings to get the better of their physiological instincts, but set the example to all about them by healthy alliances for social enjoyment and perpetuation of their kind. They would not wonder at his thus speaking to them if they had ever been in a position to see as much evil fruit from evil sowing as he had. The responsibility of those who knowingly, and in the face of well-established laws, transmitted to posterity the recognised abnormalities which constituted disease, was absolutely enormous.

From this and analogous points of view it was clear that the chief object of their profession in these days was rather to prevent than to cure disease. And, indeed, the maladies which scourged the race are more preventable, while it is not equally certain that they are more curable. But, says the practical man, who is hungry, and under the ignoble necessity of labouring for the meat which perisheth, What profiteth my study and my acquisition of therapeutic lore if there is left to me no field for its exercise? Moreover, is it not more clear that remedial agents (so-called) are less resorted to than formerly, and that our ablest physicians doubt the efficacy of drugs on which they once complacently relied? In fact, it was as common as it was wise to give our patients frequent doses of disguised nothing. Nevertheless, the young and hungry Æsculapius might console himself with the fact that never was the profession doing so much; never did it stand so high; never were its members so highly cultivated and so united; never did they reap such a pecuniary harvest as at the present moment. They would not forget the testimony which had recently been borne to them by the First Minister of the Crown in the hall of Lincoln's-inn. Nor was it far to seek for a reason why the profession was so growing in public estimation. The standard of education had been gradually and persistently raised, and the "healing on its wings" promised and proclaimed by their science was now of the largest and most comprehensive type. The lecturer then alluded to the aid which they derived in their warfare with disease and death from "the trained and gentle Nightingales of the sick-room." He spoke of ventilation, warmth, and rest as being more effective weapons than (with few specific exceptions) could be drawn from the huge armoury of the Pharmacopœia. And yet, as there was a fashion in everything, there was a fashion even in the exhibition of drugs. Supposed therapeutics, once lapped up so freely, were now scarcely ever administered. The explanation of this might be—and frequently, though not always, was—found in an enlarged knowledge, not only of the remedial agents themselves, but of the minute anatomy and physiological action of the structures upon which they were invited and supposed to exercise an influence. For instance, everyone knew the extent to which opium was formerly used in the treatment of delirium tremens and insanity. His special experience in these diseases enabled him to say that the value of this narcotic had been completely dwarfed by the giant hydrate of chloral. It was only fair to state, however, that the latter remedy was frequently resorted to very unnecessarily: that ladies kept it in their medicine chests, and that coroners had been under the painful necessity of sitting upon it. In fact, chloral is as much a pharmaceutical fashion as is golden hair-dye a pseudo-æsthetical in the geographical district known to us as Belgravia. Nor was this fashion confined to drugs; it extended to systems. He remembered the time when

> "——Each doctor took such pains
> To draw the blood from almost bloodless veins"

that pallor met one in nearly every adult face, the only exception being in the cheeks of my lady dowagers (as Thackeray expresses it), who, like the sun, are wont to grow redder towards their setting. But a different order of things succeeded. A great physician, whose name and memory would ever be revered in that College, stopcocked the life-blood of the whole nation. Dr. Todd threw down the lancet and took up alcohol. He taught that our duty was to *renew* life, and not to weaken it. The alcoholic beverages were taken up warmly in more senses than one by both the sexes in every ailment, and bloodletting became unknown save as a historic fact. One extreme, as so commonly happens, was succeeded by another. We had now sobered into the healthy mean, which admits that cases occasionally occur in which life is saved by the lancet, while alcoholic stimulants are at times essential to the preservation of life. He would further illustrate this system of passing from one extreme to another by a reference to the specialty to which he had allied himself. Formerly, as they well knew, the insane were subjected to almost unlimited restraint and seclusion, and their treatment was characterised by great harshness and brutality. The non-restraint practice then came to the fore, and has pushed to an extent which involved the not unfrequent occurrence of serious homicidal and suicidal casualties, which might otherwise have been prevented. All of large experience in this matter now admitted that occasional restraint by fastening the hands to the body was not only justifiable in exceptional cases, but imperiously demanded for the safety of the patient himself. And it was equally beyond a doubt that seclusion was as necessary for an excited brain as the withdrawal of light from an inflamed eye. Dr. Sheppard then urged the students to embrace all the advantages offered to them by King's College, and promised them, on behalf of the professional staff, all the assistance which they were capable of affording. Their work should be steady, and free from those spasmodic impulses which were not healthy in men, though said to be characteristic and unavoidable in the sex endowed with periodicity of function. Travel did so much in the way of improving men—so much that could not be described, but was always appreciated—that he would strongly recommend

it to them at the close of their collegiate career, and before they buckled on the professional harness. Then they would be furnished with ampler materials for thought, "be prepared to form riper judgments, and to adjust themselves to action with greater wisdom."

This, then, having been accomplished (the lecturer concluded), the real work begins—the practical application of all that you have taken so many years to acquire. But the wise, the earnest, the intelligent will not cease to acquire, and will ever consider themselves to be in a state of pupilage. In a busy and active professional life, they will day by day garner fresh treasure into their storehouse. "The more knowledge we get," said a Bishop Jackson of an earlier time, "the greater capacity we leave unsatisfied." There is one matter which, in the last place, I submit to you; for though to me it has always been specially noticeable, I am not aware that I have ever heard it alluded to or illustrated. It is this: the difficulties of a start in the medical profession are greater than in that of law or divinity, and this by reason of its complex and inexact nature as also by the issues which it involves. "It seems to me," says a quaint Dutch writer, "that the first fire of an Æsculapius must be of a deadly nature, when his later and calmer zeal may still prove so dangerous." "Aye, there's the rub,"—that first fire. A young lawyer may make his first will without much anxiety or doubt; a young clergyman preaches his first sermon, and though of course he may be very nervous, he can't do much harm, and he may do some good. At all events he will excite sympathy. He did his best; he meant well, and such like. But there will be no sympathy for you if you poke out a man's eye even after the most approved fashion and with the very best intentions.

Even the best educated and most skilful of young practitioners must feel the tremendous responsibility of (say) his first case of typhoid fever in an influential household; or (say) his first case of strangulated hernia at the hospital to which, after much rivalry and contention, he has first been elected; or (say) his first unnatural presentation in midwifery, among the croaking gossips who swarm round their sisters in the agonies of abnormal parturition. There is always someone to think and say you have done wrong in a fatal case, and even those who think you have done right may be reluctant to say so; and more than this, our doubts and difficulties extend in some measure over our whole subsequent career. There are few men—I doubt if there can be any men—of large judgment and experience to whom the occasion must not arise for self-scrutiny and examination, as to whether their conduct of such and such a case has been all that it ought to have been. Life is so mysterious a thing, and its attendant circumstances and surroundings are so varied, that even when we are acting on the most approved scientific principles (known to be so mutable) we may well doubt whether we are as successful as we ought to be in the art of prolonging it.

"I think there are only two things," said Coleridge, "which can justify a surgeon in performing the Cæsarean operation—first, that he should possess infallible knowledge of his art; and secondly, that he should be infallibly certain that he himself is infallible." What wisdom in the satire! Which of us is infallible? Which of us ever will be? No one, as I take it, until shall have come to him that "inevitable" which it is our daily mission to postpone. No one until he shall have "gotten the key of all mysteries which never is let down into the world, and begun the real life which errs and stumbles never more."

ST. THOMAS'S HOSPITAL.

The Introductory Lecture was delivered by Dr. John Harley on October 1. After a few introductory observations on the choice of a profession, the lecturer made the following remarks on the medical life:—"The medical man, however humble his associations may be, is constantly reminded that he is doing useful work. His aim is health, the first and best of human possessions. He is the minister of health, and varied are the emotions that attend his ministration. To-day, his heart is cast down by some new scene of unexpected sickness and sorrow; to-morrow, he is cheered by amendment, and, as the dark cloud gradually shows her silver lining, his feelings warm with satisfaction and joy that he has had some share—it may small, it may be large—in bringing about a happy issue. It is easy to mistake the road that leads to happiness; but nature is true to herself, and we shall not fail to know when we are on the right track. The whisperings of the heart are heard above the acclamations of the crowd, and to the sober-minded and humane to alleviate pain and disease by anxious thought and patient care is a pleasure purer, deeper, and more lasting than any that can spring from what are commonly esteemed more exalted sources. This, then, I take it, is the inspiration that leads you to medicine, and contents us all to labour on, regardless of the wealth and honours we see falling upon members of other professions. Men who follow the learned professions should ever be ready to prefer the dignity of their calling to the allurements of wealth. It is an honour to our profession that this principle is universally recognised and adopted. Entrance to the medical profession at once relieves you of the temptations and chagrins which attend the pursuit of wealth. Titles, too, ill become the man whose deep knowledge of life teaches him to set no high estimate on artificial distinctions. An order of merit to distinguish its possessor from the less industrious and less skilled of his *confrères* is a different thing. Such an order, though so tardily bestowed, would be a graceful compliment to a profession which has long served the State for a remuneration altogether inadequate to the charges imposed upon it; a profession which, at risks as great as those to which the soldier is exposed on the field of battle, is laboriously and successfully engaged in freeing suffering humanity from the bonds of disease; a profession whose members, in occupying the foremost place in the pursuit of science, have done more for the progress and enlightenment of the world than those of any other. As faithful followers of Medicine, then, we set aside wealth, public honours, and ease, and adopt a useful, unobtrusive, and honourable calling, which will amply satisfy our expectations, and in the end bring unalloyed satisfaction. If we have health, our honest exertions will bring us a sufficiency of this world's goods. If to health we should add length of days, we may be sure of a competency and an honoured old age. The daily work of the profession is full of interest, and, to a thoughtful and observant mind, it will furnish every kind of intellectual exercise and enjoyment. Man, in all his phases, variations, humours, and derangements, is the object of our study, and to know him we lay under tribute every phenomenon of nature and ransack every casket where life is stored."

In reference to his curriculum, the lecturer took occasion to observe that the students' present course of study was more adapted to the wants of those who intended to practise as consulting physicians and surgeons than to the requirements of the general practitioner. In order to give the latter a more practical education, he proposed the adoption of a modified apprenticeship and the addition of a home-patient department to our hospitals. "By the former of these arrangements, the medical disciple would be articled to a medical man for a term of three years, during which, or before commencing his studies at a medical school, he would be required to pass two preliminary examinations,—the one in arts, at the end of the first year of his articles; the other in chemistry, botany, and materia medica, at the end of the third year; when, having eliminated these subjects from his curriculum, he would devote himself exclusively to the study of anatomy, physiology, medicine, surgery, and midwifery, at the medical school, during another period of three years. By the second arrangement, that portion of the city within a given radius of the hospital would be divided into districts, and each placed in charge of a member of the medical staff appointed for the purpose. Patients too ill to attend the hospital, and precluded, either by the nature of their illness or by various contingencies, from admission into its wards, would be visited at their homes by students, during the sixth and last year of their study, under the directions of the proper officers. By these arrangements a more perfect education of the student would be effected, while the adoption of the second would confer a great boon on a number of poor sufferers, and make the administration of our hospitals more complete."

In reference to lectures—which constitute so important a part of the medical curriculum—Dr. Harley remarked, "Both your studies and examinations are becoming every year more practical, and we may look forward to the not very distant time when the lecturer shall have become the more useful demonstrator, and the student shall be referred to his handbook for theoretical views and systematic arrangements, the motto of both being—'*Facta præstantiora verbis.*'

"The student is provided with admirable text-books on every subject of his study; and as they are usually the well-digested compilations of the lecturer himself, his lectures are at best but a repetition of the printed pages which he puts into

the hands of his pupils. Oratory, no doubt, produces a more powerful effect than the most vigorous writing; but Eloquence herself is tongue-tied when dry bones and a tanglement of nerves, bloodvessels, and muscles are the only theme. Something may be said in favour of lectures on medicine, because fever, ague, and madness cannot be isolated like a cancerous tumour or a broken bone, and put before the student; but chemical experiment and botanical facts are so completely within the reach of individual observation that lectures on these subjects might be made entirely subsidiary to demonstration. Lectures on physiology, too, may be reduced to narrow limits now we have our course of practical study. And here I must ask you to look not to the laboratory only for practical physiology, but to the wards and prescribing-rooms also. There you will find hosts of wonderful experiments done by Nature herself, demonstrating truths which can never be determined by artificial mutilations. And do not forget that the practical physiology I speak of, and the experimental physiology which appears to be so attractive just now, are very different things—for the one is natural and the other artificial. Be careful, too, that you do not neglect the education of your tactile sense by the use of instruments which, though pretty and good in theory, are inconvenient and bad in practice."

Turning to the means of preventing and curing disease, the lecturer observed—"We can speak of great triumphs. Slow as we have been to learn that it is not good to keep our filth about us, and sip it in the dog-days, we can now point to plague, cholera, enteric fever, ague—the loathsome brood of a filthy soil—and say, The march of these is within our control. But even here there is much to learn. In dealing with the question of infection you have need to be most wary, or else your perception will be dimmed by dogmas worthy of the darkest days of ignorance, and your observation misled by the hasty and insufficient conclusions of the day. The prevention of disease is an exciting topic for a humane and virtuous mind. The transmission of disease is no less interesting. It is a question of immense importance whether disease, arising from a single source, can be propagated indefinitely in successive generations of otherwise healthy individuals. It will doubtless be found that as there is in animals and plants a constant tendency to throw off superadded qualities, so a given disease will wear itself out and disappear in the course of a few generations, provided the victim heirs strive to attain a healthy standard and avoid similar contamination. Nature is careful of her progeny, and, granting her pure associations, she will, I believe, prove this by ridding her children in the course of three or four generations of the monstrous parasites that disfigure and debase them.

"To recognise the successive progeny of disease to the fourth generation, and refer them to their originals, will be noble work for some of you. What if cruel cancer should be found a distant remove of syphilis? One form of this disease is, we are almost sure, an exuberant variety of the primary disease. Should we not lop off the primary disease from outraged society, and prevent the anguish and destruction of an innocent posterity? Verily I believe if Medicine could work out her beneficent will, she would lead us a great way along the road to Paradise.

"In our present state of knowledge we know not how much disease would remain, if the preventable ones were actually prevented, and their effects allowed to die out by healthy associations. But we do know that, apart from the self-polluting influence of man and animals, a condition of perfect health—*i.e.*, a perfectly balanced and constantly uniform state of the body—can never exist so long as the external conditions upon which life is dependent continue in a perpetual state of variation. The body must share these mutations, and the balance is disturbed as often as it does so. Health fluctuates accordingly; the transition periods from change to change being coincident with periods of incipient but scarcely perceptible morbid action. Those are healthiest who can most readily adapt themselves to these changes; and if the more weakly could always use vigilance and the care that prudence dictates, many of the diseases over which we have no other control would be prevented. But there is a limit to human foresight and self-denial, and so, in spite of all our prophylactics, we shall never want an enemy to cope with.

> "'Rough winds do shake the darling buds of May,
> And summer's lease hath all too short a date;
> Sometimes too hot the eye of heaven shines,
> And often is his gold complexion dimmed;
> And every fair from fair something declines,
> By chance on nature's changing course untrimmed.'"

Referring to therapeutics, the lecturer spoke of the difficulty which attended the study of the action of medicines—a difficulty which often led inconsiderate men either to ignore the value of drugs altogether, or to adopt some one remedy, and ride it rough-shod over every disease. While deprecating in strong terms the abuse of alcohol and narcotics, he observed in reference to chloral hydrate—"The theory of its action is so simple that it was intelligible to all, and in a very brief space of time the drug was known in almost every family invaded by disease. Medical men prescribed it freely and indiscriminately, and in some cases continuously. Patients thus accustomed to the use of the remedy supplied themselves and even their friends with it. When they would be oblivious, they took chloral hydrate, and sometimes passed from oblivion into death. Medicine is thus made to reverse her intent. Laxness in prescribing narcotics and continuing them, often for slight ailments, until the too-willing patient is wrecked in mind and body, is a terrible indiscretion. At this moment there are hundreds of patients looking for the arrival of their medical attendants to inject another grain or two of morphia beneath the skin. Only four hours ago they had a similar dose, and four hours hence they will have another. They declare they cannot endure a rheumatic neuralgia or obscure hysterical pain, and they implore you to give them frequent and increasing doses of morphia, each of which carries them still further from real help, and eventually adds to their misery and degradation. Beware of this abuse of opium, or you will bitterly repent the recklessness which first led you into it, or the want of courage which prevented you from withholding it before it was too late to do so. The hypodermic syringe is a powerful and most valuable weapon, but those who use it should possess more wisdom than knowledge."

Alluding to the mode of study, Dr. Harley said: "There are two acquirements which are not thought of as necessary to a medical man, but which are of the utmost use to him. They are—sketching, and shorthand writing. From the first to the last day of your professional career, labour as hard as you will, you will find yourself a laggard on the heels of time. As a reporter attendant on nature, you want the means of instantaneously photographing and recording your cases. He who can delineate nature with a few touches of the pencil, and describe her moods by intelligible signs, will want only one more faculty in order to know her, and that faculty is observation. Learn to apprehend facts, simple facts, and fix them in your mind. Life, disease, death, are the facts you have to deal with, and these are not simple like those which engage the attention of the astronomer or the chemist, but complex. Each of these phenomena is a mosaic of facts, so perfectly fitted as to show no lines on the surface, and scarce a clue beneath. Your first object must be to discover and isolate these facts in your observation of the broken vessels which come before you,—to identify their connexion, trace their relations, and ultimately to do your tiny share in putting the wonderful puzzle together that makes 'this soft, sensible motion.' This is, indeed, the laborious work of ages. Do not be discouraged that the labour seems so little fruitful. Each one of us can do no more, perhaps, than recognise and isolate one bare, unconnected fact; but, like the fragment that is turned out of the dust-heap which marks the site of the ruined and forgotten city, your fact will—some time in the distant future—be recognised as the link wanted to complete a discovery which may result in untold benefits to the human race. 'Benefits to the human race.' Never forget that this is the object of all your study now,—of all the efforts of your maturer understanding and skill hereafter. Faithfully pursue that divine object, and thus shall you be daily 'laying up for yourselves treasures in heaven, where neither moth nor rust doth corrupt, and where thieves do not break through and steal.'"

WESTMINSTER HOSPITAL.

The Introductory Address was delivered by Mr. George Cowell, Surgeon to the Hospital and the Dean of the Medical School. He said: "It is related of Mr. Abernethy that, on entering the theatre of St. Bartholomew's Hospital on the occasion of delivering the introductory lecture, he cast his eyes over the crowded benches, and said, 'God help you, gentlemen! What is to become of you all?' In the present day we do not suffer from the same plethora of candidates aspiring to enter the medical profession. I do not know that it is especially a

matter for congratulation, but it is a fact that whilst the population has increased with marvellous rapidity, and whilst the number of medical schools has nearly doubled, the numbers of the profession have not increased in the same proportion, and are little more than they were in the days of Abernethy. We have, at all events, no cause for anxiety on behalf of all those who enter now as to the prospect of their finding sufficient scope for the exercise of their profession." After giving reasons for maintaining the old custom of the annual delivery of introductory lectures, a short sketch of the history of the Hospital and school was given, and mention made of the celebrated physicians and surgeons who have served the Hospital during the 159 years of its existence. Westminster is interesting as having been the first hospital established by the voluntary contributions of the public. The changes made in the school, and particularly in new arrangements with regard to clinical lectures and clinical teaching, were next alluded to. On the subject of preliminary examinations, the lecturer said: "There can be no doubt of the wisdom of requiring a sound preliminary education before entering upon medical study. It was not without astonishment that he heard the ex-President of the College of Surgeons of England enunciate, in the last Hunterian Oration, a contrary opinion. The reason Mr. Hancock gave was, that the establishment of the preliminary examination had abolished the old-fashioned apothecary, who, with his shop and unambitious tastes, was *par excellence* the poor man's doctor. If preliminary examination achieve nothing more than the severance of the remaining links which seem to unite a noble profession with a retail vending of drugs —a bond which has done much to depreciate in the eyes of an often unthinking and unreasoning public the dignity which appertains to our calling—we shall have reason to be satisfied. But its object is much greater than this. The study of classics and mathematics trains the mind—the reasoning powers. Just as we develope the body by the proper exercise of its various muscles, so must the mind be developed by early training its reasoning powers. No one would dream of teaching a man the art of fencing until he had been put through a course of gymnastics to develope to some extent a precision and ease and rapidity of movement; and can it be wise to put a man to study a profession which requires more than any other the facile use of the reasoning faculty without first training those faculties by the gymnastics of preliminary education?" The possession of a well-trained mind was shown to be every year more imperative, so rapidly were the subjects of medical science growing and multiplying. Perseverance was the best cure for every neglect in this early training; and John Hunter was quoted as an example.

The objects of a medical school were then discussed, and the student warned against grinders and abbreviated text-books. Work got up in that way would not be remembered six months. Each man must get up his work for himself, and if it is to be of any use to him he must digest it and assimilate it for himself. After showing the student the best way of doing this, and referring to the necessity of the student making the dissecting-room his special field of study, and avoiding the wards as much as possible during his first year, the lecturer criticised the present regulations of the examining bodies as not consistent with the wise division of the examination into a primary and a practical examination. Men who came up for three years only of study at the Hospital and College were obliged to attend hospital practice, when they ought to be engaged in the study of anatomy, physiology, and chemistry—subjects quite sufficient to require their whole time and energies. The reason so many men failed to pass the primary examination was that the counter-attraction of the wards tempted men to neglect their proper work. The rapid progress of physiology and pathology was then contrasted with the slow advance of the knowledge of therapeutics. The study of the latter was rendered obscure and difficult by the habitual use and efficacy of moral treatment, and the presence in the human body of a power—call it a tendency to health or what they will—which, without treatment, or in spite of it, will gradually, so long as no organic disease exists, lead to a re-establishment of healthy function. The story of Sir Samuel Garth, Physician to George I., was quoted. Coming one night to the Kit Cat Club, he declared he must soon be gone, as he had many patients to attend, but some good wine being brought, he forgot them. Sir Richard Steele, who was of the party, reminded him of the visits he had to pay, when Garth pulled out his list of fifteen, and said: "It's no great matter whether I see them to-night or not, for nine of them have such bad constitutions that all the physicians in the world can't save them, and the other six have such good constitutions that all the physicians in the world can't kill them."

The value and necessity for the study of physiology was enlarged upon, and the nature of the reasoning upon which such sciences were built up was contrasted with the mode of reasoning in an exact science, such as mathematics, the difference explaining why it was possible to calculate the magnitude and course of an unseen planet, when it was so difficult to discover the use of a spleen or a supra-renal capsule. The supposition that science and religion were opposed to each other was then combated, and it was shown that although some apparent antagonism from time to time arose even between one branch of science and another, it rarely happened that such antagonism could not soon be proved to have no reality. The facts of theology had been revealed to us, but their full meaning we did not yet grasp any more than we did those of the sciences referred to. There was a unity of purpose and identity of design throughout the whole, to which the idea of antagonism or contradiction was repugnant. It had been remarked the other day at Bradford that it was just as absurd now to judge religion by the facts of science as it was in the days of Galileo to judge science after a religious test; but it seemed to him that in the long run the harmony of the two was so complete that he did not fear to submit either to the scrutiny of the other. What he feared was lest we mistake the speculations of scientific men, the theories of those who have allowed their imagination to carry their thoughts far beyond the conclusions that their facts will warrant, into the unseen world of fancy. These, he said, must not be mistaken for true science, for a calm and careful consideration would ever convince us that just as the concurrence of the various conditions necessary to the most ordinary phenomenon inclosed the most irresistible proofs from natural evidence of unity of design, and consequently of the unity of the Creator, so true was it that conclusions which were contrary to, and at variance with, revealed truth were visionary and worthless. In conclusion, the highest attributes of the profession were insisted upon, and it was shown that if medical men could not look forward to high honours and rewards, still in no profession could they look back upon a long life of usefulness with greater pleasure or with a more perfect consciousness of having aided their fellow-men. "And may each of us, gentlemen, when we come to the last years of life, look back with pleasure on the good work we have been permitted to perform, and may we then, as now, say with Wordsworth—

"'O! that our lives, which flee so fast,
In purity were such
That not an image of the past
Should fear that pencil's touch!
Retirement then might bravely look
Upon a soothing scene;
Age steal to his allotted nook,
Contented and serene:
With heart as calm as lakes that sleep,
In frosty moonlight glistening,
Or mountain rivers, when they creep
Along a channel smooth and deep
To their own far-off murmurs listening.'"

*** Several of the Introductory Addresses unavoidably stand over till next week.

THE Kent Water Company have now provided a constant supply of water to such parts of St. Mary, Rotherhithe, St. Paul and St. Nicholas, Deptford, as are bounded on the north and east by the river Thames, on the east by the Surrey Dock and Canal, and on the south by Evelyn-street and Princes-street, Deptford.

PARISIAN HEALTH STATISTICS. — According to the *Bulletin de Statistique Municipale* of November, 1872, just issued, and which still bears the name of M. Calmon, then Préfet of the Seine, the highest ratio of mortality—viz., 27 per 10,000—occurred in the fourteenth arrondissement (Observatory); the lowest—10 per 10,000—was observed in the ninth (Chaussée d'Antin). The diseases that proved most fatal were consumption 590, apoplexy 207, bronchitis 195, pneumonia 180, inflammation of the bowels 129. Regarding infants, the highest mortality during the first year of life occurred at the age of two months—viz., 49. Between the ages of one and two years the deaths were 93; of two and three, the same.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, OCTOBER 4, 1873.

THE INTRODUCTORIES.

Again the time has come for opening our columns to reports of the "Introductory" Lectures delivered at the reopening of the several medical schools; and, as is our wont, we again devote a little space to comment on the lectures. Again, also, we venture to express our regret that at one of the oldest, largest, and most famous of medical schools the "introductory lecture" is conspicuous by its absence. Why this is we know not. We cannot believe that in these days, and at such a well-managed and efficiently-officered school, there is any dread that the audience would offend by a noisy and indiscreet overflow of youthful spirits; nor do we suppose that the authorities think that an annual "hospital school dinner," presided over by one of the senior and most distinguished members of the medical, or surgical, or teaching staff can fully, as well as pleasantly, replace the "Introductory," given, as a rule, by the youngest and least-tried member. The lecture is meant, and ought to be, something more and better than an opportunity for a pleasant *réunion* of the old and the young *alumni* of the school. It may, at any rate, be well used to give new students some warning as to the difficulties and temptations that lie before them, some hints as to how best overcome or avoid them, and some gracious words of welcome and encouragement. It is not difficult, however, to conceive that men lately appointed on the staff may not unwillingly acquiesce in a change which relieves them of a difficult and onerous, though honourable, task. It is by no means an easy thing to give a really good introductory lecture —introductory not to any one course of lectures, but to medical school life; and though it gives a man an opportunity of showing something of his cast of mind, and of giving some insight into his intellectual powers and acquirements, and some reason for the faith in him that led to his appointment, yet it may well be that he would rather avoid a *rôle* in which it is much more easy to obtain a mere *succès d'estime* than a real and genuine success.

Dr. Roberts had been appointed to give the Introductory Lecture at University College, but unhappily was disabled by indisposition, and his place was supplied by Professor Erichsen, who delivered the excellent address which we have the pleasure of presenting *in extenso* to our readers. From the character of it, we may venture, without being thought too curious, to suppose that the learned Professor made use for the purpose of some of the reflections and arguments that had occurred to him when musing on the Address in Surgery, which he, in his turn, had been prevented by illness from giving at the late meeting of the British Medical Association. He took for his theme the "Tendencies of Modern Surgery," and dwelt on the great advances made during the last few years "in the department of medicine," which he has himself studied, practised, and taught. Speaking first of the progress of surgery as a practical art, he remarked that "thirty-five years ago surgery had fallen in its manipulative art into a sluggish and almost stagnant state. In the two greatest operations in surgery—those for stone and for aneurism—there had been no advance in one since Cheselden, nearly a century before, had so successfully operated; or in the other since John Hunter, more than half a century previously, had linked his name inseparably with the operation for aneurism."

But this state did not long last. "Whilst surgery slumbered in the south, it had for some years been endowed with an extreme degree of activity in the north," and from the great school in the northern metropolis "modern British surgery drew its deepest inspiration, and received its first great and decided impulse in all that relates to its art and manipulative department"—an impulse that, aided by the discovery of anæsthesia, and through the combined efforts of many active and zealous practitioners, has carried practical surgery "to a point of perfection far beyond any that it had heretofore attained, and very far in advance of what it had occupied but a very few years previously." The Professor thinks, indeed, "that we have at length reached something like finality in the mere manipulative art of surgery," and that "we can scarcely hope to pass far beyond the line at which we have arrived in the direction of extreme precision and almost absolute certainty in the mechanical performance of the operations of surgery, and that in this direction the progress of modern surgery is nearly barred"; but, at the same time, he points out that "the stream of surgical thought is turning aside into a new channel, the direction of which will tend to limit the unvarying use of the knife, to render its employment more restricted and exceptional, and to substitute for it other means for the accomplishment of those ends that formerly could only be attained through its instrumentality"; and in this direction we may hope for new triumphs and continued progress.

The Professor then turned to the *scientific* school of surgery, and here, he observes, "we are but as yet halting on the threshold. And whether we regard the science of surgery in its relations to the essential nature, the character, and the pathology of surgical diseases and injuries, or whether we consider it in reference to all those circumstances which, independently of the mechanical skill of the operator, influence for good or for ill the results of his procedures, we have a field before us as vast as it has hitherto been little cultivated." And he shows how "every department of physical and natural science may be, and has been, laid under contribution by the scientific surgeon to aid in the development of his own branch of knowledge," and points out to the students that it is "by this application that the science of surgery has made such great progress of late years, and it is in this direction that we may probably look for its most brilliant achievements in the future." In this direction especially he appealed to them to work, while by no means neglecting the acquirement of dexterity and precision in operative surgery, assuring them that "here is a vast and most fertile field, to which you who are commencing your studies may direct your attention with the

greatest advantage, and which you who after this session will go forth into the world to practise, may cultivate with a double advantage to humanity and yourselves." We have but sketched out the backbone of Professor Erichsen's admirable address. Our readers will go to the address itself to learn how fully he developed his arguments, and how happily he illustrated them.

At Guy's Hospital, Mr. Hinton, after referring in graceful and well-merited terms of praise to Dr. Owen Rees and his connexion with the Hospital, went on to treat of the connexion between medicine and the other sciences and branches of life, showing that it exists even with sciences apparently most remote from it. The physician must study also the mind and its workings, in order that he may be capable of separating what is mental in disease from what is bodily; and, indeed, the student of life must extend his studies throughout the whole realm of nature. Those who know Mr. Hinton's published works will expect him to speak of the "researches by which the hard-drawn line between the organic and inorganic effaced itself before their eyes, and laws of physics illumined the recesses of life. This process, he thought for his part, would go on indefinitely, until all that seemed distinctive of life had been included under physical laws. But not, therefore, would life be resolved into physics; rather, physics would be revealed as life. Having disproved the fiction of a vital force endowed with powers other than those of universal force, a triumph worth achieving would have been obtained over ignorance and false impressions. It would have been demonstrated that there is no dead world." He observed that the "storing up of force and its liberation is of constant occurrence throughout all nature, but when met with in the organic world it is called nutrition and function. Nor is this relation of force peculiar to the physical—it runs through the intellectual and moral life." And his lecture was an ingenious and philosophical setting forth of this view. His exposition of his theory could not fail to interest his auditors, although it is difficult to suppose that it equally succeeded in convincing them.

At King's College, Dr. Edgar Sheppard delivered a discourse of a very different, and certainly not less practically useful, style. Recommending to his hearers a careful study of the addresses which had been so lately delivered within the walls of the College, at the meetings of the British Medical Association, he took for the subject of his own lecture what he termed "the socio-political aspect of the profession," and enforced on the students the necessity of studying "not only medicine, but society—its varied character and phases. They must learn to adapt themselves in the largest sense to those with whom their avocation would bring them in contact." "This is truly an age," he remarked, "for making concessions, and a playful and polished way of making them will often effect a triumph over weaker brethren, and subvert a veritable stumbling-block in the way of progress which rigid philosophy would find it hard to displace." And he happily illustrated this teaching by a reference to "the faculty of adaptiveness, manifested in a form of unusual grace and attractiveness," of the late Bishop of Winchester. He gave useful warning against attempts to make "any profession common and unclean by spattering outsiders with a superficial knowledge of it," and in that view questioned the real usefulness of books on "domestic medicine" and the like subjects. He even ventured, with playful audacity, to attack the medical-woman movement, remarking that "they who once thought it their highest privilege to mind the house and bear children" had given themselves up to "quantitative analysis" and "minute cellular anatomy." The teachings of Fresenius and Virchow were superseding the injunctions of St. Peter and St. Paul. We fear that if Dr. Sheppard should meet Miss Jex-Blake and any of her gentle medical sisterhood, they would do their best to give him a *mauvais quart d'heure*. He next spoke of the "modern doctrine of evolution," and of the importance of what Professor Tyndall has termed "the morality of clean blood," and of the triumphs achieved and to be achieved by medical science in the prevention of disease. He discoursed on the high value of ventilation, warmth, and rest in the treatment of disease; of fashions in the exhibition of drugs and in systems of treatment; of the necessity of steady work, "free from those spasmodic impulses which are not healthy in man, though said to be characteristic and unavoidable in the sex endowed with periodicity of function"; and of the advisability and improving power of travel at the close of the collegiate career. His lecture, though far more entertaining and readable than a vast deal of what is called "light literature," is also full of useful warnings and practical wisdom.

At St. Thomas's Hospital, the Introductory Lecture was delivered by Dr. John Harley, who drew a high-toned picture of medical life, that would, we suspect, hardly be fully accepted by all his hearers. All would, no doubt, agree—in theory, at least—with the statement that, "to the sober-minded and humane, to alleviate pain and disease by anxious thought and patient care is a pleasure purer, deeper, and more lasting than any that can spring from what are commonly esteemed more exalted sources"; but we doubt whether all would be with the lecturer when he added—"This, then, I take it, is the inspiration that leads you to medicine, and contents us all to labour on, regardless of the wealth and honours we see falling on the members of other professions"; or would quite appreciate his assertion that "entrance to the medical profession at once relieves you of the temptations and chagrins which attend the pursuit of wealth." But all would fully agree with him that "men who follow the learned professions should ever be ready to prefer the dignity of their calling to the allurements of wealth," and allow that our profession does fully recognise and adopt this principle. In speaking of the present curriculum of study, Dr. Harley observed—and, we think, rightly—that it is more adapted to the wants of consulting physicians and surgeons than to the requirements of the general practitioner; and he would amend it, in the interests of the latter, by "the adoption of a modified apprenticeship, and the addition of a home-patient department to our hospitals"; and certainly his proposed arrangements for these additions would, if they could be effectively carried out, greatly improve the practical education of the student. On the prevention of disease the lecturer grew enthusiastic and eloquent. "Verily I believe," he says, "if Medicine could work out her beneficent will, she would lead a great way along the road to Paradise. In our present state of knowledge we know not how much disease would remain if the preventable ones were actually prevented and their effects allowed to die out by healthy associations." We fear that, though sanitary science is beginning to be acknowledged and encouraged, it will be a long time yet before man is forbidden to transmit and propagate disease and tendencies to disease. When speaking of therapeutics and the difficulties attending the study of the action of medicines, Dr. Harley took the opportunity to speak strongly against the excessive use of chloral hydrate and the hypodermic injection of morphia. He asserts that both are frightfully abused, and with reference to the latter he remarks—"The hypodermic syringe is a powerful and most valuable weapon, but those who use it should possess more wisdom than knowledge." Finally, the lecturer made some remarks on the mode of study, and strongly recommended the student to cultivate those two (certainly most desirable) acquirements—sketching and shorthand writing.

Mr. George Cowell, in his lecture at the Westminster Hospital, defended the wisdom of requiring a sound preliminary education before entering on medical study, and pointed out its great value in training the reasoning powers, and that as the subjects of medical science are rapidly growing and

multiplying, the possession of a well-trained mind becomes more and more imperative. He warned the students against abbreviated text-books and crammers, telling each one that he must get up his work for himself, and must digest and assimilate it for himself. He gave the students advice on the best way of working, and found fault with the examining bodies for requiring men to attend hospital practice "when they ought to be engaged in the study of anatomy, physiology, and chemistry"; and at the close of his lecture he combated the idea that there is any real antagonism between science and religion. His lecture is altogether a good specimen of an older style of the "Introductory" than is generally given now.

We shall continue our notice of the "Introductories" next week. They are all deserving of commendation; some are especially admirable; but all that we have at present seen are earnest and useful enough to be quoted in favour of a continuance of the custom of giving "Introductory Lectures."

THE ASHANTEE WAR.

By the last advices received from the West Coast of Africa there appears to be little change in the situation at the seat of war. The rainy season had not quite terminated, but the excessive sickness which had previously prevailed was still decreasing. Cape Coast Castle and the environs are reported to be very unhealthy, but this is scarcely to be wondered at when the enormous increase to its population is taken into consideration. The natives under our protection, who were driven from their homes by the hostile invasion, have camped and quartered themselves in every available spot without the slightest regard to sanitary considerations, and as many of them were suffering from small-pox when they arrived, the sickness of the station during the past few months must of necessity be looked upon as abnormal.

The medical staff on the spot appear to have borne up exceedingly well under the execution of their arduous duties. The principal medical officer, Dr. Home, was at Cape Coast Castle, and Surgeon-Major Mosse at Elmina. Surgeon-Major Rowe, who has been suffering from a slight attack of fever, was also doing duty at Cape Coast Castle, the remainder of the medical staff being attached to the different stations and redoubts, with the exception of Surgeon Wright, who had been invalided to Madeira suffering from dysentery.

Sir Garnet Wolseley will no doubt realise the important fact that, whatever operations are undertaken, the force to be employed must have done its work and left the Coast again by the month of March next. This fact the authorities at home will do well to bear in mind, so that all demands may be promptly and energetically met. There is, we firmly believe, no reason why an expeditionary force arriving at the seat of operations at the exact moment required, and provided with everything needful in the shape of medical stores, both prophylactic and remedial, should suffer exceptionally in a march towards the interior. The drinking-water must of course be carefully watched, tea or coffee being made, if possible, the principal beverage of the troops; but this point is one which is sure to be attended to by Sir Garnet Wolseley, as the Red River Expedition under his command abundantly proves.

The screw-liner *Victor Emmanuel* is receiving all her fittings at Portsmouth to convert her into a hospital-ship, and she is expected to leave this country in about six weeks' time. Much discussion has arisen as to the best spot for establishing a sanatorium, and several places on the West African Coast have been indicated, but we are decidedly of opinion that the sick or wounded should be promptly conveyed to this country. For this purpose some fast and comfortable vessels might be detailed, such as the *Himalaya*; the invalids would thus be removed altogether from the influence of a dangerous climate, and would have much greater chances of recovery. This system, if we mistake not, was carried out during the Crimean War. Certain vessels were there employed in carrying the sick and wounded from Balaklava to the hospitals at Scutari.

It is rumoured that the 1st West India Regiment, at present stationed at Jamaica, is to be despatched to Cape Coast Castle, but whether as an addition to the corps already mentioned as about to take part in the expedition, or to replace one of them, has not transpired.

Many arrangements are left, and will have to be left, in abeyance until a report has been received by the War Office from Sir Garnet Wolseley. When that officer has, from personal inspection and inquiry, decided upon a plan of operations, much which is now only a matter of conjecture will be definitely decided upon, and upon his report all final arrangements will have to be based.

THE WEEK.

TOPICS OF THE DAY.

The letter of our Liverpool correspondent recounts another importation of cholera from Havre. Two vessels—the *Rosaire* and *Hortense Dusantoy*—have arrived at Liverpool from that port. In the former there have been three deaths, but fortunately the existence of the disease was known to the authorities before there had been much communication with the shore. The case of importation by the other vessel, the *Hortense Dusantoy*, is somewhat similar to that by the steamship *Allianee*, which we noticed last week. The *Hortense Dusantoy* came into port on Thursday, the 25th, and it was not until Saturday that one of her crew applied for admission at the Southern Hospital. He was found to be suffering from cholera, and was taken to the Toxteth-park Workhouse Hospital, where he died the following evening. The case affords another example of the impossibility of excluding any disease which has a period of incubation without the establishment of quarantine.

Cholera seems to be dying out in Italy. On September 29 no case had occurred for some days in Venice; and a telegram from Rome of the same date reports the disease decreasing everywhere except at Naples.

In Lord Houghton's opening address at the meeting of the Social Science Congress, which begun at Norwich on Wednesday, his remarks on the condition of sanitary legislation had rather a desponding tone. He said—

"No practical progress, I fear, has been made in the vexed question of sanitary reform. Day after day it comes before us illustrated with fresh disaster and moral difficulty. The conflict of powers can only be averted by some absolute authority, and even when that authority is established it too often refuses to move. There could be no better evidence of the exigencies and embarrassments of the present state of things than the story of the Bill which Mr. Powell and Sir Charles Adderley introduced during the late session. It was evidently supported by the Government; but the new arrangement, which prevents any fresh matter from being brought on after half-past twelve having delayed the second reading, when it had passed the next stage the session was too far advanced for any further procedure. The loss of this measure is much to be regretted. It would, among other useful enactments, have given to rural sanitary authorities the power of making by-laws and of compulsory purchase, which are now only possessed by the urban authorities, and would have enabled the Local Government Board, by order, to supersede the sanitary authority in cases of non-performance or neglect. It will, perhaps, be found necessary in future legislation on this pressing subject to give to a much smaller proportion of the inhabitants than is now required the means of setting the Local Government Board in motion, and owners must have more power to act independently of their tenants."

It is proposed to fit the China barrows for the Gold Coast with water-tanks and charcoal filters, so that the troops should have

a good supply of filtered water for cooking and drinking purposes. The men are also to be supplied with pocket charcoal filters similar to those which were used in the Abyssinian expedition.

In Dr. Whitmore's report on the late outbreak of typhoid fever in Marylebone and the adjoining parishes, presented last week to the Marylebone Vestry, the number of families who suffered is stated to have been ninety, and the number of persons attacked 320. The percentage of deaths had not been arrived at, on account of the removal of some of the patients, but about twenty fatal cases were known, of which only five or six terminated in Marylebone. One died in France, one in Wales, and others in different parts of the country. The precautions he had adopted to check the spread of the fever, which had incontestably originated in milk supply, were the continuous flushing and disinfection of the sewers with sulphate of iron and carbolic acid, the watering of the streets with a weak solution of carbolic acid, and the sprinkling of all gullies and air-shafts with carbolic powder, packets of which were also distributed amongst the poorer classes. Posters and handbills with sanitary directions were also distributed. We are glad that the number of cases falls short by 180 of the number which had been announced, and that, considering the nature of the disease, the mortality has been so remarkably small. In the epidemic of typhoid at Wolverhampton, supposed also to be due to contaminated milk, fourteen persons have died. We notice that, in consequence of the fines recently inflicted on dairymen for selling adulterated milk, the metropolitan milk vendors are proposing to raise the price of milk from fourpence to fivepence a quart. This will be a serious change for large classes of the poor, and as we believe it to be entirely unnecessary, we hope the public will not meekly submit to it.

MEDICAL MEN AND THEIR PRESCRIPTIONS.

One day last week a medical practitioner appeared before Mr. Woolryeh, at the Hammersmith Police-court, to prefer a complaint against a chemist who, in compounding a prescription entrusted to him to make up, had substituted an ingredient which was deleterious to the patient for one which had been prescribed by the applicant. The magistrate appeared to be of opinion that, as a chemist was not an apothecary, the case would not come within the meaning of Act 55, George III. The applicant further explained that the most important item of the prescription had been tampered with, and stated that he believed it to be a common practice with chemists to substitute articles on their own responsibility for those of an expensive character, which they might not happen to have in stock. Mr. Woolryeh said the matter was one of great importance, and should be looked into, but he was afraid that unless the patient died through the alteration which, without authority, had been made in the prescription, there were no means of punishing the offender. The applicant expressed his thanks to the magistrate for the attention with which his complaint had been listened to, but observed that whilst the law remained in its present defective condition the public were daily in danger of being killed through the physician's prescription being thus unwarrantably tampered with. There can be no doubt that the practices thus brought to light are of great importance to the sick generally; but we cannot imagine that the better class of chemists would follow such an unjustifiable course. Every prescription ought to be compounded with the most scrupulous accuracy down to the minutest details, and it should be borne in mind that the slightest deviation from the written instructions which it contains may have the effect of nullifying the entire care and attention with which the medical man has been studying his patient's case. If, as the present case shows, such flagrant breaches of confidence are really perpetrated, we can only counsel both physicians and patients to be certain of the character of those firms to whom they entrust the making up of their medicines.

INQUESTS IN ST. PANCRAS WORKHOUSE.

The increased number of inquests which have been held during the past two years in the St. Pancras Workhouse was a subject of some discussion at the last meeting of the Board. The result was, that a resolution was carried that Dr. Hill be requested to provide the Board with a list of the names of all persons who had died in the workhouse during the past two years on whom inquests had been held, and also the ages of the said persons, together with the verdicts of the juries. The discussion began with the Rev. W. R. Arrowsmith, who said it was high time the guardians took some steps to prevent so many inquests being held on persons dying in the workhouse. During the last year no less than sixty inquests had been held at the request of Dr. Hill. Some of them were, no doubt, absolutely necessary, but he believed the majority were not. It was only right that the Board should have a list of all the cases laid before them, and he would at the proper time move that it be transmitted to the Local Government Board. Mr. Salter said that in four cases referred to the verdict of the jury showed that Dr. Hill was justified in asking that inquests might be held. It was different in Dr. Ellis's time, as frequently the verdict returned then was—"Death from natural causes." He quite agreed that the return asked for should be granted. Under the circumstances, we do not see how the guardians can be blamed for moving for the return in question. It is necessary, however, that great care should be exercised in arriving at the conclusion that any inquest was unnecessary. The fact of the jury having returned a verdict of "Death from natural causes" would not necessarily show that the inquest had not been properly held. We shall look with some interest for the result of the inquiry.

MEDICINE IN INDIA.

To Sir William Grey, the late Governor of Bengal, as a correspondent of the *Pall-mall Gazette* states, is due the honour of initiating a scheme for driving European medicine into use amongst the people. He found himself face to face with great epidemics, which in the most populous and the richest districts of Bengal decimated the adult population, and left whole villages untilled. He accordingly devised a system of "training up a body of local practitioners able to apply simple remedies to ordinary diseases, such as cholera, small-pox, and epidemic fevers." Vernacular medical classes were opened, and the past three years have proved them to be a success. In the Medical College of Calcutta alone there are now 1400 students, and their numbers increase by twenty-five every year. Of these, 500 receive a high education through the medium of the English language, and from highly paid European professors. Nearly 800 obtain a shorter and less complete medical education in the Bengali language, at the hands of carefully selected native teachers. About 130 pupils, mostly men from Northern India, receive the same education in the Hindustani tongue. The success of the Calcutta Medical College has led to a demand for vernacular medical schools at other places throughout Bengal, and the insatiable Sir George Campbell comes to the front with a scheme for spreading such institutions throughout the country. He finds that Bengal with its 66¾ millions of people requires 34,000 medical practitioners, with an annual supply of 900 men yearly, to keep up the profession at this standard. Of course there is the invariable money difficulty. Sir George deplores that he has hitherto spent only £115,000 per annum on medical tuition, and winds up with the characteristic declaration that wherever the money is to come from, "the arrangements proposed

must be made." The italics are his own. But the naturalisation of English medical science means a revolution in the domestic habits and superstitious propitiatory rites of the people which would have taken away the breath of an Indian Governor in the days of John Company.

DR. TIDY ON THE ADULTERATION ACT.

DR. TIDY, Medical Officer of Health and Analyst for the Parish of Islington, in his report to the Vestry "protests against irregularities in the working of the Adulteration Act, which in some places unfortunately seem to be the rule. To purchase articles irregularly, to find them adulterated, and then to tell the tradesman (which the Act does not sanction) rather than to summon him, is merely playing with an important Act of Parliament; it is treating it as a creature of circumstances to be toyed with after one's own liking, and it can only end in bringing disgrace on chemical analysis and on the law which employs science for its help to punish the guilty and let go the innocent. To prevent the Act being a means of persecuting the dealer and of interfering with just trading on the one hand, or allowing our certificates to be the means of trade advertisements on the other, should be a matter of constant concern; while at the same time we should allow no false feeling to prevent our putting a stop to what has been too long an enormous source of addition to the money-bags of the fraudulent dealer, and so necessarily a cheat on the poor and a curse to us all."

IMPROPER ADMISSION OF FEVER PATIENTS INTO WORKHOUSES.

THE Visiting Committee of the Islington Board of Guardians very properly complained, at the last meeting of the Board, of the laxity of a system by which persons suffering from a contagious complaint were sent into the workhouse, which numbered nearly 700 inmates. It appeared that four cases of typhoid fever were admitted into the workhouse without a medical order. As soon as the medical officer saw the patients he ordered them to be at once isolated. The Committee expressed satisfaction with the prompt action of the medical officer, and the Board resolved that the matter should be investigated, with the view of preventing the recurrence of a proceeding so dangerous to the health of the inmates.

BABY-FARMING.

THE Metropolitan Board of Works have recently had their attention drawn to the fact that the provisions of the Infants' Life Protection Act have been much neglected. The present organisation for carrying out the provisions of the Act appears to be very defective. We hope, as the subject has been referred for consideration to the Works Committee, that some efficient means may be adopted by which the Act will no longer be almost a dead-letter. Several instances have lately shown how little has been done towards organising the active system of supervision which was intended by the Act. It seems that baby-farmers have recently established themselves beyond the boundary of the Metropolitan Board.

A FEVER-STRICKEN CITY.

SHREVEPORT (says the *Times* Philadelphia correspondent), the principal town of Northern Louisiana, located on the Red River, near the Great Raft, is suffering from a severe visitation of yellow fever. It has about 4600 inhabitants, half whites and half negroes, and has heretofore been a very thriving business-place. Now, however, through the dread an epidemic always inspires, the communication by rail has been stopped, and a fall in the river has almost cut off water communication. The fever is very malignant, causing an average of twenty deaths daily, and aid has been asked from New Orleans, St. Louis, and other cities, where the call is meeting with a liberal response.

MIDDLESEX HOSPITAL.

THE annual dinner of the Middlesex Hospital passed off well. Dr. Greenhow, F.R.S., occupied the chair, and there were present about eighty, including past and present students, members of the staff, etc. Major Walters and Major Maclean responded for the Army, Navy, and Reserve Forces; Mr. De Morgan, who was received with enthusiasm, for the Medical College; Mr. Rix and Mr. Arthur Tomes for the Past and Present Students. The Middlesex Hospital Minstrels, including Mr. Critchett, Mr. Hailstone, Mr. Adams, Dr. Semple, Mr. Gillespie, and the Rev. Mr. Walshe, the Chaplain of the Hospital, afforded much pleasure by the really capital vocal and instrumental music they gave.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE annual meeting of this Society was held on the evening of September 29, in the library of the Newcastle Infirmary; Dr. Philipson, President, occupied the chair. The following is a list of the officers appointed for the ensuing year:—*President:* Dr. Philipson. *Vice-Presidents:* Drs. Burnup, L. Armstrong, Peart, and Mr. Broadbent. *Honorary Secretary:* Mr. Henry E. Armstrong. *Committee:* Drs. Denham, Humble, Arnison, B. Bramwell, and Page; Messrs. C. Carr, Russell, Hawthorn, and Redmond.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT the last annual meeting of the Society the following officers were elected for the year ensuing:—*President:* Dr. Henry Letheby. *Vice-Presidents:* Drs. H. G. Sutton, W. Hardwicke, and S. Gibbon. *Treasurer:* John Liddle, Esq. *Secretaries:* Drs. J. Northcote Vinen and Thomas Stevenson. *Council:* Drs. J. Adams, F. T. Bond, W. H. Corfield, T. O. Dudfield, W. T. Iliff, Price Jones, D. O. Maxey, C. M. Tidy, J. W. Tripe, and W. T. G. Woodforde; C. F. J. Lord, Esq., and J. Oakeshott, Esq.

DEATH OF DR. THURNAM, F.R.C.P., F.S.A.

WE regret to observe the death of Dr. Thurnam, of Devizes, the well-known author on British Crania and on other subjects of archæological, physiological, and psychological character. We hope to give our readers a notice of Dr. Thurnam's life and career in an early number.

FROM ABROAD.—THE PRÉFET DU RHÔNE AND THE ASSOCIATION FRANÇAISE—TREATMENT OF AMPUTATION-WOUNDS—EXCISIONS AFTER GUNSHOT INJURY.

M. ALGAVE, the editor of the *Révue Scientifique*, in his able report of the proceedings of the French Association for the Advancement of Science, recently held at Lyons, gives a curious account of the high-handed proceedings of M. Ducros, the Préfet du Rhône, whose name has so often been before the public of late. It seems that the Préfet was by no means favourable to the meeting of the Congress at Lyons at all, and used his best endeavours to prevent it, being under some kind of persuasion that it must have more or less of tendencies of a socialist description. One point was clear enough—it had been cordially invited to Lyons by M. Barodet, then Mayor of Lyons, and the Municipal Council, who had voted 20,000 fr. for its reception. This *fait accompli*, and the positive injunctions of the Government, compelled the Préfet to withdraw his opposition. However, he determined to keep the reception in his own hands, and simply ignored the Municipal Council, preventing their having anything to do with those who had supposed themselves to be their guests. His mode of manipulating the 20,000 fr. voted by the Council was what would be called in this country "cool," and rather in contrast with the liberality of our own chief magistrates. Issuing cards in his own name and that of his wife the

Countess for a grand dinner, he invited a selected number of the Association to meet his other guests, not including of course the Municipal Council who had provided the funds. With the rest of the money an evening reception was given; but this was so managed as to give just umbrage to the Association. No mention was made of them in the programme, the Préfet informing them a few hours before that they might all come in undress on showing their cards of membership. They were, in fact, treated just as ordinary travelling strangers are when passing through a town where a prefectorial *fête* is given. The consequence was that very few of the members attended, the *salons* being crowded by functionaries and inhabitants of Lyons, many of whom cared little about science, and who certainly were not aware that the first *fête* given by their Préfet was paid for out of money voted to do honour to its votaries.

It seems, however, that the Préfet was so well content with the way in which matters had gone off that he volunteered an address himself, and appeared unexpectedly for that purpose, resplendent with stars and orders, during one of the final business meetings. The address was an unintelligible muddle, in which the first chapter of Genesis and the Greek Argonauts figured in inharmonious proximity.

In the surgical section of the Congress, Professor Azam, of Bordeaux, read a paper on what seems to be an inexhaustible subject, the "Treatment of Amputation-Wounds." His plan consists in obtaining immediate union of the muscles and skin, while the deeper-seated parts are allowed to discharge by means of a drainage-tube, which is left in usually until the twelfth or fifteenth day. The results are, he says, very satisfactory, union being generally accomplished by the twelfth or sixteenth day, and in other cases by the twentieth or twenty-fifth day. M. Verneuil observed that this question is little more advanced than it was at the end of the sixteenth century —free exposure of the wound, its immediate union, and mixed methods like this of M. Azam's succeeding each other. This plan must be compared with others which consider that the danger proceeds more from the medium in which the patient is placed than from the wound, and of which Lister's and the occlusion and wadding dressings are examples. M. Azam's plan may suit well enough in the country or in small hospitals, but in Paris or Lyons, where the hospitals are certified cemeteries (*nécropoles assermentées*), all attempts at immediate union when they do not succeed are horribly dangerous; and when the accidents do ensue it is too late to recede. The chance of a more rapid cure cannot be pitted against the patient's safety. The extreme complication and tediousness of Lister's mode of dressing leads M. Verneuil to prefer in insalubrious localities the wadding dressing, with which he has reason to be more and more satisfied. M. Focher, surgeon to one of the smaller Lyons hospitals, has found this obtaining partial union of great service, employing, however, in place of a drain a tent, which in three days secures an open channel for the deep-seated pus, and may then be removed. M. Courty, of Montpellier, also approves of the practice of endeavouring to unite three-fourths or four-fifths of the wound, and endeavours to leave an issue for the pus at the most dependent angle of the wound, by bringing all the threads of the ligatures there. Lister's plan demands too much time and minute attention, and the occlusion dressing cannot always be safely employed. M. Ollier, of Lyons, explained a modification that he had made in his procedure. Of all means of treating wounds in a hospital medium, he observed the oil-bath is the only one absolutely certain, this being replaced at the end of twelve or fifteen days by simple dressing. The employment of this method was, however, attended with so much difficulty that it had to be abandoned, and for it was substituted the wadding dressing rendered immovable by silicate of potash. The latest improvement in this consists in bringing the edges together, applying a layer of phenicated wadding, and keeping the limb on a splint, a drain being also placed in the depth of the wound. This is all continued for forty-eight hours, during which period the chief danger from secondary hæmorrhage and septic accidents is present. At the end of this time the occlusion by wadding dressing is secured, this being also rendered immovable by means of silicate of potash. During two years and a half M. Ollier has not met with a case of pyæmia.

During the session of the Congress the members of the section inspected the Hôtel-Dieu of Lyons, and unanimously pronounced it to be totally unfitted for its purposes, and fraught with every evil that can characterise hospital construction. Its wards are too large, its ventilation is impracticable, and all the patients have to be supplied with close-stools. Moreover, intended alterations were pronounced to be mere illusions, and it was declared that no efforts could render passable as a hospital what was a sufficiently imposing-looking edifice that should at once be converted to some other use. A similar investigation of the Charité Hospital was followed by an equally unfavourable opinion—at all events, as regards its lying-in wards. It is sincerely to be hoped that this verdict, pronounced by such unimpeachable authority, will have its weight with the municipality.

At the second Congress of German Surgeons a discussion took place on a paper read by Professor von Langenbeck, on "The Results of Excisions performed during War." He observed that the unfavourable results of the excisions performed during the Schleswig-Holstein war as reported by Hannover, as well as the later observations collected by Kraatz, bearing on the ultimate utility of limbs so treated, had led most observers to prefer amputation. Langenbeck is, however, able to make a more favourable report, derived from his own military experience. He had met with several cases of excision of the shoulder and other joints in which very useful limbs resulted. Even the unsuccessful cases were not always to be attributed to the operation itself, but to the difficulty of applying appropriate apparatus in war time, or even to the interest which the patient had in maintaining his limb in such a condition that it would gain him a pension. Professor Busch, of Bonn, observed that civil practice had already taught us the difference there is in excisions performed in chronic disease or on account of injuries. While in the first case a stiff joint is formed, in which we can only obtain mobility with much trouble, when extensive injury has been present it is as difficult to procure a firm and useable joint. All kinds of means may have to be resorted to during perhaps a twelvemonth before a loose joint is converted into a serviceable one. In the late war he found some of his patients upon whom he had performed excision in a miserable condition, which he attributed much to their frequent removals and their falling into the hands of successive surgeons. Professor Esmarch believed that political antipathy had a great deal to do with the statements of Professor Hannover, of Copenhagen. During and after the first Schleswig-Holstein war he had had many opportunities of becoming acquainted with the views of the Danish surgeons on this subject, and always carried away the conviction that they were determined to oppose the operation of excision. After the war, also, they attacked it on every opportunity. The same prejudice plainly prevailed also during the war of 1864. As in the first war, the Danish surgeons did nothing to restore the utility to the limbs which had undergone excision in the German lazaretths. Dr. Danzel could quite confirm Esmarch's statements, having found this prejudice prevail even when complete movability had been established in a case of excision of the elbow. In general he is content with a stiff joint, for the limb is usually of more utility

than where this remains movable. Professor Langenbeck also suspects that the statements of Hannover are not free from prejudice. He referred to cases of Danes whom he had successfully treated, producing excellent and serviceable joints, both in the wars of 1848 and 1854, no mention of which is made in Hannover's statistics.

AUTOBIOGRAPHICAL RECOLLECTIONS OF THE PROFESSION.

No. XXX.

By J. F. CLARKE, M.R.C.S.

For nearly forty years on the Editorial Staff of the "Lancet."

THE LONDON UNIVERSITY.

(*Continued from page* 163.)

Quarrels of the Medical Staff — Rival Modes of Treating Erysipelas — Antagonistic Lecturers — The Office of House-Surgeon in the Hospitals of London obtainable only by Purchase — The System of "Concours" established at the North London Hospital — Stringency of the Test — Its Effects on the Students — Past and Present State of Medical Education — The Vast Improvements effected in late years.

As might have been expected, the quarrels which were carried on in the board-room of the Hospital were not confined to that arena; they were carried into the wards, and into the lecture-room. Remarks were occasionally made at the bedside which were intended to excite ridicule or contempt. The house-surgeon of one of the chiefs was scarcely on speaking terms with the house-surgeon of another. Indeed, I recollect that this antagonism was carried on to such an extent in one instance as to threaten personal violence. This condition of things was certainly favoured by at least one of the chiefs, and connived at if not encouraged by the other. In spite of all these disagreements, however, the medical officers as a body and individually were much respected and even beloved by the students in general. They, at all events, whatever bitterness their principals might feel, only regarded the quarrels with curiosity and amusement. Sometimes, indeed, these quarrels bordered on the ludicrous, if not on the truly comic. Thus, at a period when erysipelas was almost epidemic in the hospital, both amongst the medical and surgical patients, we had four practitioners of the highest eminence and skill treating the disease in four different and distinct ways! Elliotson was painting the patient with a strong solution of nitrate of silver; Thomson was smearing the surface over with mercurial ointment; Cooper, with his usual caution, modified the topical treatment by attempting to isolate the disease by drawing lines of lunar caustic near the margins of the eruption, to prevent it spreading beyond them; while Liston confined himself to the older mode of treating the disease locally by means of fomentations and the application of flour. But, notwithstanding his assumed contempt for medicine, he always administered powerful remedies internally. Belladonna at this time was much resorted to by the homœopathists, and this Liston employed, together with antimony, in what were regarded as "heroic" doses. Liston at this period was very frequently called into consultation with Dr. Quin, then the head of the "heresy," and was no doubt considerably influenced by the sagacity of that able and philosophical, but mistaken practitioner. It was curious to listen to the clinical lectures of the four principal medical officers of the Hospital, sometimes delivered the same week. Elliotson, always clear, decisive, and "rational," gave reasons for all he did, and justified his treatment with the nitrate of silver, and appealed to the results of that treatment. He would occasionally make a sly, good-humoured allusion to the "do-nothing" mode of treatment, but he was never coarse or ill-natured in his remarks on the practice of his colleagues. Thomson would drily, and with the most perfect coolness—as if, indeed, he and his colleagues had agreed to try a series of experiments on the treatment of the disease,—draw conclusions from all the cases, and would analyse, in his laboured manner, the results of the therapeutical agents employed. Cooper stuck mainly to his own cases, and if he did allude in any way to those of his colleagues, it was in a quaint, humorous style, without being offensive. He could, however, when he pleased, say very nasty things in a very quiet way. Liston's impetuous temperament urged him to say very uncivil and very bitter things. He ridiculed the idea of curing erysipelas by "turning a white man into a nigger," or by "drawing lines horizontally, perpendicularly, and slantingdicularly over a patient's body." His lectures, I believe, on certain occasions (and this was one of them) were carefully prepared. He was, moreover, assisted to some extent by one of the greatest masters of invective of the time. These lectures were usually well attended. What the effect of them was, so far as teaching the students, I leave others to judge; but the students certainly had the opportunity of witnessing and judging the results of very different modes of treatment. When the "North London" was established there was no hospital in London at which the office of dresser or house-surgeon could be obtained, even by the most meritorious student, except by a large payment of money. In some of these it was necessary to the candidate to have been an "apprentice" or pupil of one of the surgeons. For this apprenticeship very large sums of money were given—a thousand guineas being about the average payment. The effect of this was to "keep out in the cold" many of the best men in the institutions. To the medical staff of the North London Hospital medical students at that time were, and at the present time are, under a deep debt of gratitude for the course pursued in that institution. On its establishment it was determined that money and family influence should have no effect on the appointment of candidates to the posts of honour. The least favoured amongst them, *quoad* money and interest, stood the same chance of success as the most favoured in those particulars. None of the medical officers derived any emolument from the fees of students for attending the practice. These fees went directly to the support of the Hospital, without any drawback whatever. In order that the best men might be appointed to offices of honour and trust, the system of *concours* was established. Any student of the Hospital was entitled to enter into the contest, his only requirements being that he had attended a certain number of lectures at the College, and having for a certain time been an "entered" student of the Hospital. Under these circumstances it was all but impossible that an incompetent man could be elected. The ordeal he had to pass was most severe; not simply in the presence of a clique, but in the presence of his fellow-students, and of the students of all the hospitals in London. I recollect no instance in which the selection made met with the slightest disapproval on the part of anyone interested in the matter. The candidates were required to answer questions of a searching character, and to perform operations on the dead body before a public assembly. The *concours* days were of exceeding interest, as was evidenced by the crowded state of the theatre of the hospital which prevailed on those occasions. I recollect many of these "trials of strength" during the many years that I represented the *Lancet* in the Hospital. I regularly furnished reports of these proceedings to that journal, and it is not difficult to imagine the effect that they had on the other hospitals of the metropolis. At first the *concours* was attempted to be pooh-poohed, but this attempt was of short duration. The minds of the students of London were thoroughly impressed with the justice of the course pursued, and the "authorities" slowly and unwillingly were at length brought to the same conclusion. In order to show the thoroughly fair and practical ordeal to which the candidate for honours was subjected, I reproduce here one of the papers:—

"*Questions proposed for Answer in Writing.*—1. Describe the modes of taking blood from the arm and from the temple. What are the accidents which may occur during or after these operations? How would you remedy them? 2. What are the circumstances which would render necessary the operation of tracheotomy? Describe the operative procedure. 3. What circumstances distinguish a fracture of the neck of the thigh-bone from dislocation of the hip? 4. The anatomical relations of the common carotid artery. Describe the mode of applying a ligature to the artery, and the precautions to be taken during the operation.

"*Practical Examination in Public.*—Amputation of the great toe at the metatarso-phalangeal articulation; after-treatment. Amputation of thumb at metacarpo-phalangeal articulation. Describe the treatment for diffused aneurism of the arm. Describe the treatment of onychia (and definition). Apply a ligature to the brachial artery in the lower third of its course.

Apply a ligature to the femoral artery in the upper third of its course. Remove a foreign body from the meatus aud. extern. Apply the apparatus for fracture of the lower jaw."

Such were the examinations of the candidates for the house-surgeoncy of the North London Hospital, and no one will deny that they were stringent and practical. Looking at the fact that it is nearly forty years since the examination above referred to took place, I may fairly ask if there was any such searching examination at any of the colleges of surgeons in this kingdom? I believe not. Even now it may be questioned whether any collegiate test is much, if any, more likely to be effective than the old *concours* test of six-and-thirty years ago.

I have dwelt at some length on the establishment and career of the London University and the North London Hospital, as it represents a very important epoch in our profession, particularly as regards medical education and the future of the medical student. For though the "University" was not confined to medical teaching and included most of the other arts and sciences, its chief reputation rested on the medical department. The "University" was founded on the most liberal principles, and its council was composed of the ultra-liberal party. It may well be supposed that it met with the strenuous and determined opposition of those whose interest it was to "keep things as they were." Attacks upon it were made of the most unscrupulous character. It was attacked in Parliament, in the pulpit, and by the press. It was denounced as an "infidel" institution; was characterised as "that low place in Gower-street"; and one brilliant writer, in a paper which he edited at the time with much ability, called it "Stinkomalee."(a) But, thanks to the courage and ability of its medical staff, it flourished in spite of all opposition and ribald invective. For some years it had the largest class of any medical school in the metropolis. It has "turned out" some of the ablest, most accomplished, and most successful physicians and surgeons of the day. It is true that at the present time University College and Hospital have no just pretence to pre-eminence in any way. There is not a single school in London or the provinces that is not ably officered and conducted in such a manner as to make it a fitting place at which to obtain a first-rate and complete education. This has been the work of time; it has been slow, but it has been complete. There is now a generous and beneficial rivalry amongst the schools to be foremost in imparting sound and practical knowledge. But it is not an inopportune moment at the present, when the medical session has just commenced, to remind the students of the past. For many of the advantages they now possess, for many of the improvements in their education, and for the destruction of a gross monopoly of place by money and patronage, they are mainly indebted to the influence of "that *low* place in Gower-street," assisted by the unflinching and constant advocacy of a free and independent medical press. Every student at the present time may feel assured that, with proper diligence and conduct, he may, like the meanest soldier in the ranks of the Great Napoleon, "carry a marshal's *bâton* in his knapsack."

NÉLATON AS A CLINICAL PROFESSOR.

By Professor SAPPEY.

Quite in accordance with the simplicity which characterised his entire career, Nélaton forbade any addresses being delivered at his interment. Before this was known, however, the Faculty of Medicine, of which he was so distinguished an ornament, had deputed M. Sappey, Professor of Anatomy, one of the deceased's warmest friends, to prepare an address in their name. Although not delivered, Professor Sappey has since published this, and we reproduce those portions which relate to Nélaton as a clinical teacher:—

"What he was as Professor of Clinical Surgery a short parallel will exhibit. Nélaton was the pupil (the last remaining) of Dupuytren, and among all his titles none had more value in his eyes. From the day when he was first privileged to see and hear this celebrated man, to the moment when a slow agony confined him to his bed of suffering, the pupil continued to preserve for the master a deference only equalled by his lively admiration. Formed in this school, and endowed with the powerful faculties which had rendered him illustrious, he grew up as it were under the shadow of and in the worship of his master's memory. Thirty years later, the pupil had become the rival of the master. The surgeon of the Clinique had attained in Europe the high position which the surgeon of the Hôtel-Dieu formerly occupied. If the law which regulates our destinies could have permitted that they should then be brought into the presence of each other, the master would have felt proud of such a successor; and the pupil, still animated with the same feelings as when young, would have inclined with the same respect before him who he considered as the living personality of the genius of surgery.

"They resembled each other in the great qualities which constitute the man of superiority and the surgeon of eminence, but differed in all other aspects of their organisation. Both shone by that penetrating acumen which they displayed in the examination of patients, by the infinite art they possessed of grouping in the most natural succession all the observed phenomena, and by the lucidity with which they fixed upon the seat and nature of the disease. This determined, they showed the same skill in seizing the indications presented, and the same talent in fulfilling these. It was especially in difficult cases that it was a pleasure to see and hear them unfolding the picture of the disease. So far from dissembling the obscure points, they on, the contrary, brought them fully forward; and then, by the logical interpretation of the facts and their comparison with analogous facts derived from the annals of science or their own experience, and by a learned and luminous discussion of these, they gradually raised the veil under which the lesion to be combated with lay hidden, exhibiting it in most cases in all its completeness. He who has not seen our eminent colleague engaged in the struggle with one of these great surgical difficulties, and who has not been present at one of the lectures when he has diffused over the subject and among his auditory the bright clearness of his own mind, cannot have a just idea of the nature and elevation of his talent. To his operations he brought a firm and sure hand, calculating and foreseeing everything in advance, going straight to his object, and entirely absorbed in the interest of his patient. If one of those accidents which the most consummate knowledge does not always enable us to foresee presented itself, with admirable presence of mind he instantly modified his whole plan of the operation, and attained his end as certainly and as rapidly by this new procedure.

"As professors, both Dupuytren and Nélaton attained brilliant success. Both had their clinics crowded by pupils and foreign practitioners. On the part of these there was the same desire and eagerness to hear them both, and the same deference; and yet how different were these two masters! Dupuytren had a powerful constitution, fine stature, a proud physiognomy, and a severe expression. Grave, solemn, and imposing, he kept the crowd at a distance. When the time arrived for him to speak, his voice at the commencement seemed almost extinguished, becoming afterwards gradually raised until it filled the room. Now, animated by his clear, facile, abundant, and correct eloquence, he seized hold of the minds of his auditory, and held them suspended to his lips. Nélaton was simple and dignified, his attitude, language, and manners all expressing benevolence. The pupils surrounded and accosted him without fear. To any reflections or objections which were submitted to him he willingly replied, sometimes entering on discussions, and always in a tone of simplicity and marked courtesy. To be useful to his patients and to instruct his pupils—in a word, to fulfil the high mission that had been confided to him, and to fulfil it as well as possible—constituted his sole preoccupation. He had also the gift of lucidity, and the still rarer gift of captivating the attention of his auditors. But he attained this end less, perhaps, by brilliant forms of language than by the clinical developments into which he entered, and into which he knew how to infuse the most vivid interest.

"Dupuytren will remain the most accomplished type of the professor, and Nélaton the most perfect model of the clinician. Both the one and the other had the most exquisite appreciation of science, and yet both of them wrote very little. With them have disappeared in the tomb the accumulated treasures of their long experience. We may regret this immense loss, but we can only accuse the insufficiency of their strength. Constantly carried away in the whirlwind of a devouring life, they had neither the tranquillity nor the time necessary for prolonged labours. What they have not been able, however, to bequeath us in a durable form they have

(a) Theodore Hook.

transmitted by their voices to several generations of auditors. In their school have been formed pupils now spread over all parts of the globe; and their teaching has been a great centre of light for the propagation of sound doctrines in surgery, and a centre of diffusion for all that relates to the art of healing. If both the one and the other have well deserved at the hands of suffering humanity, so have both also well merited of science."

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Forty-third Meeting.

(*From our Special Correspondent.*)

The following abstracts of papers read at the British Association on subjects connected with Physiology and Medicine were unavoidably omitted last week from want of space:—

Dr. George Harley on the Mode of Formation of Renal Calculi.

Although this communication was of a strictly scientific character, it has at the same time an important practical bearing upon treatment. The following general laws were laid down by Dr. Harley as being applicable to all kinds of renal calculi:—1. In all cases of constitutional calculi the amount of solids excreted by the kidneys must be disproportionate to the amount of liquid. The liquid may be diminished, while the solids remain normal; or the solids may be in excess, while the quantity of liquid remains normal. 2. Calculi may occur at any period of life—from the cradle to the grave. 3. Constitutional calculi are frequently hereditary. 4. The deposition of a calculus in any part of the urinary system is always dependent on some special local cause. The cause may be trifling and temporary, but still it must exist. Once, however, the concretion has begun to form, the original exciting cause is soon lost sight of. 5. The vast majority of constitutional calculi, be their nature what it may—oxalate of lime, phosphate of lime, uric acid, xanthin, or cystin,—have their origin in the kidneys, and are transported elsewhere by the urine. 6. Renal calculi may be divided into two great classes—the organic and the inorganic. The substances composing the former are manufactured within the frame itself; the latter are the direct products of the food and the drinking-water. 7. The colour of a calculus does not necessarily depend on its nature, but on the amount of urohæmatin in the urine. Phosphatic and cystinic calculi form an exception to this rule, by refusing to combine with extraneous pigments. 8. There are three perfectly distinct modes in which crystalloid material is deposited in the formation of calculi. The first and rarest form of calculus is that which consists of a monster crystal, or an aggregation of monster crystals, which are only to be met with in the case of triple phosphates, oxalate of lime, and uric acid. The second is that in which a certain amount of colloid is united with the crystalloid material, one in which it may be said that small crystals separating from the super-saturated renal secretion become entangled in mucus, tube-casts, epithelium scales, or other colloid material, and by fresh aggregations around them gradually become closer and closer packed together until they assume the appearance and properties of a compact concretion. The last mode of formation is by the aggregation of molecular atoms, on the principle of molecular coalescence from the union of viscid or colloid material with earthy or organic crystalloid matter, in the manner of the formation of the dental tissues and shell structures described by Mr. George Rainey. To these three different modes of constitutional calculus formation the author gives the respective names of crystalline, crystallo-colloid, and molecular coalescence. In concluding, Dr. George Harley remarked that the calculi he had been describing must not be confounded with those which for the sake of distinction might be termed "accidentally acquired," such as vesical, which frequently have for their nucleus foreign substances, such as a pea, a barleycorn, a piece of bone, hair, wire, a fragment of sealing-wax, or a portion of catheter—the irritation of which excites the presence of tenacious mucus, blood, or even pus, with which the foreign body itself becomes coated, and in and around which crystalloid molecules and actual crystals are deposited and form the calculus. Finally, calculi are not always of uniform composition throughout; their composition varies at different times with the different states of health of the patient. The centre of the concretion may be composed of uric acid, then may come a layer of oxalate of lime, and over that another layer of uric acid or of phosphates; so that, in a section of a calculus, the clinical phases through which a patient has passed may be read as truthfully as the geologist can read the earth's history in the strata forming its crust.

The Action of Alcohol on Warm-Blooded Animals.

A paper on this subject was read by Dr. Binz, of Bonn, who related the details of a number of experiments performed by him, which went to show that one important effect of alcohol upon the human frame is to diminish the temperature to the extent of from three to five degrees Fahrenheit, this effect being produced by the action of the alcohol on the heart, causing more blood to circulate through the vessels of the skin, which are dilated, and thus a larger quantity of blood is cooled down. The alleged heat of the organism from alcohol, he said, does not exist. The subjective impression is, at least partially, the consequence of an irritation of the nerves of the stomach and of the enlargement of the vessels arising in the skin. When given in small quantities, the thermometer shows no extraordinary increase or decrease of the temperature of the blood; moderate doses, which need not lead to drunkenness, show a distinct decrease of about half an hour's duration or more; and strong inebriating quantities evince a still more decided lowering, lasting several hours. The decrease after moderate doses takes place most successfully in warm-blooded animals which have not for some time previously had alcohol administered. Dr. Binz injected under the skin of rabbits or dogs about a cubic centimeter of ichor, which in a short time produced death; but not so if, with the ichor, alcohol diluted with water was administered either by the stomach or the skin. In the latter case the animal was quite lively and took kindly to its food; so that alcohol need not, he contended, be a narcotic. His experiments, he said, showed a threefold action—the diminution of the heat of the body, reduction of the putrid processes, and raising of the action of the heart. Alcohol was more than a simple stimulant: it was a strong antipyretic and an equally powerful antiseptic. It was *à priori* to be expected that alcohol would not be without its influence on the metamorphosis of tissues. An agent that, consumed in large doses, clearly lowered the combustion, must also be supposed to decrease the urea and the carbonic acid; and this was in reality the case.

Report on the Heat of Arterialisation.

This was a communication by Professor Gamgee, the object of whose researches has been to ascertain whether, when venous blood comes in contact with oxygen gas, its temperature is perceptibly raised. The majority of experimenters who have investigated this question have arrived at the conclusion that if any heat is generated its amount is too slight to admit of detection. In a first series of researches, the results of which were read at the Edinburgh meeting of the Association, Mr. Gamgee had determined that when the blood of asphyxiated animals is shaken with oxygen its temperature is raised. In the experiments which formed the basis of the present report the ordinary venous blood was used. By means of a complicated apparatus furnished with a thermometer of extraordinary delicacy, Mr. Gamgee determined that, whenever venous blood is brought in contact with oxygen, its temperature is raised between three and four-hundredths of a degree centigrade.

(*To be continued.*)

New Disease.—Cattle Plague in a New Form.—The Brahmans of Terunakara have announced that a deity, in the shape of a granite ox of stupendous dimensions, and the pagoda of that place, has been attacked by a most painful boil. The sufferings of the deity demanded and received the utmost sympathy and liberal offerings from the faithful.

Carbolic Acid in Intermittent Fever.—Disagreement in opinion amongst medical men is of constant occurrence, but we have seldom met with a more positive contradiction as to the results of observation by competent persons than with respect to carbolic acid in ague. While MM. Déclat, Barrant, and others have reported that it is a means which never fails—succeeding in obstinate cases wherein quinine had been given in vain—Dr. Curschmann, of Berlin, reports (*Centralblatt*, September 6), as the result of numerous trials of large doses in well-diagnosed cases, that the acid is utterly worthless, succeeding in none of them; and he is lost in amazement as to how other observers have got their results.

GERMAN ASSOCIATION FOR THE ADVANCEMENT OF NATURAL SCIENCE AND MEDICINE.

(*Continued from page* 367.)

(*From our Special Correspondent.*)

THURSDAY, September 18, was chiefly occupied with the first general meeting and the first public dinner.

The proceedings of the first general meeting began with the speech of the President (Professor Fresenius), who opened the Conference with the following hearty welcome to the visitors:—

"The forty-fifth meeting of the German Association for the Advancement of Science and Medicine, at Leipzig, elected me the President of the present Congress, and in virtue of this my office I have the honour herewith to open the forty-sixth meeting. . . . .

"Gentlemen,—This is not the first time that I have had the honour of opening the meeting of the Association. One-and-twenty years ago—in the year 1852—on this very day, at this very hour, and in the same place, I greeted in the same capacity the twenty-first gathering. Those who were then young are now in the full vigour of manhood; those who were then at their best are now declining; and many who then strove with us and rejoiced with us are now resting from their labours. But the one-and-twenty years have not passed fruitless by. Established in fresh splendour, active, and onwards-striving, is seen the German land; afresh and in full earnest, in all the departments of life, has been sustained the fight, in which, better than in any other sign, is to be recognised the advance of man—the combat of truth with error: and mighty are the advances made in all the realms of science. Nor have the natural sciences and medicine been left behind. New methods of investigation have been discovered, hard problems solved, and we have set before us new and higher aims than before. And so the present offers us—truly a time of striving and advance—an opportunity of justifiable rejoicing, and in this spirit I offer you, in the name of the Commissioners, a hearty welcome. I bid you welcome on the beautiful Rhine, which, with better right than twenty years ago, we call the German Rhine. I bid you welcome in hospitable Wiesbaden, the blooming city, which since your last visit has more than doubled its population. May you be at home here amongst us, and may you enjoy our company. If this wish of your Commissioners is fulfilled, it is above all due to the friendly and powerful support which we enjoy on all hands—the gracious gift of his Majesty, our Emperor and King, the powerful co-operation of the royal authorities, the praiseworthy self-sacrifice and ready assistance of the magistrates, and the co-operation of the scientific and medical circles. Gentlemen, the purposes of our gathering may be variously comprehended, and have since Oken's time been variously comprehended. May this difference of opinion bring no discord into our rejoicings. As the sun scatters light and warmth, so may our meeting be allowed to enlighten and to vivify. The light of the beams of science will surely not be obscured by our hearts warming in the honest exchange of thankfulness for which the friendly festivities offer the best opportunity. Your Committee hope that they have been true to the words of Goethe—'Tages Arbeit, Abends Gäste'—as far as possible; at least, they endeavoured so to arrange the festivities that the time of work will not suffer thereby. Like every man, so every people has its peculiar fashion of living and working. The German nation like to think not only of the head but of the heart. This character is innate in us—we enjoy it,—and if we express it in our Conference we are not to be blamed. It is my fervent hope that in this, as in so many former meetings, we may furnish a proof that by it German science—so dear to us all—suffers neither want nor care."

A second welcome on the part of the Government was followed by the transaction of the formal business of the meeting. Professor Neubauer, of Wiesbaden, then proceeded to deliver a highly rhetorical and eulogistic address *in memoriam* of the great chemist whom Germany has lately lost—Baron Liebig,—and this was in its turn followed by an address by Professor Oscar Schmidt upon "The Application of the Theory of Evolution to Man."

The first day's proceedings were brought to a close with a public dinner in the hall of the Kurhaus.

The second and third days of the meeting were entirely devoted to sectional work. Among the most interesting papers read were the following:—In the Section of Anatomy and Physiology: "On the Influence of Flesh Diet upon the Formation and Excretion of Urea," by Professor Falck, of Marburg; "On the Effect of Water upon the Red Corpuscles of the Blood," by Professor Kollmann, of Munich; "On the Posterior Roots of the Spinal Cord," by Professor Gerlach, of Erlangen. In the Section of Pathological Anatomy: Dr. Hirschfeld, of Dresden, "Experimental Investigations on Typhoid Fever"; Professor Eberth, of Zürich, "On Fat Embolism"; and Professor Rindfleisch, "On Phthisis." In the Medical Section: Professor Jürgensen, of Tübingen, "On a Milder Form of Typhoid Fever"; Professor Mosler, of Greifswald, "On the Local Treatment of Caverns in the Lungs." In the same section Professor Ziemssen, of Tübingen, exhibited a boy suffering from congenital fissure of the sternum, and demonstrated the application of an apparatus for washing out the stomach; and Professor Waldenburg, of Berlin, demonstrated a portable pneumatic apparatus for treating cases of lung disease. In the Surgical Section the most interesting papers read included those of Professor Busch, of Bonn, "On Gunshot Wounds"; of Professor König, of Rostock, "On the Mechanism of the Hip-joint"; and of Professor Czerny, "On the Treatment of *Anus Præternaturalis*." In the Section of Surgery also a demonstration was given by Professor König of Esmarch's method of making the limbs bloodless previous to operation. In the Ophthalmological Section, among the papers read were those of Professor Schmidt, of Marburg, "On the Results of Dissections after Linear Extraction"; and of Dr. Samelsohn, of Cologne, "On the Treatment of Conjunctival Granulations by the Galvano-Caustic Method." In the Section of Gynæcology and Midwifery, Professor Spiegelberg, of Breslau, read a paper "On the Course of Delivery and its Management in Contracted Pelvis"; and Professor Dohrn, of Marburg, "Upon the Value of Premature Delivery in Contracted Pelvis." Professor Meynert, of Vienna, read a paper in the Psychology Section "On the Identical Regions in the Brain of Man and Apes." In the Section of Public Health, Professor Hirch, of Berlin, contributed "Notes on the Origin and Spread of Cholera"; Dr. Böhm, of Vienna, and Dr. Roth, of Dresden, discussed "The Relative Value of Large Hospitals and Barracks"; and H. Hoffmann, of Wiesbaden, read "Notes on the Examination of Eyes in the Schools of the Town."

On the evening of the 19th a grand concert was given to the visitors in the Kurhaus, and was attended by a very crowded audience; and on the following evening, a *Fest-Ball* was held in the same place.

The majority of the members and their lady friends joined the excursion to the Rheingau, on Sunday, the 21st, the principal places visited being Rüdesheim, Bingen, and St. Goar. The excursion was a complete success. Another smaller party visited the baths of Schwalbach on the same day.

At the second general meeting, on Monday, September 22, it was resolved to hold the next Congress at Breslau. At the same time Dr. Löwig, of that city, was elected President for the year, and Professor Spiegelberg Second Commissioner. When this business was concluded, Professor Virchow delivered an address "On the Natural Sciences: their Importance in the Moral Education of Mankind." Virchow spoke in his usual quiet and undemonstrative, but earnest and impressive style, and was listened to with marked attention for nearly two hours by a very crowded audience, who frequently manifested their approval by loud applause as some happy phrase or striking sentiment fell from the speaker. The address altogether was so remarkable and so full of what must interest every thoughtful man in England as well as in Germany that we will report it separately.

A second address was delivered after a short interval by Professor Sandberger, of Würzburg, upon the subject of the "Oberrheinthal in the Tertiary and Diluvial Periods." There were no sectional meetings on this day. In the evening there was a grand display of fireworks in front of the Kurhaus.

The forenoon of Tuesday, September 23, was occupied with the last of the regular meetings of sections. The chief interest was centred in the section of Pathological Anatomy, where it was understood that the discussion on phthisis and tubercle, opened by Professor Rindfleisch on Friday, would be continued by Virchow, Köster, Zenker, and other eminent authorities.

The audience were not disappointed, for they had the satisfaction of hearing the author of the cellular pathology discuss the vexed question of tubercle, scrofula, and phthisis, and make a lengthened statement of his views on the subject, which he has not published for several years. Rindfleisch—now so familiar to English readers through the medium of his "Manual of Pathological Histology"—briefly replied; and was followed in the discussion by Virchow again, Köster (of Giessen), Birch-Hirschfeld (of Dresden), Waldenburg (of Berlin), and Zenker (of Erlangen). The discussion was maintained throughout with every appearance of deep interest and earnestness on the part of the speakers, and occasionally with a considerable exhibition of excitement or even warmth. (A full report of this discussion will be given in the *Medical Times and Gazette.*) On the same day Dr. Ponfick (of Berlin) read a paper of great value "On the Anatomical Changes in Relapsing Fever."

Tuesday evening was evidently the last which a number of the visitors intended to spend at the meeting; and the *Festtrunk*, which began at half-past seven, proved to be the climax of the whole proceedings. This *Festtrunk* or drinking festival was held on the invitation and at the expense of the town of Wiesbaden, who crowned the hospitality with which they received and entertained their guests with a banquet in a style at once really splendid and thoroughly German. The wine, we need hardly say, was from the Rhine, and from the Rhine only; and so wonderful was its quality that the most accomplished *connoisseur* was loud in its praises, and vowed that he would never forget the 1868 Rauenthaler Pfaffenberg from the cellar of Manskopf-Sarasin in Frankfort-on-the-Maine. The supply of the wine was unlimited, and its effect was speedily manifest. The conversation became louder and more animated every moment; the *Anstossen* of the wine glasses ever merrier and more frequent. The well-known demonstrative affection of the Germans became increasingly conspicuous; and—forgive them, *Gott Bacchus!*—the flavour of the Rhenish nectar was soon lost in an universal cloud of tobacco smoke. Many a bond of eternal friendship taken in the old student days was now renewed, and many a fresh one formed; and this among men of every age—from the youthful practitioners and *Naturforscher* fresh from the late war, where they had laboured side by side, to the aged *Philosophen* and *Kliniker*, who may first have met at the foundation of the society more than fifty years ago. At short intervals a toast was given by some of the more eloquent of the company, who acquitted themselves as a rule in the most happy style, receiving due honour from the guests, who drank with equal heartiness and goodwill "Confusion to the Jesuits!" and "Long life to our cousins the monkeys!" Even more acceptable, if possible, to the company, and certainly more striking to a stranger, were the frequent songs—not from one voice, but from a thousand, accompanied by a military band. Each guest was presented with a song-book for the occasion, and the "Gaudeamus," the "Loreley," etc., were rendered in the very best student-fashion. But the crowning piece of all was that verse in the "Rheinweinlied" where the whole company, with a peculiarly mixed air of joviality and seriousness, rose to their feet as one man, and sang in the full strength of their enthusiasm—

"Am Rhein, am Rhein, da wachsen unsre Reben;
Gesegnet sei der Rhein!"

As we have said, the *Festtrunk* was truly the climax of the entire proceedings; and next day the majority of the visitors returned to their duties, refreshed in mind and revived in heart.

The third and last general meeting, which concluded this year's Congress, was held on Wednesday forenoon. The first address was delivered by Dr. Snell, on "The Scientific and Medical Standpoints in relation to Instruction in the Present Day;" the second by Dr. Radde, on "The Steppes of Russia;" and the last by Professor Meynert, of Vienna, on "The Mechanism of the Brain." The President then publicly thanked the members and associates in a few parting words; and Professor Virchow, in a short speech, proposed a vote of thanks to the President and Committee and to the town of Wiesbaden, which was carried with acclamation. Thus ended the forty-sixth meeting of the German Association for the Advancement of Science and Medicine.

The annual exhibition of instruments, books, etc., was of no great size, and insignificant when compared with that of the British Medical Association in August last. There was a good display of electrical apparatus by Hirschmann, of Berlin, and Fein, of Stuttgart; and of apparatus for transport, baths, etc., by Fischer and Co., of Berlin. Perhaps the best exhibition of all was the books, among which must be specially mentioned Pagenstecher's (of Wiesbaden) splendid atlas of the Pathological Anatomy of the Eye; two atlases of Medical Anatomy, by Luschka and Hoffmann respectively; and an atlas of the Syphilitic Diseases of the Skin and Mucous Membranes, by Kaposi, of Vienna. Dr. Stein, of Frankfort, exhibited some very wonderful photographs of scientific objects, the most remarkable of which were, perhaps, those of Dissections of the Abdomen in Pregnancy. There was also a very small display of new therapeutic agents.

REVIEWS.

Popular Lectures on Scientific Subjects. By H. Helmholtz, Professor of Physics in the University of Berlin. Translated by E. Atkinson, Ph.D., F.C.S., Professor of Experimental Science, Staff College. With an Introduction by Professor Tyndall. London: Longmans. Pp. 397.

Few books constitute more pleasing, none more instructive, reading than lectures to audiences of unskilled people by our masters in science, who have also the gift of language. Seldom have we read anything with more pleasure than some of Faraday's Christmas lectures to children, such as his "Lectures on a Candle," than which we know no better introduction to the study of chemistry. Such, too, is Giekie's "Story of a Boulder," Huxley's "Bit of Chalk," and some of Tyndall's discourses. But it is not given to everyone to have at once the gift of successfully following scientific pursuits and pleasantly expounding scientific truths; and we are only too glad to welcome these lectures by the foremost physicist in Germany—he especially who has been so successful in the study of those subjects which constitute the borderland between physiology and physics. The lectures are eight in number, and might be arranged in three categories. First come those intended to give to people whose training has not been in the way of physical science some notion of the scope and bearing of what the Germans call "*Naturwissenschaft*"—natural knowledge. These are—first, a discourse on the "Relation of Natural Science to General Science," delivered in the University of Heidelberg; an address "On the Aim and Progress of Physical Sciences," delivered at the opening of the annual meeting of naturalists and physicians, whose doings we are now recording—then coming together at Innsbrück, this year at Wiesbaden; and a lecture delivered before the German Society of Königsberg on Goethe's scientific researches. Helmholtz was one of the first to grasp in all its details the grand modern generalisation of the conservation of force, and to that a lecture which was delivered at Carlsruhe is specially devoted. Closely allied in many respects is the lecture "On the Interaction of Natural Forces," which was delivered at Königsberg. In a niche apart we must place the pleasant lecture "On Ice and Glaciers," which was delivered both at Frankfort-on-the-Maine and at Heidelberg. And lastly we have—perhaps the most valuable of all, as dealing with subjects Helmholtz has made peculiarly his own—two lectures—one "On the Physiological Causes of Harmony," the other "On the Recent Progress of the Theory of Vision"—lectures which we take leave to commend to all interested in physiological physics. It is these last which, as students of medical science, interest us most. The sensation of hearing, as we all know, depends on vibrations communicated to the auditory apparatus; but as constructed in man the apparatus is only capable of appreciating certain tones—viz., those contained within the area of from twenty vibrations a second to about 32,000 a second; more or fewer give rise to no appreciable sound. However produced, these vibrations are propagated in waves through the air. These waves are similar to those of water; in water waves any given particle of water or any splinter of wood moves upwards or downwards, but does not change its place horizontally. In air, however, the summit of a wave is, as it were, compressed, and so represented by a spot where there is increased density of the air. The wave is, as it were, flattened out, and hence the motion of a particle of air is rather to-and-fro than upwards or downwards. According to the length of a wave as measured from apex to apex—or, in the case of air, from one point of maximum density to another—is the pitch of the tone. Many shallow waves give a high pitch; few and mighty are those which produce deep tones; whilst the degree of density gives

loudness or intensity. But besides pitch and loudness tones have still another character, which is commonly called "quality" or "timbre," which seems to depend on the shape of the wave.

It is tolerably well known to all that if a note be struck or sounded before an open piano the string which corresponds to this note replies; and if more than one note be sounded, each string will, so to speak, pick out its own note and sound in unison with these. In this way such an instrument might be described as in a certain fashion resolving a confusion of sounds into their component notes. Our ear is in all probability an instrument of some such description. In the interior of the cochlea is, as all know, a kind of spiral partition, dividing it into the two scalæ. In one margin of this partition is a peculiar structure, known as the "organ of Corti," and which bears a striking resemblance to the keyboard of a piano, or rather organ. The conclusion is almost irresistible that each of these is intended to pick out its own peculiar note, and to respond to it, thus converting vibration into sensation. But the ear can do more. Each wave of sound may be made up of several smaller ones. Provided we have one wave of the same length as the definite form required, the hollows and crests may be filled up in any pattern, the whole producing a compound wave. This wave the ear can resolve into its component parts. If two tones be produced of exactly the same pitch, the ear does not so distinguish them—they either reinforce or destroy each other; but if the pitch is not exactly the same, the waves come upon the ear in different intervals, and so are split up, giving rise to a disagreeable sensation as they fall upon the ear, which is dissonance. This is greatest and most unpleasant when the two sounds are in pitch a semitone apart. With a whole tone it is less, and with a third it disappears, but not so perfectly as with a fifth, where the one tone makes two vibrations to the three of the other. To keep this or a smaller ratio, as 4 to 5 or 3 to 4, is the basis of harmony. Certain other considerations are, however, to be taken into account, but they are too recondite to be here dealt with. Let the reader refer to the original.

The lecture on the eye and vision is more extensive. It is divided into three parts—one considering the eye as an optical instrument, another the sensation of sight, and the third the perception of sight; that is to say, the sense of vision is dealt with from a physical, physiological, and psychological point of view. Here we cannot enter into a consideration of all the details of the function of vision, but the more important points are these:—What we call light is supposed to be due to the vibration of a hypothetical fluid universally present, which we term ether. These vibrations or waves travel excessively fast: some are high, some are low, but all travel at the same rate. All rays give rise to the sensation of heat, but some which give rise to heat do not, in the eye, produce the sensation of light; such waves are very long and high. Others again, which are very short, are characterised by powerful chemical properties, though hardly visible. Only the medium kind of rays produce the sensation of light. But even these differ among themselves—the longest visible rays are red; the shortest, violet; between we have all the colours of the rainbow. By a mixture of these, in certain definite proportions, we obtain white light.

But to convert these waves into sensations a peculiar organ is necessary. We shall not attempt to speak of the various structures in the eye necessary for accurate vision, but deal only with the sentient surface—the retina. The retina is essentially a nervous structure, and is, in fact, made up of ganglia such as are found in other parts of the nervous system; but we find the essential visual structure in the layer of what are called rods and cones, which in a certain way correspond to the pianoforte-looking keys in the organ of Corti. These rods and cones are all arranged perpendicularly to the surface, forming a regular mosaic, and each receives a slender nerve-filament. The impinging of the waves of ether on these gives rise to the sensation of light. But, as is well known, this is not the only stimulus to which these rods and cones, or rather the optic nerve, responds; a blow on the eye will give rise to the impression of a flash of light—here the nerve is excited by the sudden pressure, and the stimulus produces in the brain the usual effect of such stimulation, that is, the sensation we call light.

Space will not permit us to follow the philosopher further in his clear and interesting account of the physiology of vision. All of the lectures are exceedingly valuable and instructive, and we have only selected these as being more strictly medical than are some of the others. The fresh bloom is, perhaps, lost in their translation, for it is impossible to keep the freshness and *verve* of the original language in any translation; but they have all been rendered into good English, which is a great thing, and reflects credit on the translators. We heartily commend the work to such of our readers as may be fond of science in this guise.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

September 30.

REPORT OF MEDICAL OFFICER OF HEALTH—COMMENCEMENT OF CHOLERA.

An important report has just been presented to the Health Committee of the Liverpool Town Council by the Medical Officer of Health, Dr. Trench, concerning the action recommended to be taken by the Council as the port sanitary authority. At the present time vessels arriving in the port are inspected by the officers of Customs, and when any case of contagious disease exists notice has to be given to the mayor, in order that the infected person may by his authority be landed and removed to hospital, and the ship be disinfected. The arrangements under which this inspection is now carried out are so complete that Dr. Trench does not consider the appointment of any additional staff necessary at present. Should cholera break out, however, he advises that a staff should be extemporised for the daily visitation of the infected ships.

As to the establishment of a hospital-ship, he does not approve of this, because of the difficulty of communication between such an institution and the shore, and the consequent want of facilities for its management; but recommends the provision of a hospital for port sanitary purposes on the land bordering on a proposed quarantine area, and he recommends the Health Committee to put in force all the powers of compulsory purchase which they possess, in order to obtain as soon as possible a proper site for such hospital. He very properly represents the necessity for this as most urgent, considering the want of port hospital accommodation jeopardises the safety of the people. The hospital should be near where the ships are moored, be easily approachable by boats at all periods of the tide, and be so far removed from houses and public thoroughfares as to permit of complete isolation. He suggests that it should be a temporary construction of wood and iron, and that admission to its beds should be restricted to cases of cholera and choleraic diarrhœa, and that all other cases of infectious disease should be conveyed as at present to the workhouse hospital.

The report, of which the above is a short abstract, was written on August 26, and will be considered by the Health Committee at its meeting to-morrow (October 1). The consideration will not come too soon, for it is no longer a matter of question that fatal cases of cholera have been brought into the port.

These cases, four in number, were all imported from France, and their history, which is briefly as follows, seems to point to the necessity of much more stringent regulations than at present prevail bearing on the admission of possibly infected ships into dock:—One vessel, the *Rosaire*, on which there have been three deaths, put into Liverpool from Havre on her way to the West Coast of Africa on Sunday morning, and, having been boarded and examined by the Customs officers, was by three o'clock p.m. safely moored in the Georgia Dock. It then transpired that the captain was ill, and not long after this time two of the crew became ill also. No medical assistance was called until six the next morning, when Mr. Howard Pughe, F.R.C.S., was summoned to the ship. On Mr. Pughe's arrival the captain was not only dead but quite cold, and the two men, who had been subsequently seized, in a state of profound collapse, but without having suffered from diarrhœa. In a few hours these two men died, the one at 2 p.m. and the other at 8 p.m. yesterday—*i.e.*, the day on which they first became ill,—the disease having had a course of about eight hours in the first, and a little over twelve in the second case. There seemed to be a slight appearance of reaction after the first administration of remedies, but it quickly passed away. The three bodies were conveyed out to a distance and sunk in the sea last night, and the vessel then placed in strict quarantine, where she will be detained until the medical officer

of health is satisfied of her healthfulness. So far, then, as this ship is concerned, there has been no such communication with the town as would be likely to cause extension of the disease.

In the case of another ship the isolation of an infected sailor from it was almost as complete. This ship—the *Hortense Dusantoy*—came into port on Thursday last, the 25th inst., having called at Havre on her way hither. There seemed to be nothing in her condition to justify the Custom-house officers in putting her into quarantine and calling in the medical officer of health. On Saturday, however, one of her crew applied for admission to the Royal Southern Hospital, but, the case being judged suspicious, he was passed on immediately to the Toxteth-park Workhouse Hospital, where he died on the following evening. This man had severe choleraic discharges from the bowels, and was in a state of collapse when taken to the Royal Southern Hospital. Up to the present no further case has occurred; those which have occurred, however, are quite sufficient to prove that the time has come for the exercise of a stricter inspection than that carried out by the Customs officers.

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—The following is a list of the Candidates who have passed the recent First M.B. Honours Examination :—

Anatomy.

FIRST CLASS.

Pepper, Augustus Joseph, (Exhibition and Gold Medal), of University College.
White, Ernest William, (Gold Medal), of King's College.

SECOND CLASS.

Mercier, Charles Arthur, of London Hospital.

Physiology, Histology, and Comparative Anatomy.

FIRST CLASS.

Pepper, Augustus Joseph, (Gold Medal), of University College.

SECOND CLASS.

Jones, Arthur Henry, of Guy's Hospital.
White, Ernest William, of King's College.

Organic Chemistry, and Materia Medica and Pharmaceutical Chemistry.

FIRST CLASS.

Jones, Arthur Henry, (Exhibition and Gold Medal), of Guy's Hospital.
Pepper, Augustus Joseph, (Gold Medal), of University College.

SECOND CLASS.

Rogers, Thomas King, of University College.
Jones, Cyril Lloyd, White, Ernest William, } Equal. { of Guy's Hospital. of King's College.

The following is a list of the Candidates who passed the First B.A., First B.Sc., and Preliminary Scientific M.B. Honours Examinations :—

(FIRST B.A. AND FIRST B.Sc. CONJOINTLY.)

Mathematics and Mechanical Philosophy.

FIRST CLASS.

Hill, Micaiah J. M., First B.A., (Exhibition), of University College.

THIRD CLASS.

Edwards, Joseph, First B.A., Fawcett, William, First B.A., } Equal. { of Owens College. Private study.

(FIRST B.Sc. AND PRELIMINARY M.B. CONJOINTLY.)

Chemistry.

FIRST CLASS.

Thompson, Claude Metford, First B.Sc., (Exhibition), of University College.
Jones, John Viriamu, First B.Sc., of University College.
Christopher, George, First B.Sc., of University College.
Bedson, Peter Phillips, First B.Sc. and Prel. Sci., of Owens College.

SECOND CLASS.

Jones, David Rhys, Prel. Sci., of University College.
Hill, Samuel Alexander, First B.Sc. and Prel. Sci., of Royal School of Mines.
Davy, Henry, Prel. Sci., of Guy's Hospital.
Robson, Herbert, First B.Sc. and Prel. Sci., of University College.

THIRD CLASS.

Banks, William, Prel. Sci., Private Study.
Daniel, Alfred, Prel. Sci., Meek, John William, Prel. Sci., } Equal. { of University of Edinburgh. of Owens College.
Hopkinson, Charles, First B.Sc., Lodge, Oliver Joseph, First B.Sc. and Prel. Sci., Ryley, James, Prel. Sci., } Equal. { of Owens College. Private study. of University College.
Mears, William Pope, Prel. Sci., of London Hospital.
Harris, Thomas Frederick, First B.Sc., Private study.

Zoology.

FIRST CLASS.

Sheppard, Chas. Edward, Prel. Sci., (Exhibition), of St. Thomas's Hospital.
Daniel, Alfred, Prel. Sci., of University of Edinburgh.

SECOND CLASS.

Richmond, Charles Ernest, Prel. Sci., of Owens College.
Freund, Percy Herbert Edmund, Prel. Sci., of St. Thomas's Hospital.
Ray, Prasanna Kumar, First B.Sc. and Prel. Sci., of University College.

THIRD CLASS.

Stevenson, Leader Henry, Prel. Sci., of Guy's Hospital.
Nicholson, John Francis, Prel. Sci., of St. Thomas's Hospital.
Miller, Richard Shalders, Prel. Sci., of University College.

Experimental Physics.

FIRST CLASS.

Lodge, Oliver Joseph, First B.Sc. and Prel. Sci., Private study.

SECOND CLASS.

Sainsbury, Harrington, Prel. Sci., of University College.

THIRD CLASS.

Jones, David Rhys, Prel. Sci., of University College.
Jones, John Viriamu, First B.Sc., of University College.

Botany.

FIRST CLASS.

Banks, William, Prel. Sci., Cuming, Charles Henry, Prel. Sci., } Equal. { Private study. of University College.

SECOND CLASS.

Parker, William Rushton, First B.Sc. and Prel. Sci., of Caius College, Cambridge.
Jones, David Rhys, Prel. Sci., of University College.

THIRD CLASS.

Stevenson, Leader Henry, Prel. Sci., of Guy's Hospital.
Lloyd, David, Prel. Sci., Todd, John, Prel. Sci., } Equal. { of University College. of University College.
Barclay, Arthur, Prel. Sci., of University of Edinburgh.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Sept. 25 :

Churchward, Albert, South Penge-park, Anerley.
Rendall, John, 47, Trinity-street, Borough.

The following gentlemen also on the same day passed their primary professional examination :—

Golding, Reginald, St. Bartholomew's Hospital.
Hogg, Thomas B., Leeds School of Medicine.

At the Preliminary Examination in Arts held at the Hall on September 26 and 27,—108 candidates presented themselves ; of whom 32 were rejected, and the following 76 passed, and received Certificates of Proficiency in General Education—viz., in the first class, in order of merit :—

First : W. A. Sykes. Second : C. F. Campe, A. E. Cracknell, B. J. Guillemard, and R. E. Inman. Sixth : J. L. A. Hope, and W. Hugo, Eighth : W. J. Cant, D. Colquhoun, H. R. Dale, F. J. Driver, F. C. Gibbs E. P. Hayward, W. J. Milles, and B. Rigden.

In the second class in alphabetical order, viz. :—

R. W. Addems, A. Allen, N. Allsworth, W. W. Amsden, T. Baker, F. Bass, H. L. Bates, C. E. Beebe, A. S. Bradford, A. H. Bromilow, A. E. Clark, M. F. Cock, C. E. Cocksedge, C. Couzens, E. Cureton, L. W. Davies, W. C. Falls, W. Fowler, F. Frank, W. T. Freeman, E. Griffiths, J. L. Hall, J. T. Hay, W. B. Hodgson, H. Hopper, G. Hussey, N. Kingsford, H. J. G. L. Leith, H. J. Liebstein, M. E. Ling, A. P. Lungley, E. D. Maddick, C. Maunder, J. Montford, T. P. Morgan, H. B. Noble, G. E. Palmer, W. J. Parkinson, C. Plant, J. R. Purdue, F. F. L. Robertson, H. J. Scott, J. S. Scriven, F. J. Shaw, H. G. Statham, H. O. Stuart, E. Tatham, R. C. Thomas, T. F. Vaisey, C. J. Vlieland, E. C. Waller, M. Waite, A. S. R. Wainwright, E. C. Warren, T. F. Watts, J. M. Wheler, P. H. White, W. R. White, F. Wiles, H. Wilson, and A. L. Wing.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

PRESTON, WM., M.B. and C.M. Edin.—House-Surgeon to the Lancaster Infirmary and Dispensary, *vice* W. Berry, M.R.C.S. Eng., etc., resigned.

NAVAL APPOINTMENTS.

ADMIRALTY.—George B. Beale, and J. M. Hunter, Staff-Surgeons, second-class, to the *Fisguard ;* Mark A. Harte, Surgeon to the *Revenge ;* Alexander G. Bain, Surgeon to the *Northumberland*. Dr. Henry Fegan, Staff-Surgeon, 2nd class, to the *Active*. Dr. Samuel Campbell, Staff-Surgeon, 2nd class, to the *Devastation*.

BIRTHS.

ASHBURY.—On September 22, at Broxbourne, Herts, the wife of Charles John Ashbury, M.R.C.S. Eng., of a daughter.

BRADBURY.—On September 27, at Corpus-buildings, Cambridge, the wife of J. R. Bradbury, M.D., Linacre Lecturer of Physic, of a son.

FENN.—On September 23, at The Old Palace, Richmond, Surrey, the wife of Edward Liveing Fenn, M.D., of a son.

MARRIAGES.

BAUGHAM—DAVEY.—On September 24, at Frampton Cotterell, near Bristol, the Rev. T. A. Baugham, Prebendary of Lichfield Cathedral, to Frances Helena Mary, daughter of James George Davey, M.D., of Northwoods, Gloucestershire.

BUTLIN—BALDERSON.—On September 27, Henry Trentham Butlin, F.R.C.S., to Annie, eldest daughter of Henry Balderson, Esq., of Corner Hall, Hemel Hempstead, Herts.

COTTON—BIRNIE.—On September 23, at Kingston Church, Hants, John Cotton, M.D., Staff-Surgeon R.N. Hospital, Haslar, to Katherine Birnie, only daughter of the late James Birrell Birnie, Esq., and only surviving grandchild of the late Sir Richard Birnie, Kt.

DREW—MCINTYRE.—On September 23, at St. Stephen's Church, South Lambeth, William Thomas Drew, M.R.C.S. Eng., L.S.A., of Egham, to Mary, youngest daughter of the late Hugh McIntyre, Esq., of H.M. 3rd West India Regiment.

FENN—READ.—On September 30, at St. Peter's, Regent-square, W.C., George Keyworth Fenn, elder son of Thomas Fenn, Esq., of 14, Bedford-square, W.C., to Florence, youngest daughter of Reginald Read, F.R.C.P., L.S.A., of 1, Guilford-place, Russell-square.

GELL—DAVISON.—On September 26th, at the British Legation, Darmstadt, Thomas Silvester Gell, M.D., of St. John's Lodge, Kensal-green, W., to Jessie Elizabeth, only daughter of Frederick Davison, Esq., of 24, Fitzroy-square.

GRUNDAL—ROSENBLAD.—On September 24, at Trinity Church, Geneva, Adolf Grundal, M.D., of Stockholm, to Enriqueta Cumman, daughter of N. P. Rosenblad, Esq., of Buenos Ayres.

KOPPELOW—HALPIN.—On September 24, at the British Embassy, Berlin, Hermann von Koppelow, Lieut.-Col. 28th Regt. Rhenish Infantry, to Hetty, second surviving daughter of the late Charles Halpin, M.D., Cavan, Ireland.

LOWE—BARNSTON.—On September 30, at the parish church, Kidsgrove, Wm. Henry Lowe, M.D., to Emma, second surviving daughter of the late R. H. Barnston, Esq., of Crewe Hill, Farndon, Cheshire.

MACDONALD—JAMIESON.—On September 23, at Aberdeen, Donald MacDonald, M.D., Deputy Surgeon-General Bengal Army, to Isabella Jane, elder daughter of the late John Jamieson, Esq.

MURRELL—FENTIMAN.—On September 27, at the Church of St. Botolph Without, Aldgate, Herbert John Murrell, Esq., to Emily Alice, daughter of George Fentiman, M.D., Tower-hill, London.

OXLEY—GILMAN.—On September 23, at St. Peter's, Onslow-gardens, Captain Oxley, Madras Army, second son of Thomas Oxley, Esq., late Chief of the Medical Staff in the Eastern Settlements, to Mary Ann, third daughter of E. J. Gilman, Esq., of The Boltons, London.

SMITH—STANGER.—On September 25, at Hunstanton, John Elliott Johnson, fourth son of Joseph Smith, Esq., The Park, Nottingham, to Hannah Edith, younger daughter of the late William Stanger, M.D., Surveyor-General of Natal.

DEATHS.

BISHOP, JOHN, F.R.C.S., F.R.S., of 38, Bernard-street, Russell-square, at Strangeways, Marnhull, Dorset, recently, in his 76th year.

FRY, GEORGE, M.R.C.S., L.S.A., at High Beech, Loughton, Essex, on September 26, aged 53.

GOLDING, SARAH PELERIN, widow of Benjamin Golding, M.D., founder of Charing-cross Hospital, at her residence, 54, Cromwell-road, Kensington, on September 27, aged 74.

HODGES, the Rev. GEORGE BRUSHFIELD, eldest son of the late Edward Hodges, M.D., formerly of Bath and Kensington-park-road, at All Saints' Parsonage, East Clevedon, Somerset, on September 28, aged 32.

SKEY, ARTHUR, youngest son of the late Frederick Skey, C.B., F.R.C.S. Eng., F.R.S., on September 27, of typhus fever, aged 25.

THURNAM, JOHN, M.D., F.S.A., at the Wilts County Asylum, Devizes, very suddenly, on September 24, in the 63rd year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Applications, with testimonials, to the Secretary of the Medical Committee, at the Hospital, Dyke-road, Brighton.

CHELTENHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to E. T. Brydges, Clerk to the Urban Sanitary Authority, Public Offices, Cheltenham, on or before October 11.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to John Binks, Esq., Honorary Secretary, Wakefield.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Medical Officers, Candidates must be duly qualified. Applications, with testimonials, to P. Goldschmidt, Esq., Chairman of the Board, 100, Albert-square, Manchester, on or before October 15.

ROYAL CORNWALL INFIRMARY.—House-Surgeon, Secretary, and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Treasurer, Robert Tweedy, Esq., Truro, on or before October 8.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Andover Union.—Mr. F. J. Hammond has resigned the Fifth District; area 15,043; population 2397; salary £65 per annum.

Peterborough Union.—Mr. J. B. Bodman has resigned the Castor District; area 7760; population 1470; remuneration 6s. per case.

APPOINTMENTS.

Barton-upon-Irwell Union.—Wm. M. Shearman, M.R.C.S. Eng., L.R.C.P. Edin., to the Swinton District.

Hemsworth Union.—Frederic T. Hindle, M.R.C.S. Eng., L.R.C.P. Lond., to the Fifth District.

Manchester Township.—Peter Tytler, B.M. and M.C. Univ. Aber., as Assistant Medical Officer at the Crumpsall Workhouse.

Rochdale Union.—Alexander Welsh, M.D. and M.C. Glasg., to the Whitworth District; Herod Turner, M.R.C.S. Eng., to the Spotland District and Workhouse.

Tendring Union.—Robt. C. Atthill, L.R.C.P. Edin., L.S.A., to the Seventh District.

WE are requested to announce that the ophthalmic operations at St. George's Hospital will for the future be performed on Fridays at 1.15, instead of on Wednesdays as formerly.

SMALL-POX is very prevalent in the neighbourhood of Market Lavington.

MORE than forty Port Sanitary Authorities have been constituted by the Local Government Board for English harbours.

IN November last, Mr. Hayward, the District Surveyor of the Parish of St. Giles, returned no less than 170 underground rooms as illegally occupied. At the present time there is not, reports Dr. Ross, the Medical Officer of Health, a single underground room illegally occupied in the district—the result of great efforts which have been made to prohibit the use as sleeping-rooms of all such places as have been occupied contrary to law.

THE Portumna Board of Guardians have increased the salary of Mr. James Pelly, Medical Officer for the Eyre-court Dispensary District, from £100 to £120 per annum, and that of Mr. William H. Blackton, Medical Officer for the Drummin Division of the Portumna and Drummin Dispensary District, from £33 6s. 8d. to £40 per annum.

Cholera in a severe form manifested itself on board the emigrant ship *Assyria*, which took from Calcutta to Madras, *en route* for Trinidad, 247 emigrant coolies or labourers. The ship, in proceeding to Madras, took on board a heavy cargo of *rice* (mark this!); the vessel was overloaded, the coolies crowded, diarrhœa broke out, and then cholera. The men were transferred to the *Pandora*, and sent up the coast to be put ashore in tents, and the *Assyria* ordered out to sea; but eight deaths had occurred already by August 31.

UNIVERSITY OF CAMBRIDGE.—Professor Humphry gives notice that the course of lectures on Practical Anatomy will commence on Wednesday, October 8, at 9 a.m., and be continued daily. The course of lectures on Anatomy and Physiology will commence on Thursday, October 23, at 1 p.m., and be continued on Tuesdays, Thursdays, and Saturdays. The dissecting-room will be open from October 1.

THE LATE DR. NÉLATON.—Amongst the distinguished men who attended to pay their last respects to this great and good member of our profession was the President of the Royal College of Surgeons, Mr. Thomas Blizard Curling, F.R.S.—a compliment to M. Nélaton's memory and to French surgery which was duly appreciated by our French friends, and no doubt will be warmly approved by Mr. Curling's colleagues at the College.

ROYAL COLLEGE OF SURGEONS.—The calendar of this institution has just been published, from which it appears that during the past collegiate year the Council or governing body of the College, which consists of twenty-four members, have held fourteen meetings, the fees paid to them amounting collectively to £231. The Court of Examiners, which consists of ten members elected by the Council exclusively from the Fellows of the College, held six meetings for the examinations for the fellowship, and fifty-two meetings for the primary and pass examinations for the membership. The fees paid for this heavy duty amounted to £3952 14s. 6d.—not by any means an exorbitant sum, especially to those having large practices, when the time necessarily occupied, often to a late hour in the evening, and during the most profitable time in the morning, is considered. The following statement of the number of candidates who presented themselves for the fellowship and membership respectively, with the results of the several examinations, will no doubt be read with some interest:—For the first-named distinction 90 candidates offered themselves at the primary examination; of this number 54 passed, and 36 were referred for six months. At the "pass" 33 were examined, of which number 19 passed and 14 were referred for one year. For the primary examination for the membership in anatomy and physiology, 702 candidates were examined; 503 were successful and 199 referred for three months. At the "pass" examination in surgical anatomy and the principles and practice of surgery and medicine there were 462 candidates; of this number 323 passed, 54 were approved in surgery but not admitted members until qualified in medicine, 60 were approved in surgery who afterwards qualified in medicine, and 85 were altogether rejected. The total number of diplomas granted amounted to 383. The Board of Examiners in Midwifery consists of four members; only two meetings were held to examine 18 candidates, half of whom passed, 6 were referred for three months, and 3 to a written examination. The fees paid to the Board are represented by the modest amount of £19 12s. The Board of Examiners in Dental Surgery consists of six members. During the year 16 candidates were examined, all of whom passed to the satisfaction of the Board, who appear to be better remunerated than the obstetric department, as for examining a less number of candidates they received more than double—viz., £42. The income of the College during the past year from all

sources amounted to £13,311 16s. 5d., and the expenditure to £12,276 6s. 2d. The analysis of the receipts and disbursements appeared in the *Medical Times and Gazette* recently.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—The prizes were distributed by Mr. Ross, Chairman of the Weekly Board. After the introductory address by Mr. Morris, Dr. Murray was able, as Dean, to present a most favourable account of the condition of the School. Scholarships and prizes, sessions 1872-73.—Broderip Scholarships, for the best examination at the bedside and in the post-mortem room: First, Mr. Samuel J. J. Kirby; second, Mr. Arthur Tomes; Governors' Prize, Mr. Arthur Tomes; Clinical Prizes, Mr. Henry Jackson and Mr. F. M. Williams (equal); Medicine, Mr. S. J. J. Kirby; Pathological Anatomy, Mr. Arthur Tomes; Anatomy, Mr. Alexander T. Scott; Surgery, Mr. E. F. Kissack; Practical Surgery, Mr. Arthur Tomes; Physiology, Mr. J. W. B. Mason; Chemistry, Mr. G. Sherman K. Bigg; Midwifery, Mr. J. W. B. Mason; Materia Medica, Mr. T. Cambridge; Practical Chemistry, Mr. W. Walker; Dissections, Mr. G. C. Karop; Medical Jurisprudence, Mr. J. W. B. Mason; Botany, Mr. A. Lucas; Practical Physiology, Mr. W. Walker; Psychological Medicine, Mr. Alexander T. Scott; Medical Society's Prizes, Mr. A. Tomes and Mr. S. J. J. Kirby. Entrance Scholarships, October, 1872: First, Mr. Reginald Paul; second, Mr. Walter Scott Thomson. Certificates of Honour: Mr. William E. Cree and Mr. William M. Beaumont in Clinical Knowledge; Mr. Arthur Tomes in Medicine; Mr. S. J. J. Kirby in Practical Surgery; Mr. David Hepburn in Anatomy, Physiology, and Surgery; Mr. George C. Karop in Anatomy and Physiology; Mr. J. W. B. Mason in Anatomy; Mr. Walter Scott Thomson in Chemistry; Mr. A. T. Scott in Forensic Medicine; Mr. E. Price in Materia Medica; Mr. T. Cambridge, Mr. G. Clements, and Mr. E. Price in Botany; Mr. Percy Cree in Practical Physiology; Mr. S. J. J. Kirby in Comparative Anatomy.

PEPPERMINT AND SEWAGE IRRIGATION.—M. Stanislas Martin, the well-known *pharmacien*, writing to the *Bull. de Thérapeutique*, September 15, draws attention to the great success which has attended the cultivation of this plant at Gennevilliers (see also *Medical Times and Gazette*, July 12, page 39), formerly an arid plain enclosed by one of the bends of the Seine, now a fertile garden. This has been brought about by sewage irrigation, in spite of enormous prejudices, which at one time were so great that land which now pays a heavy rental was obliged to be given gratis, in order to try the experiment. The success has been complete, as the vegetables grown attain an enormous size, and M. Martin submitted some of these to a comparative analysis. He found that the ashes of some of the plants which had undergone irrigation were richer in mineral principles than those cultivated by ordinary procedures. M. Chardin, a Paris perfumer, has utilised the sewage for the cultivation of labiated plants, and found the result so productive that he has had this year three hectares of land employed in the culture of peppermint. So vigorous was the growth, that he has had three crops in the year, and the essence produced by distillation is, he states, far superior in delicacy of aroma and taste to that imported from England, which is so renowned.

BEEF-TEA.—The Philadelphia Obstetrical Society recommend the following formula:—Mince with a sharp knife one pound of juicy lean beef, and put it with its juice into an *earthen* vessel containing a pint of tepid water, letting it stand for two hours. Strain through a clean cloth, squeezing well the meat and adding a little salt. Place the juice thus obtained over the fire, but remove it as soon as it has become browned. Never let it boil; otherwise most of the nutritious matter will be thrown down. Prepared in this way, the whole nourishment of the beef is retained in the tea, making a pleasant and palatable food. A little pepper or allspice may be added if preferred. The *Philadelphia Medical Times* (June 21) enters its protest against the statement that this or any other beef-tea "contains the whole nourishment of the beef." So prepared it can only contain such matters extracted from the meat as are soluble in water, the fibrin, muscular fibre, etc., being left behind, whilst kreatinin, carnin, and other products of destructive metamorphosis, with the inorganic salts, are dissolved. The only nutriment contained in this solution is albumen, and three drachms of this may be precipitated from a pint by nitric acid. "We do not mean to deny the value of beef-tea when properly used. We do mean to insist that as a food it is an extremely wasteful preparation, and that to tell the poor of a community that they are giving to their children all the nourishment of the beef in giving them beef-tea is to practise unwittingly a great fraud upon them. Moreover, we desire to call the attention of physicians to the fact that beef-tea contains so much potash that when given in large quantities it is a medicinal agent, and can only be intelligibly employed with a direct appreciation of this fact."

AN anonymous donor has placed a large sum in the hands of the Committee of the Birmingham and Midland Institute, for the foundation of a Lectureship on the Laws of Health, and also for a prize fund in connexion with the class. Dr. Corfield has been offered the post for this year, has accepted it, and will deliver an inaugural lecture in the Town Hall, Birmingham, on Thursday, October 9, at 8 p.m., on "Sanitary Progress." The course will begin on Tuesday, October 14, at 8 p.m., and be continued on succeeding Tuesdays until some time in April. It is intended more especially for the working classes, and both men and women will be admitted.—*Nature*.

QUICK WORK.—They have rather a rapid way of living and dying in Memphis. Dr. Miller relates a sprightly incident: At seven o'clock a man went to market, bought his breakfast, went home, cooked it, and was eating it when he was taken with cholera. He sent for Dr. Miller, who visited him at nine, prescribed, and told him that he would be back in an hour. At a quarter past ten he returned. The man was not only dead, but had been buried, and his room swept and garnished for another occupant.—*Boston Journal*, August 1.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPTEMBER, 1873.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	—	—	—	—	—	—
West Middlesex	17·03	0·034	0·098	0·001	13·5	3·6
Southwark & Vauxhall	17·10	0·039	0·106	0·002	13·5	3·3
Chelsea	17·56	0·041	0·125	0·001	14·0	3·3
Lambeth	17·57	0·046	0·104	0·002	13·8	3·3
Other Companies.						
Kent	28·17	0·004	0·196	0·000	21·8	5·6
New River	17·17	0·023	0·110	0·000	13·6	3·0
East London	16·83	0·038	0·126	0·002	13·5	3·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was very slightly turbid—namely, in those of the Southwark and Vauxhall, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 126,240,210 gallons; and the number of houses supplied was 504,905. This is at the rate of 37·7 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 24·9 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

The returns of the Grand Junction Company have not been received.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Chundar Coomar Dey, Calcutta.—Enclosure received.

Iota.—In our opinion, very objectionable.

Dr. Hartsen, Cannes.—We are glad to say, much improved.

A Provincial Student.—Registration is made at your school, and returns forwarded to London. Only metropolitan students have to attend at the College and Hall. It commenced on Wednesday last, 1st inst.

Beta.—The primary examination-papers, including those of the examination you passed, are published in the Calendar of the College of Surgeons, just out. You will find also those given at the pass examinations for the Fellowship and Membership.

Veritas.—The coroners' returns show that last year there were 1455 cases of suicide—1057 males and 398 females.

Vegetarian.—The average quantity of meat brought into London weekly from all sources, according to a recent report by the Superintendent of the Metropolitan Meat Market, was 2836 tons, of which 1335 tons were foreign and town-killed meat, and 1501 country.

Hure.—The report of the Sewage Committee of the British Association was in favour of irrigation, and against the theory that entozoic disease is propagated by the process.

A Subscriber.—Yes; we understand that the London members of the theatrical profession have subscribed upwards of £100 towards the proposed testimonial to Sir William Fergusson.

J. F. B.—Dr. J. Batty Tuke, Edinburgh, has been appointed by the patron, Dr. A. Morison, to the Morisonian Lectureship on Insanity in the Royal College of Physicians, Edinburgh.

Lyton.—A sanitary association for all Germany has been formed at Frankfort-on-the-Maine.

Fred S. A.—Coste, the celebrated naturalist, was almost sightless at the last, having destroyed his vision with the microscope. He was in his 66th year when he died.

Joseph P.—The late M. Nélaton's son is studying for the profession. He has passed his first examination in medicine. He is twenty-two years of age.

Nolens Volens.—Tom Hood's Ode to Dr. Hahnemann, the homœopathist—

"Doctor, forgive me if I dare prescribe
A rule for thee, thyself, and all thy tribe,
Inserting a few serious words by stealth.
Above all price of wealth,
The Body's Jewel—not for minds profane,
Or hands to tamper with in practice vain—
Like to a woman's virtue—is man's health,
A heavenly gift within a holy shrine!
To be approached and touched with serious fear
By hands made pure and hearts of faith severe,
Even as the priesthood of the *One* divine."

COMMUNICATIONS have been received from—Mr. J. Clay; Mr. A. Gamgee; Dr. Berry; Mr. E. O'Connell; Dr. John Harley; Mr. H. Jackson; Dr. Charlton; Mr. H. Lloyd; Dr. Tate; Mr. W. A. Goward; Dr. Alexander Harvey; Dr. Edgar Sheppard; Mr. E. Bellamy; Mr. Hinton; Mr. Scatterogood; Mr. Cowell; Dr. Chundar Coomar Bey; Dr. Latham; An April Fool; Mr. W. J. Marsh; Mr. J. Vincent; Dr. Hartsen; Dr. Caton; Dr. Letheby; Professor Humphry; Dr. Luke Armstrong; Mr. H. E. Armstrong; Mr. C. F. Maunder; Mr. J. Chatto; Dr. Bruce; Dr. Hans Lloyd; Dr. J. Laing; Mr. Thomas Scott.

BOOKS RECEIVED—Budfield's Report on the Health of St. Mary Abbotts, Kensington, for the year 1872—St. George's Hospital Reports, vol. vi.—Choléra, Préservation et Traitement par le Cuivre, par le Dr. V. Burg—Smith's Lectures on the Clinical Uses of Electricity—The Proper Treatment of Children, Medical or Medicinal: being the Annual Discourse before the Massachusetts Medical Society, June 4, 1873, by Dr. C. E. Buckingham.

PERIODICALS AND NEWSPAPERS RECEIVED—Lancet—British Medical Journal—Nature—Bell's Weekly Messenger—La France Médicale—Le Mouvement Médical—Gazette Médicale—Le Progrès Médical—La Tribune Médicale—Pharmaceutical Journal—Allgemeine Wiener Medicinische Zeitung—Le Bordeaux Médical—Gazette Hebdomadaire—Indian Medical Gazette—Science Gossip—Popular Science Review—Monthly Microscopical Journal—British and Foreign Medico-Chirurgical Review—The Obstetrical Journal of Great Britain and Ireland, No. 7, October—Public Health—Students' Journal and Hospital Gazette—Bulletin Général de Thérapeutique—Hampstead and Highgate Gazette—Medical Press and Circular—London Medical Record.

APPOINTMENTS FOR THE WEEK.

October 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

6. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

7. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

8. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. Dr. Sutton, "Cases of Typhoid Fever."

10. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 27.

BIRTHS.

Births of Boys, 1137; Girls, 1097; Total, 2234.
Average of 10 corresponding years 1863-72, 2070·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	574	603	1177
Average of the ten years 1863-72	658·7	642·4	1301·1
Average corrected to increased population	...	...	1431
Deaths of people aged 80 and upwards	...	...	42

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	2	...	...	2	...	4	...	13
North	751729	...	1	3	1	8	...	4	2	13
Central ...	334369	...	1	4	1	7	...	2	...	14
East	639111	1	11	3	...	11	2	9	3	18
South	967692	...	7	1	2	11	...	9	4	27
Total	3254260	2	22	11	4	39	2	28	9	85

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·101 in.
Mean temperature	54·4°
Highest point of thermometer	72·5°
Lowest point of thermometer	38·2°
Mean dew-point temperature	47·1°
General direction of wind	Variable
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 27, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Sept. 27.	Deaths Registered during the week ending Sept. 27.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2234	1177	72·5	38·2	54·4	12·44	0·00	0·00
Portsmouth ...	118280	12·4	73	43	71·2	45·0	57·8	14·33	0·01	0·03
Norwich	81677	10·9	63	26	70·0	37·0	51·7	10·94	0·00	0·00
Bristol	189648	40·4	124	72	69·9	43·8	53·9	12·17	0·02	0·05
Wolverhampton ...	70084	20·7	54	37	72·7	39·0	54·0	12·22	0·00	0·00
Birmingham ...	355540	45·4	261	199	73·2	38·5	54·0	12·22	0·00	0·00
Leicester	102694	32·0	88	48	70·7	35·0	53·9	12·17	0·00	0·00
Nottingham ...	89557	44·9	66	45	70·6	35·3	52·4	11·33	0·01	0·03
Liverpool	505274	98·9	357	232	70·8	43·0	53·3	11·84	0·02	0·05
Manchester ...	354057	78·9	268	189	75·7	34·0	52·2	11·22	0·00	0·00
Salford	130468	25·2	89	52	74·8	37·9	53·9	12·17	0·01	0·03
Oldham	85141	20·4	73	27	68·0	...	...	...	0·02	0·05
Bradford	156609	23·8	121	61	65·2	40·0	53·2	11·78	0·02	0·05
Leeds	272619	12·6	212	135	69·0	40·0	53·2	11·78	0·05	0·13
Sheffield	254352	11·1	240	121	73·5	39·0	53·2	11·78	0·00	0·00
Hull	128125	35·9	100	59	68·0	33·0	51·4	10·78	0·00	0·00
Sunderland ...	102450	31·0	104	48	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	120	70	...	...	...	...	...	...
Edinburgh	208553	47·1	112	75	76·4	39·8	56·4	13·55	...	...
Glasgow	498462	98·5	377	203	69·4	37·6	53·6	12·00	0·19	0·48
Dublin	314666	31·3	206	148	75·3	31·6	54·3	12·39	0·00	0·00
Total of 21 Towns in United Kingd'm	7507575	34·5	5372	3067	76·4	31·6	53·7	12·06	0·02	0·05

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·61 in. The highest was 30·36 in. on Monday morning, and the lowest 29·74 in. at the end of the week.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ABSTRACTS OF

THE INTRODUCTORY ADDRESSES DELIVERED AT THE OPENING OF THE MEDICAL SCHOOLS.

THE MIDDLESEX HOSPITAL.

The Introductory Address was delivered by Mr. Henry Morris, who, after a few words of welcome to the students, proceeded to describe the nature of the studies requisite for the profession of medicine.

"To be an accomplished workman at any craft requiring skill and intelligence you must know the nature both of the material you work upon and of the instruments with which you do the work. Now, the materials upon which as surgeons and physicians you will be engaged is no less than man himself—no less than the very crown of creation. Your subject matter is the same as that of the divine, the lawyer, and the politician; and though it is with different parts of that subject matter that each of these workers is primarily engaged, yet so connected are the tendencies and attributes of human nature that there is no distinct boundary for the one or for the other. The divine, however, is most concerned with man's moral nature and his relation to the Deity; the lawyer with man's acts and rights in his relation to his fellow-man; the politician with man's relations as a member of an independent community, and to the government which presides over that community; while the doctor has to do with man's body and mind in so far as they depart or are prone to depart from the condition known as health: with the relations of each of these to the other, and of the different parts of each to one another. All work separately, and sometimes ought to work conjointly, for man's good. There is, however, this difference between the divine and doctor on the one hand, and the lawyer and the politician on the other: with the two latter, the good of man collectively—that is, of the whole community of which he is a member—is the end to be secured, and the good of the individual is sought secondarily through the general good. The motto of these professions is or should be that of Bentham—viz., 'The greatest good of the greatest number': whereas with the former two the welfare of the individual is the first consideration; but as the safety and well-being of each individual is desired by them, so they too, but in a manner secondarily, work for the good of all.

"There is again a marked difference in the public recognition of the secondary duties of these two professions; for while those of the divine are, as they deserve to be, fully and appreciatively acknowledged—while the clergy have direct representation in the Upper House of the legislature, and numerous posts of honour and emolument for those entrusted with the State functions of their profession—the secondary, but still most important, duties of the doctor are for the most part either ignored by or unknown to our rulers, and the State functions of medicine get but trifling honour and scanty remuneration. This no doubt is partly accounted for by the fact that in ancient times exclusive attention was given to politics, morals, and law; and in more Christian times and countries to these subjects and to theology. The blind and inveterate prejudice of old, which considered the study of matter derogatory to man's dignity, and the superstition of religion, which till quite recently has been the irreconcilable foe to the investigation of nature, have no doubt delayed the recognition of the good to the community at large which medical men are able to effect. It required the Reformation to emancipate States and Corporations from the fetters of the Church, and it was only by the same great revulsion of all the elements of intellectual life that the rights of those sciences of observation and experiment upon which modern medicine is founded were established in the schools of philosophy. Nevertheless, you must know that it is both the individual and the social well-being of man that will be your care in life.

But what is man? I have already implied that he is a being composed of body, mind, and spirit. But what is his body? It is a vast and complicated assemblage of physical facts, and it has life; hence it involves a large number of chemical, mechanical, and vital processes. It has form intricate and varied in its details, and allied in its different parts to the forms of other beings; it is composed of structures, the functions of each of which are of importance in themselves and in their relations to the functions of other structures. For these reasons you must study chemistry and natural philosophy, human and comparative anatomy, botany, and physiology; and a knowledge of these subjects furnishes to the student of medicine that illumination which was needful to raise so complicated a science out of the abyss of blind empiricism. But these structures and functions and this form of man are liable to change, derangement, and decay; hence the necessity of a knowledge of morbid anatomy and pathology—subjects which in these latter days of medicine have made particular progress, and which, strange as at first sight it may appear, blend in a marvellous manner with the study of life and history. It was by the light of pathology that that eminent master of positivism, M. Littré, in some interesting essays on medical men and medical topics, attempted to show that the demonology and sorcery of the middle ages, and the table-turnings and spirit-rappings of our own day, are logically connected with certain states of mental disease. Next, what is man's mind? It is made up of sensations, emotions, will, and intellect. Through the sensations he is made aware of the states and conditions of his body, and its surroundings. By his emotions he experiences love, hate, fear, anger, and remorse, and when any of these are excessive or perverted, he becomes debased and lowered in his moral nature, or he ceases to be a responsible agent and to possess a sane mind in a sound body. Through his intellect, his will is appealed to, both by education and advice, to aid our efforts in the prevention and remedying of those pernicious changes to which the structures and functions of his body and the sensations and emotions of his mind are subject. Therefore you ought to become familiar with psychology, both normal and morbid, a science strictly and importantly connected with medicine, but one to which I venture to think sufficient attention is not given except by those who make mental diseases their special study. So much for the subject matter of your work. But besides the subject matter, it is requisite that you know well the means at your disposal for influencing and acting upon it. For this purpose you must study:—1st. Materia medica, which gives a descriptive account of drugs, and of their effects upon the human system. 2nd. The art of therapeutics, which instructs how to substitute physiological for pathological actions other than by the agency of drugs. 3rd. The various kinds of surgical instruments and appliances.

"Thus I have now enumerated the several subjects, a knowledge of which is necessary for the scientific and enlightened study of medicine, surgery, and midwifery, for the safe and intelligent practice of your profession. But there are two offshoots from this great tree of medicine to which your attention must be especially drawn. I just now said that the provinces of the lawyer, politician, and doctor are in places so closely connected that they sometimes quite encroach on one another. So true is this, that we have a branch of law medicine—viz., medical jurisprudence; and another of State medicine—viz., the science of public health. Both are of the highest importance. A knowledge of the former will but rarely be demanded of you; yet it is absolutely requisite, because the committal of any error therein will be very damaging to your reputation, both on account of the gravity and publicity of such a mistake. The latter—State medicine or public health—is one of the very corner-stones of the social safety of mankind. But, strange to say, it is far from taking that position which even any tyro in political science would give it if he were modelling out a perfect political society. When hundreds—nay, thousands—of our fellow-countrymen are annually destroyed by preventable diseases, no one can, I think, deny that the want of a properly adjusted system of sanitary medicine is one of the greatest imperfections of our political community. Preventive medicine we hear spoken of as one of the subjects of the day, and (with shame let it be admitted) so it is. Instead of working invisibly but efficiently, as an agency of prevention should work, we have lately seen it 'humbly petitioning' a Minister of State that it might be entrusted to competent authorities; and now we see it groaning under an Act of Parliament which has excited surprise, dissatisfaction, and indignation.

"For years the profession has been considering the question how to preserve health by preventing disease, and many of its leading members have devoted much time and labour to its solution. More than twenty years ago one of the consulting physicians of this Hospital (well known for his contributions

to our knowledge of specific fevers), on a similar occasion to this, completely refuted the reproach with which medical men are ignorantly taunted—viz., that they live by disease, and therefore naturally cannot be expected to bestir themselves in its prevention; as though medical men have ever refused to check the distribution of a justly suspected cause of epidemic poison until they were compensated for the pecuniary loss which would accrue to them! There are many highly informed men who possess both the knowledge and the will to bestir themselves (however suicidal their efforts to the selfish interests of their profession) to make our nation a more healthy and vigorous one than it is. But the truth is—and sooner or later it must be acted upon—that this knowledge is technical and minute, and cannot be suddenly implanted, at the instance of the Local Government Board, in the minds of men not specially trained for it. It is not to be wondered at that diseases which ought never to arise, or at least to spread, do nevertheless flourish amongst us while the present unsatisfactory system exists. We see at home the medical officers of district schools and the medical health officers subject to the opinions of lay inspectors who are unacquainted with the fundamental principles of sanitary science. We hear from abroad that in an African settlement, where the drainage and water-supply are recklessly neglected, and where small-pox and fever are rampant, not only is the sanitary inspector not a medical man, but the administrator is a military man, who first erected an arrangement for accumulating stinking refuse of all kinds under the nostrils of the residents, and then complains that he finds doctors the very bane of his existence, and that as long as he holds the reins he will have matters his own way!"

The kind of preliminary education best suited for those destined to recruit the ranks of medicine was next discussed. After stating that education meant much more than the study of books and the lessons of teachers, and quoting Locke to show that its purpose is as much to form the character as to train the intellectual faculties, the lecturer continued—

"It appears to me that we are living at a time when two opposite erroneous answers are given to this question. On the one hand there are those who, while they adhere to the old method of classical education, wish to superadd to it modern languages and nearly the whole range of natural sciences: after this manner has the matriculation of the University of London, in my opinion, erred. On the other hand, there are those who would give youths unchecked liberty of selection, and would not submit them to any kind of regulations, for fear of warping their genius or destroying their individuality and tendency to self-cultivation. . . . . But all candidates for a profession or for any calling which opens up social or intellectual distinction should be made to pass through a course of study, and a test which is general without being diffuse, and accurate without being special. . . . . To permit the unguided following of the mind would be to establish a system for the cultivation of specialities, and this would lead to the production of a large number of men of one book—'*cave ab homine unius libri.*' If the natural sciences are to constitute the leading feature of school education, they also will conduce to a very one-sided development of the mind. Moreover, considerable knowledge of natural sciences is quite compatible with a very insufficient standard of mental refinement and culture. The same, too, may be said, with even greater truth, of modern languages. On the other hand, it is universally admitted that a mixed classical and mathematical education is a humanising and refining one; that it occupies a most useful place in our national life, and that narrowness of mind and fanaticism are too often associated with the want of it. . . . . As a method of mental training the classics are considered by many authorities on education, such as Mr. Matthew Arnold, Mr. Goldwin Smith, and Mr. Mill, to have a greater power than any other; and certainly, so far as I am aware, no one has ever attempted to prove that in this respect any other system is superior to the classical. For these reasons, then, I feel sure it was a happy day for medicine when this kind of education was insisted on as the portal to the profession; and those in authority ought, I think, to look well about them before they talk of modifying or changing it." Having outlined the preparation requisite for the study of the profession, the method necessary for correctly following it was next considered.

"In the ancient schools of medicine there were, according to Celsus and Gregory, two distinct classes—the Dogmatici and the Empirici. The former did not reject the teachings of experience, but held that modes of treatment ought to be founded on some intelligent design; the latter professed to be guided by the experience of tried modes of treatment only, without any inquiry into the causes of disease, and without paying any attention to anatomy, physiology, or pathology, such as these subjects were at the time. The one school was therefore founded on an abuse of theory; the other on an exaggerated estimate of experience, too often only another name for chance. In the 'Novum Organon' we find the following aphorism upon the errors of these two schools:—'Qui tractaverunt scientias aut empirici aut dogmatici fuerunt; empirici, formicæ more, congerunt tantum et utuntur; rationales aranearum more, telas exse conficiunt: apis vero ratio medea est, quæ materiam ex floribus horti et agri elicit; sed tamen, eam propria falcutate vertit et digerit.'

"In this clever metaphor we have both a beacon as to what we must avoid and a guide as to what to follow. We must neither do as the ants, which only lay up and then use their store, nor as the spiders, which spin all out of themselves; but as the bee, which takes the middle course, and after gathering from abroad digests and arranges by its own faculty all that it has gathered. We must avoid the mistakes of the 'doctrinaires' and of the self-styled 'practical men.' We must avoid both false theory and blind empiricism. We must neither base our practice on *à priori* notions nor neglect to draw inferences from experience. We must purify our minds from all preconceived ideas and traditional prejudices, and then observe facts with acuteness and accuracy, and interpret them with wisdom. For this we must be both theoretical and practical.

"Theory, properly so called, is but a shorthand note to register a principle without which we could make but little progress. A theory—not a hypothesis or a guess,—when once framed, enables us to go on with our investigations without burthening our minds with the details of the particular instances whence it was drawn. . . . .

"Understand clearly, however, that yours is a practical, not a speculative science. Perhaps it is more correct to call it a scientific art. At any rate, medicine, like most of the sciences subsidiary to it, is a science of pure observation. It is a thinking exploration of man in health and in disease. It is a scientific study of facts through the faculty of observation. You must know how to observe that you may describe facts, and how to reason upon that you may explain and predict them. . . . . It is because of the constant demand upon the faculty of observation in medical men that each medical student ought to ask himself, 'How ought I to observe?' 'What are the methods of observing?'

"There are two kinds of observation at our service in the study of medicine—viz., the unassisted and the assisted. Unassisted observation is made by our senses without any arrangement for increasing their power. Assisted observation is that which is made by our natural senses aided by some artificial contrivance; such is observation with the microscope, the stethoscope, the laryngoscope, the ophthalmoscope, the sphygmograph, and the thermometer, and all the other various instruments with which the ingenuity of modern science has supplied us. But as with our modes of observing, so with the facts we have to observe: they may be of the simplest or most complicated character. Many are so obscure and so inaccessible that even with highly educated organs, and these, too, assisted by the most approved apparatus, we find it difficult—nay, but too often impossible—to introduce light and order into the chaos which defies it. And this difficulty is the greater because of the nature of the phenomena we are occupied with. This is such that we cannot employ a third method of observation much more precise and certain than the others I have mentioned: I mean observation under experiment. It is true that *disease* often makes up for this deficiency in our methods. Still, experimentation itself is for the most part quite unavailable in our investigation of cause and effect. Even if society and morality permitted the use of means by which we can artificially produce, or mingle, or modify phenomena, experimentation would have no significant place in medicine. So great is the solidarity (to use an expression introduced by M. Comte) in a human being, so difficult is it to study the various forces by which body and mind are influenced, that we cannot consider man's physiology apart from his mental and moral phenomena. We cannot study the normal, let alone the abnormal processes of digestion,

nutrition, or circulation, without reference to the moral and mental laws by which they are often influenced.

" ' All served, all serving, nothing stands alone :
The chain holds on, and where it ends—unknown.'

Nor can we separately examine the different organs composing man's body without destroying the very thing it is our aim to preserve—the perfection of the whole and of each part of that body ; because in

" ' Following life in creatures we dissect,
We lose it in the moment we detect.'

Now, the two methods of pure observation—the unassisted and the assisted—may be either unintentional or intentional, or, as, Herschel has described them, ' passive ' or ' active.' Unintentional or passive observation is of those phenomena which present themselves unsought to the observer. The only thing required for it is attention. The phenomena must be attended to, otherwise no impression of them will remain. Now, it is this faculty of attending to the facts and incidents which come before them without anticipation which has so much to do in making men good observers. Therefore, in the exercise of your calling—in fact, at all times and in all places—you should be on the alert to make little mental pictures and memoranda of all that occurs in the range of your senses. Newton, that leviathan in the exact sciences, has recorded his opinion that it was this habit of observation and attention which distinguished him from other men. It is this same habit which has characterised all men who have made themselves eminent in practical pursuits. It has existed as a natural gift in many eminent medical men. . . . . In active or intentional observation we do more than pay attention to accidental impressions : we observe in a definite matter with a definite purpose ; we select the phenomena to which we intend to attend, and we prepare ourselves for the process. We therefore exercise choice, intention, and attention. Observation when thus employed becomes investigation. This is the method of our deliberate examination of medical and surgical cases—of our researches in the dissecting-room and in the post-mortem theatre. It is too, of course, the nature of nearly all assisted observation ; for the mere fact that we are using means by which we increase the power of our senses implies the condition of choice, intention, and attention. Still, assisted observation may be unintentional as well as intentional ; and then the importance of attention again comes into special prominence. Thus, if we use the laryngoscope to remove a foreign body, we may at the same time accidentally observe an ulcer or a new growth ; or if we use the stethoscope to examine the lungs, we may unexpectedly hear the bruit of heart disease.

"In the exercise of intentional observation there are three dangers to avoid—first, the non-observation of things or parts of things we ought to observe, *i.e.*, their oversight ; secondly, the observation of things to the point, but in an imperfect manner ; and thirdly, the observation of things not to the point. . . . . All these errors you must try to avoid. The first you will escape by patience and sustained attention ; the second, by care and thoroughness ; and the third, by ascertaining what is and what is not relevant to the subject in hand, and directing your thoughts to what is important. But there is a fourth trap into which the ignorant and unwary are apt to fall—viz., the mistaking inference for observation. It is impossible to deny that in observing—and still more in description—inference is intimately blended with facts ; but for all that, when we make an assertion we ought to know how much of it is observation and how much inference from observation. . . . . This error depends upon the want of good mental development, so that the best way for us to avoid this fallacy is to bring to our profession minds as highly cultivated as possible. And here we have, I think, a strong argument in favour of early training, being, as I have advocated, accurate in mode rather than useful in purpose. Let us teach youths first how to know ; and knowledge itself will readily be gained by them afterwards. The conclusion, then, from these remarks is,—that to observe well we must educate thoroughly our organs of sense ; that as we have ears to hear, eyes to see, and hands to touch, we ought so to train and discipline them that they reach the highest possible degree of perfection. But we must not only see sights, hear sounds, and touch surfaces ; we must, in addition, perform all kinds of mental analyses and syntheses of the facts we observe, treating them as words and letters, resolving the former into their component letters, and building up the latter into words. To do all this requires great sagacity and sound judgment, and good powers of reasoning and paying attention."

The importance of holding hospital resident appointments was insisted on as the surest and best way of becoming practically acquainted with medical and surgical cases ; of gaining an insight into the discipline and management of a large medical institution ; and of giving the holder of these offices that most inestimable of all qualities for a doctor—self-reliance, based on conscious knowledge. For the guidance of those who would shortly leave the medical school and enter on the responsibilities of practice, the lecturer said,—" First, never forget to uphold the honour and dignity of your profession. You will not succeed in this by boasting and self-assertion ; but by an unobtrusive yet confirmed consciousness of the respect due from you and others to it, by shunning charlatanism and professional insincerity, and by not allowing self-interest to lead you as surgeons and physicians into representing a thing as plausible merely because it is popular. Know that you will owe much to your profession, and the best acknowledgment of your debt is to act honourably in and towards it. Bacon has said, ' I hold every man to be a debtor to his profession : from the which as men of course do seek to receive countenance and profit ; so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto.' Secondly, endeavour in your professional capacity to raise the intellectual and sink the emotional side of your nature as much as possible. I do not mean, of course, by this that you are not to exercise sympathy and charity—which are two great weapons in the armoury of medicine. But these are not true emotions. Sympathy is the idea of pain in others, irrespective of pleasure or pain in ourselves, and it involves both the intellect and the will ; while real true charity is the intellectual recognition of the misery and want of others combined with the exercise of the will for their removal. But as the possessors of knowledge which is to be applied to the prevention and cure of disease, and the relief of pain, you have no right to listen to the dictates of selfish passions. Neither grief nor the fear of consequences, nor hatred, nor disgust, must thwart you in the execution of your mission. The darkness into which you have to cast the light, is human suffering ; the light is human skill. The solemn obligations of this possession must be your only guide. Thirdly, do not imagine that when your studies at a medical school have ceased you will cease to be students in your profession. Medicine is the last calling in which you can thus console yourselves. Science, like time, is always moving on ; and medical science must be no exception to the general progress. You must not therefore be satisfied to add to your experience in a matter-of-course sort of way as you live on and on. Years are not the measure of experience, and work will add much more to your stock of knowledge than time. Therefore work—not only to earn your living, but to keep yourselves abreast with what is going on in your profession. Work ! You will be happy, for, throughout life, work is happiness disguised ; and cessation from work is only pleasurable when it comes as rest and at intervals. But do not strive after the vain reputation of a ' busy man,' for that is but to tire yourselves and vex those about you. Neither be too ambitious in your work, for circumstances are not so arranged that all can snatch the laurels and the bays ; the majority have to be content with the elms and yews, and some even with the cypress. But be real and honest workers, and you will assuredly have your reward by proving yourselves benefactors in your generation. Nor must you allow your work either to harden your sensibilities or lead you into infidelity, as it is falsely stated by some to do. The true study of medicine ought to refine your feelings ; and, by showing you the limits of man's power over life and death, should increase your admiration and reverence of the Great First Cause. But do not confine your thoughts and occupations to your profession. The best and chiefest of your powers must, of course, be devoted to it. There is an old saying, ' Non multa sed multum,' and a modern one still better, that ' A man should know everything about something, and something of everything.' In either case your ' multum,' your ' something,' is medical science. But there is much in literature, in art, in other sciences besides your own, and in the recreation of society, that is worthy of your attention. In these are to be found the pleasures and embellishments of refined life ; and you will have more zeal and interest in your work if you indulge your leisure in some such tastes.

" But while employing your faculties in the acquisition of various kinds of knowledge, remember there ought to be something within you which can direct and purify this know-

ledge. It has been truly said that knowledge is but a mass of unprofitable materials until smoothed and squared and fitted to its place by wisdom. Therefore let us seek wisdom, that it may teach us, not to fashion our knowledge into an ornament, or a means to fortune only, but into a 'rich storehouse, for the glory of the Creator and the relief of man's estate.'"

CHARING-CROSS HOSPITAL.

Mr. Bellamy commenced his address by welcoming the students, remarking how that for those just entering upon the profession they were about to commence a most delightful period in their lives before the anxieties of practice had arrived, and that "they were then to be laying the foundation of that kind of training which was to fit them to enter the ranks of an army of men whose lives are to be devoted to the welfare of others rather than of themselves; and that they would find ample opportunities, during the time that they remained in the little world they had entered, to develope what must be regarded as a qualifying process, associated as they would be with different men, who have different tempers, habits, and manners, each of them a separate study—a study which should go on hand in hand with that most engrossing one, their profession, embodying the saying that the 'proper study of mankind is man,' and, as far as the medical man is concerned, of man in his normal and abnormal condition. No slight amount of what might be termed judicious steering would enable them to pass through this period scathless in self-respect and in reputation—to have on the one hand avoided contamination, and to have added, by their own examples, their quotum towards the moral tone of those with whom they had to do, and of the school they enter: endeavouring to act up to the characteristics of the young Englishman—manliness, high-mindedness, and a regard for the feelings of others."

Mr. Bellamy then proceeded to announce the additions to the hospital staff, of Dr. Bruce as Assistant-Physician, Dr. Sparks as Physician in charge of the Skin Department, and Mr. Astley Bloxam as Assistant-Surgeon, and remarked how Charing-cross Hospital might congratulate itself on its financial condition. "Scarcely a session passes," he said, "but we have to record some large addition to our buildings, and the consequent increase in our resources as a school; and the fact that we have pitched our tent on the 'finest site' in Europe should further stimulate all concerned with Charing-cross Hospital to make both it and its school worthy of this fortuitous circumstance."

He spoke of the movement known as Hospital Sunday, which would, he said, "no doubt, when in working order, be—and, indeed, has already been—a great boon to the unendowed hospitals, by a judicious allotment of funds. He did not of course allude to certain special hospitals, the support of which appeared to be rather an effort of misguided charity, and their maintenance a hindrance to the efficacy of the general hospitals, where the first men of our time, and the acknowledged leaders of British medicine and surgery, daily treat every form of disease which can present itself, without making any one form of malady unduly prominent." Mr. Bellamy called attention to the shameful abuse of hospital charity by those who were in receipt of incomes such as could enable them to pay for advice. He trusted that some effective measure might be taken to put a stop to the present state of matters, and stated that he had seen men whom he afterwards found out were in receipt of three or four guineas a week thus imposing upon the hospital charity. He then went on to speak of the school and of the new appointments made in it—Dr. Jas. Cantlie having been elected Demonstrator of Anatomy and one of the additional teachers of practical surgery, Mr. Clarke giving special instruction in surgical appliances, Mr. Bloxam in surgical pathology, and Mr. Bellamy in operative surgery on the dead body; whilst Mr. A. H. Garrod had been appointed to the chair of Comparative Anatomy. The lecturer then proceeded to speak of the great value of early education to medical students, and said that—"As it was impossible to overrate the advantages of a liberal education, so was it equally impossible to withhold a natural preference for such young men as had availed themselves of it. The general tone of the profession had been of late years vastly improved—not only on account of the exacting and searching nature of the professional examinations, but also on account of the generality of the preliminary test examinations." After entering fully into the subject of the *locus standi* of the educated medical man, he said that—"It was an unwelcome reflection (which might, however, enter one's mind) that the uneducated practitioner stood somewhat in the position of the ordinary artisan: called in when something wanted doing, and, when it was done, dismissed in much the same style. . . . . The subsequent development of the student's education depends partly on what he is taught, partly on how he is taught, and partly on how he learns." After discussing the manner by which these ends should be accomplished, he said that the man who passed through his student-life with the only end and aim in view of merely passing an examination, and there letting his learning or application cease, generally retained the kind of idea throughout his professional life, and was readily recognised as the hastily "run up" practitioner, who, besides being a useless was a very dangerous member of society. Mr. Bellamy then referred to the benefit that the annual publication of the successes or failures of candidates presenting themselves for examination at the College of Surgeons would have as a stimulus to fresh exertions on the part of both teachers and taught.

He next proceeded to review the several scientific subjects which would form their curriculum, and dwelt on those of anatomy and physiology at some length, alluding to the recent startling discoveries in the anatomy of the brain. The aim of all these scientific studies was as an introduction to the great subjects of pathology, medicine, and surgery, and he referred to the great difficulty there was of drawing any distinct line of demarcation between the latter. The surgeon, to practise sagaciously, must be thoroughly conversant with such technicalities as have been too frequently considered as the physician's province, whilst he has, in addition, a patient's well-being dependent upon his nerve and the steadiness of his fingers in directing the knife. The teaching of practical operative surgery has hitherto been much neglected in the student's course, and the necessity of his undergoing special training in the mechanical part of his profession, besides mere dissections, could not be too strongly insisted upon.

Mr. Bellamy then urged upon the students the necessity of hard work in the wards. As he had advised them in the scientific course almost to *live* in the dissecting-room, so, in their practical one, he counselled them almost to *live* in the wards and post-mortem theatre. Referring to the uselessness of "cram" in obtaining any insight into disease, he instanced a case he had been told of, of the difficulty experienced by a "show" prizeman in medicine in recognising a simple case of measles. He then went on to explain the several branches of the profession, such as surgeons, physicians, obstetricians, and general practitioners, which he termed "conventional," and observed that circumstances alone could direct them as to which branch of the healing art they should choose. Of the consultant, he said that "his position demanded the possession of a hospital appointment, and, having obtained it, that he must bide his time till he could get consultations. 'Biding time' implies a large outlay of what capital he possesses, real or ideal, for the sake of keeping up appearances, without any return for years; and 'obtaining consultations' depends either upon singular ability, connexions, or subtle tact in powers of ingratiation." He then spoke of how the lives of the generality of those he addressed would be spent—namely, as general practitioners,—and concluded by saying, "As such, you will be expected to have everything at your fingers' ends, and be up to every emergency; no difficult case should daunt you. Thoroughly provisioned for your campaign through life by early culture, good examples, a thorough appreciation of the attributes of gentlemen, and a sound practical and workmanlike knowledge of your profession, leaving no stone unturned lest there lie beneath it some latent energy which is being directed against your powers of observation and detection of disease, you will work your best and hardest to nerve yourselves for your future attempts to grapple with death and to delay his ultimate triumph. But do not, gentlemen, consider that professional accomplishments are to be 'the be-all and the end-all' of your attainments during these years of training. 'Make use and fair advantage of your days,' and let it be said of each of you what Valentine said of his friend Sir Proteus—

> "'His years but young, but his experience old;
> His head unmellowed, but his judgment ripe.
> . . . . He is complete in feature and in mind,
> With all good grace, to grace a gentleman.'"
>
> —*Two Gentlemen of Verona*, ii. 4.

LONDON HOSPITAL.

Dr. Prosser James, Lecturer on Materia Medica in the College, delivered the Introductory Lecture. He took as his subject the advances made in his own time in the medical sciences and the art of applying them, and drew most of his illustrations from those connected with the London Hospital. In the course of his lecture he said:—

"Great has been the progress made, and the London Hospital and its College has not been behind. Let me give you an illustration. Many of the most interesting problems relate to the form of various parts. We find certain parts fulfil certain functions. Why? Careless observers are often content to say no more. The man of true scientific mind desires to penetrate further; and this he may do either by reason or experiment. The true reasoner is the highest type of intellect. The experimenter, indeed, deserves our thanks for the facts he accumulates; but it is the reasoner who explains them. Harvey established his doctrine of the circulation of the blood by reason and experiment together; but many facts unknown to him have since been discovered, and they greatly enlarge our notion of the circulation. We may, indeed, describe the capillary or ultimate circulation as a modern discovery. The last contribution, however, to our knowledge of the circulation, to which I invite your attention, does not relate to this, but to the central organ—the heart. The openings through which the blood flows into, and out of, the cavities of the heart differ in size and shape. Why? The fact has been known from early times. The explanation might be supposed to accord with physical and mathematical laws. It was reserved for our senior physician, Dr. Herbert Davies, to prove that the several sizes and shapes are those best adapted to bring about the required result in the most perfect manner, and to furnish the formula for calculating one from the other, which may henceforth be termed Davies's law. And this law stops not within the domain of physiology, but gives us a further insight into pathology; for his explanation of the condition of the parts in health enables us to comprehend the effects of changes that are observed in disease.

"Physiology and pathology are so intimately connected that illustrations might well be classed under either. The next I take will serve as a stepping-stone to pathology: it relates to the nervous system, our knowledge of which has lately made immense progress, the London Hospital being again to the fore. Aphasia is a condition upon which much light has been shed, and the physiology and pathology of the nervous system have in my time been completely remodelled. More than one London Hospital man has worked at this subject, but no single individual has accomplished more than one of our present physicians, Dr. Hughlings-Jackson. It is indeed directly due to his clinical study of convulsions and other lesions that the greatest step has been taken towards the elucidation of the functions of the brain. He showed the way investigators should pursue. He predicted the discoveries that have just been announced as the result of the brilliant experiments carried out by Fritsch, Hitzig, and Ferrier, and which have completely realised his anticipations respecting the localisation of the functions of the brain. Regarding disease as an experiment made by nature, Dr. Jackson arrived at conclusions which Professor Ferrier's experiments have exactly confirmed, and which seem to show that the idea involved in what is called phrenology have after all a certain scientific basis. The geography of the brain is now being mapped out, and had Gall and Spurzheim pursued the method of Jackson and Ferrier, they might have been great discoverers instead of the constructors of an inadequate hypothesis.

"Speaking of the nervous system, it may be mentioned that diseases have lately been referred to it which used to be otherwise classed; for example, certain diseases of the skin. Rheumatism, also, has lately been referred to a sort of cerebro-spinal meningitis, but that great London Hospital veteran, Dr. Billing, long ago called it a neuritis.

"When I entered the London Hospital the microscope was by no means ignored, for Dr. Carpenter included microscopic demonstrations in his course of physiology; and assuredly with so eminent a microscopist as our professor it may be supposed that no school was in advance of this. But yet how great progress has since been made! To-day we can offer our students the most complete instruction in the use of the microscope; and the original work done in our laboratory is being applied to the elucidation of some of the most important medical problems.

"Looking back to the time of my entry into the profession, I recall one name that overshadowed the microscopic world. That name was Quekett; and even now, if anyone should ask what the Queketts (for there were two) did in histology, he would be likely to be answered in the one word—everything. From the Queketts a new era in microscopic work may be dated—and both of them were London Hospital men. Nor is our *Alma Mater* behindhand now; for one of the great questions of pathology at this time relates to recent investigations into the connexion of Bright's disease with certain definite changes in the vascular system. In explanation of the facts observed a theory has lately been proposed by one of our staff—Dr. H. G. Sutton—in conjunction with Sir William Gull. It is true that their theory has been warmly contested, and may be said to be still on its trial, but whether ultimately accepted or not, a mass of facts has been accumulated which must prove serviceable to other searchers after truth. In reference to this, I believe I am correct in stating that all the original work on which the hypothesis is based was performed within the walls of this College; and that nearly all the preparations were made in our laboratory. Thus we see that to this very day the London Hospital and its College maintains its reputation for microscopical research; and I take it that as London Hospital men you will feel an interest in one or two other landmarks of our progress in this department of pathology.

"Look at inflammation. This process, always an absorbing study, has been investigated with renewed vigour during the last twenty years—especially the last five or six. Virchow's cellular pathology seemed to reign supreme until lately, notwithstanding many indications of its inadequacy. It was not till 1867 that it was really deposed, chiefly through the attention bestowed on Cohnheim's researches. It is here curious to note that to Cohnheim is not due the credit of priority in the investigations and discoveries that have so largely displaced Virchow's theory, and brought us nearer to the pathology of an earlier time. For twenty-eight years before, nearly all the microscopic appearances of inflammation had been described by Dr. William Addison, whose views I perused when yet a student, and which had been accepted by Dr. Williams, whose 'Principles of Medicine' was one of my earliest text-books.

"The pathology of tubercle has been much studied with the microscope. Indeed, tubercle is of such absorbing interest to all physicians, that we naturally employ every means at our disposal to elucidate the problems gathered around it. The overwhelming influence of Laennec is still apparent, and when I began my career his theory was widely regarded as axiomatic, although Reinhardt had already published his investigations, and maintained that no such entity as tubercle existed. Opinion is now divided, and many seem to take a middle view, as if in one case tubercle could be regarded as a specific product, while in another it could be only a form resulting from the structure of the part where it is seen. Only a little while ago Villemin announced that he could produce tubercle in animals by inoculating them with the sputa of consumptives. Then many at once concluded that Laennec was right after all, and that Reinhardt must have been wrong. It was, however, very soon shown by English experimenters that rabbits, the animals employed by Villemin, were particularly liable to tubercle, and, moreover, that the inoculation of other material of a non-tubercular nature would give rise to tuberculosis. The first person to show this was Dr. Andrew Clark, a London Hospital physician, whose prior researches in phthisis had conferred upon him the highest distinction.

"I cannot leave this subject without making an announcement that I deem of the first importance. It is well enough known that consumption may be arrested, but it has hitherto been laid down that one form of it, laryngeal phthisis, is rapidly and necessarily fatal. Cases are, indeed, frequently spoken of as galloping consumption. Now, in such cases it has been my privilege to witness the arrest of the disease. In one instance the lungs as well as the larynx were affected, nevertheless the patient recovered and resumed employment as a public singer.

"We come now to the consideration of the practical aim of our art: and here I assert there are striking signs of progress. A few illustrations may be conveniently grouped around certain instruments that help us to detect or cure disease.

"Contrasting our present resources with those of our student days, nothing is more remarkable than the constant use to which

we now put the thermometer. When I entered this College the clinical value of the instrument was unknown, though it is true that important observations had been made with it. Now every physician carries one in his waistcoat pocket. Clinical thermometry is often said to have originated with Traube in 1851, for in that year he published his important observations, but it was some time before it began to influence practice. Twenty years before then, however,—namely, in the cholera epidemic at Newcastle-on-Tyne in 1831—a London Hospital physician, afterwards one of my teachers, Dr. Cobb, had employed the thermometer to measure the tendency to death, and he was assisted by Dr. Little and others. As, however, in so many other cases, all these observers had been anticipated. As early as 1754 Antonius de Haen had publicly taught in Vienna that the temperature of the body should be measured by a thermometer; and he showed not only that in fevers the heat was abnormally great when perceptible to the hand, but that even in the cold stage of intermittents, when the patient is shivering and his teeth chattering, the blood is already rising in temperature. When we remember how large a part increase of temperature plays in disease, how obvious it is to the physician, how constantly complained of by the patient, it is a matter of no small surprise that this heat should not have been measured at an earlier period; and this is the more remarkable when we consider how common it was to use the thermometer, an instrument which was itself invented by Sanctorius, a physician in the sixteenth century, for other purposes. It was an everyday remark that the hand could not be trusted to regulate the temperature of a bath, and yet physicians who knew this went through their lives trusting to their hands to distinguish the temperature of their patients' bodies, and never thought of applying a thermometer. And this, too, although from the earliest times increased temperature was recognised as the most important factor of fever. Galen defined fever as 'preternatural heat,' and Hippocrates had previously named it 'pyrexia.' Modern research is bringing us back to the conception of fever thus handed down from the Father of Medicine.

"Another new instrument for extending the range of vision is the laryngoscope. This instrument enables us to see distinctly the interior of the living larynx. It therefore brings the diseases of that organ within the range of vision. In diagnosis, it has changed conjecture into certainty. It is, moreover, available as a guide to treatment. By its aid we can watch the course of disease, we can apply local remedies, we can introduce various instruments into the larynx, and manipulate them when there.

When I left this Hospital the laryngoscope was unknown. Soon afterwards, as early as 1856, I related a case in which I detected and applied caustic to an ulcer by means of a laryngeal mirror and a reflector, thereby curing a patient who had been discharged as incurable from several hospitals. I was not then aware that the living larynx had been seen before; but since then it has been shown that others had anticipated me in seeing the organ, though no one had before then used a laryngoscope for the purpose of treating disease. Garcia, the great professor of singing, had previously used a mirror and reflected light to study the movements of the organ of voice, and in 1855 a description of what he saw appeared in the *Proceedings of the Royal Society*. Thus a scientific man preceded physicians, and pointed out to them a new means of diagnosis; for a late writer, Dr. Mandl, of Paris, tell us that Garcia urged him to apply his mirror to the investigation of disease. But even he was anticipated, for the late Dr. Babington had, in 1829, contrived a similar apparatus, which he called a glottiscope. This much, however, must be said, that he seems to have laid aside his instrument, while Garcia completed all he proposed, and was certainly the father of auto-laryngoscopy. His paper, buried in the *Royal Society's Proceedings*, became known to Türck, of Vienna, who tried to use the instrument on patients. He lent his mirror to Czermak, who greatly improved—we may say perfected—the apparatus, making it portable and convenient. From this time the progress of the art of laryngoscopy has been truly wonderful; and you know the zeal with which it has been pursued by another of my colleagues, Dr. Mackenzie. Nor is the use of the instrument confined to diseases of the larynx. It affords us information respecting general diseases, such as consumption, aneurism of the aorta, and other intra-thoracic tumours.

The lecturer then referred to the practical application of our knowledge in the treatment of disease, materia medica and therapeutics. Mention was made of electrolysis, the use of cool baths in pyrexia, and the introduction of new drugs, foremost of which was chloral hydrate.

The lecturer concluded with advice to students, and congratulations of their choice of a profession and of *Alma Mater*.

ST. GEORGE'S HOSPITAL.

The Address was delivered by Mr. Brudenell Carter, Ophthalmic Surgeon to the Hospital.

Mr. Carter commenced by saying that the utility of the introductory lectures had of late years been called in question, and by defending the ancient custom on several grounds. He then proceeded to discuss medical education in the sense of Paley's definition of education, as comprising every preparation made in our youth for the sequel of our lives. Among these preparations the storing up of knowledge occupies a high place; but the due and harmonious training of the faculties by which knowledge was to be applied was, he held, of even greater importance. His hearers would be called upon to attempt the solution of very difficult, because very complicated, problems; and it would avail them little to have filled their memories with learning, unless they had also cultivated the power of observing with accuracy, and the power of judging with discrimination. For the purposes of such cultivation they enjoyed many advantages over the students of preceding generations, especially the great advantage of being required to bring to their work minds exercised and strengthened by liberal education. They must not take it for granted, however, that this liberal education had done all for them, in the way even of preliminary training, that their minds required or could profit by; for much of the school teaching of the present day seemed to be guided by a belief that the introduction of compressed facts would mechanically expand the intellect; as if learning were a species of sponge-tent. He deplored the wide extent of knowledge now demanded from the young at various preliminary examinations, saying that it placed an obstacle, always formidable and often insurmountable, in the way of real education; and could only be attained by a sacrifice of thoroughness, and of some of the chief objects of teaching, in respect of everything that was said to be taught. These chief objects were to produce and cultivate a habit of careful attention to the meaning of words, and to accustom the mind to a high standard and to a certain kind of reasoning. Amid great laughter, he compared the show pupils of the period, who are able to write down marvellous answers to a multiplicity of questions, on a multiplicity of subjects, to the wooden cannon known among artillerymen as "quakers." These required for their production, in unlimited numbers, besides the blocks of wood, only a turning-lathe and a paint-brush, and they were placed, to deceive an enemy, in embrasures which would otherwise be vacant. There was, however, one grievous flaw in the analogy, for our English "competition wallahs," instead of being used to deceive an enemy, were used only to deceive ourselves. Unfortunately, our notions of education were still entirely empirical; and although physiologists were entering upon researches which promise to establish a science of mental culture, founded upon a study of the structure and functions of those portions of the nervous centres which are subservient to the acquirement and the application of knowledge, it would as yet be premature, even if it were possible, to speculate on the results to which these researches might lead. At present, in seeking the best attainable preliminary education for the profession of medicine, we could only use the common means ready to our hands, such as the dead and living languages—and of all languages the English language, in which our ideas are formed, and in which, chiefly, they have to be imparted—together with mathematics, physical science, and the indirect culture to be obtained from the topics of the day, from the personal tastes, and from the floating information of the social and domestic circles. With regard to all these, the results produced should be of a far higher kind than any superficial or fleeting proficiency in the studies or pursuits themselves. The aim should be to use these studies as agencies for the development of the qualities of mind which would be most useful to the medical student, and which would best qualify him to pursue his allotted path with diligence and with success. These were, first, the power of observation—the power of searching out and recognising facts, so as to obtain materials for the operations of the judgment; secondly, the faculty of imagination, by which to link together the known

with the unknown; thirdly, the power of maintaining a suspended judgment whenever certainty was unattainable; fourthly, the love of truth. Under each of these heads he discussed its special bearings, showing the uses of the several faculties, the means by which they might be cultivated, and the errors which might arise from their being absent or deficient. With regard to the love of truth, he warned his hearers that truthfulness was not something easy and natural, but that in fact, and in its widest sense, it was one of the last attainments of the disciplined and cultivated intellect. He said that children and the uneducated could no more adhere strictly to truth than ordinary persons could walk upon a tight-rope; and pointed out, even among the educated, the common preponderance of a desire to know what is said over a desire to know what is true. But nothing short of a desire to know what is true can furnish an adequate motive for the careful investigation of disease, or could overcome the temptation of floating easily along the current of the fashionable doctrine of the day. He then proceeded to consider the relation of the special departments of practice to the work of the hospital as a whole, telling his hearers that a man who practised any single branch of the profession, without a sound knowledge of the whole, was not a specialist, but a charlatan; and that, whatever might be their future aims, they would best qualify themselves for success by becoming general practitioners in the most comprehensive sense, and by leaving differentiation to be accomplished in the future. There was, however, one branch of special study that demanded their closest attention, and that was the study of the varieties of human temperament and character, so that they might learn to use the mind of each patient as an instrument for promoting the recovery of his body. The Apostle said of his own work, "Even as I please all men in all things, not seeking mine own profit, but the profit of many that they may be saved"; and medical men must be actuated by the same spirit if they would heal the infirmities of their brethren. In the conclusion of his oration the speaker dwelt in terms of pride upon the high character of the profession, and, calling to mind the words of Mr. Prescott Hewett on some former occasion —"It is not enough for a doctor to be honest; he must be chivalrous"—he urged the duty of the medical man to place the gifts with which God had endowed him at the service of suffering humanity. Estimated on a money basis, it was said the profession was "hardly worth following."

> "So think the vulgar. Life and Time
> Ring all their joys in one dull chime
> Of luxury and ease."

For his own part, he believed there was no enjoyment superior to the systematic and harmonious exercise of the faculties of the mind, no satisfaction greater than that afforded by the fulfilment of duty, and that no lives were happier than those of the great majority of the profession. If he were asked to define the sources of their happiness, he would call to his aid one of the greatest writers of fiction that ever lived, who owed much of his greatness to his profound and accurate knowledge of realities, and who, probably on that account, had rendered to doctors more justice than they had received from many of his weaker brethren. He meant Charles Dickens, who had placed his story of "Bleak House" in the mouth of a heroine who became a doctor's wife, and who thus concluded her narrative:—"We are not rich in the bank, but we have always prospered, and we have quite enough. I never walk out with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises or see them in grateful eyes. I never lie down at night but I know that in the course of that day he has alleviated pain and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often, often gone up in the last hour for his patient ministration. Is not this to be rich?" "In this quotation," he said, "we have a picture by a master hand, and I will only observe concerning it that it is given to each one of us, if we will, to realise the picture for ourselves. It would ill become me to mar its effectiveness by any further words of mine."

ST. MARY'S HOSPITAL.

Dr. Shepherd commenced his address by saying that the medical profession is one from which ease of body is most certainly absent; it demands continual personal discomfort. Even beyond the time when we may expect some fair return for our labour, it uses us as slaves. In spite of this we love it, and our love for it is our greatest boast. After some remarks on the success of St. Mary's students during the past year, he stated that his particular subject for discussion that evening would be the Relation of the Medical Man to Society. "Addison, in No. 21 of the *Spectator*, writing of the crowds who throng to the three professions of divinity, law, and medicine, interprets, I hope not quite fairly, a fact which he had noticed in his own time. He says—'If . . . . we look into the profession of physic, we shall find a most formidable body of men. The sight of them is enough to make a man serious, for we may lay it down as a maxim, that when a nation abounds in physicians, it grows thin of people.' I cannot think that this maxim as so laid down has much truth nowadays; whatever truth it has should become less with each succeeding year, as the real science of medicine makes more ground among ourselves, and through us bears more upon those whose advisers in all relating to their health we are. Still, we of a later age have no reason to plume ourselves; seeing that Galen reminds us that Homer himself speaks of the dignity of this profession—

> Ἰητρὸς γὰρ ἀνὴρ πολλῶν ἀντάξιος ἄλλων,—

we are the rather bound to examine ourselves, that we may not fall far below this ideal character." After remarking that we have happily given up, long ago, the *rôle* of "Æsculapius of old, that counterfeit god," as Burton ("Anat. Melanch.") calls him, and that our curing depended upon our care, and the latter upon our knowledge of health and disease, he insisted that the type of our mind ought to react upon the mind of the people; our science ought to come home to the people. We are very much to blame if both in its physical and moral aspects the nation is not bettered by the existence in it of a well-educated body of medical men. And the worth and force of our teaching will depend on the degree in which we take to heart the importance of this our relation to the outside world. He showed what had been done by the professors of medicine for the prevention of diseases—especially epidemic ones—by teaching people to recognise and avoid the causes of them; and how in this way Science had grown out of, and conquered, an ignorant δεισιδαιμονια. He held that our lesson is to landlords and builders even more strongly than to those who were the immediate sufferers from cholera and fever; and to all, even those in other respects most highly educated, who live on in ignorance of, often in despite of, the conditions under which all life exists.

Another great lesson of which, if we but choose, we ought to be the best teachers, is that a mere belief in authority is not the best guide of human knowledge. Careful observation and patient experiment alone give us sure ground on which to tread, sure reasons on which to base a wider science. He quoted Hallam's statement that an undue respect for authority had interfered with the revival of medicine at the commencement of the sixteenth century. He sketched briefly the gradual growth of more certain knowledge, and urged that medical men, if they would be true teachers, must not be slaves to the Idols of the Den. He spoke of the almost necessary tendency of the present day to specialism, and of the necessity of a large general knowledge for the due and right understanding of any particular subject; and for this purpose he thought that if we read a little more and wrote a little less, our knowledge would be more thorough.

"And not only physically and intellectually, but morally also, are we teachers. For we have to be guardians of the public morality in cases where our own morality in dealing with our patients is concerned. Perfect honesty is our sole safeguard against quackery." The lecturer quoted from the *Spectator's* paper on "Quacks" (No. 572), in reference to that "branch of pretenders to this art (*i.e.*, of medicine), who, without either horse or pickle-herring, lie snug in a garret, and send down notice to the world of their extraordinary parts and abilities by printed bills and advertisements." He continued—"It is not only the herbalist and the bone-setter, but with shame be it said, it is nowadays the well-educated specialist who sings with quite as lusty a voice as they—

> "'See here, see here—a doctor rare,
> Who travels much at home:
> Come, take his pills—they cure all ills,
> Past, present, and to come.'

The College of Physicians has, in its wisdom, thought fit lately to warn its members of this evil; and I conceive that it is the bounden duty of us who are members of that College to bear the warning with us."

Two other duties which form part of the medical man's

relation to society—loyalty between members of the profession, and the necessity of providence for accident or disease—the lecturer approached with delicacy. In summing up these and other relations, he thought that the *Geist* of medicine is not, as Mephistopheles describes it, easy to scize upon; and that the highest duty of medical men is to be in more senses than Homer wrote it, "men worth many others."

Referring to the education of women for the medical profession, he urged that the experiment should be tried quietly, fairly, and completely. "That a woman can be a doctor, and follow her vocation not only according to her lights, but with success, has been proved by one who not long ago passed happily through 'the great pain and peril of childbirth.' Others there are more noisily striving for her position. To shut our eyes to the apparent usurpation of work and duties, and even bodily exercise, natural to the harder man, would seem to savour of a dangerous self-satisfaction. The question is a social one, and must be settled, as all social questions will settle themselves, by the result of experience and the public good."

With regard to the hypothesis of evolution, in which he expressed his firm belief, he was convinced that (the opposition to it based on scientific grounds being left out of the question) the aversion to it so common in a very large number of minds was caused by insufficient knowledge of the evidence, coupled with the horror—of which the Edinburgh Reviewer denies the existence—that nature is aggrandised at the expense of man. He combated the idea that the position of man was affected by modification of structure, or the supposed presence or absence of some process of brain substance. He spoke of the absence of any perceptible differences in the earliest life and development of man and the lower animals; and of the horror felt by some people in the fact that our life in any portion of it should be like the life of any, the lowest, organism.

In conclusion, he insisted upon the necessity that students should have some enthusiasm for their work; and that the lazy contentment with the needs of an examination, and indifference to higher standards of knowledge, should give way to a full development of their faculties and a due sense of their responsibility. "By these means only—as night and day press upon you with their recurring anxieties, their seemingly monotonous round of work—will you succeed in this profession; till, as we hope, in no long time after leaving us, your

"'prosperous labour fills
The lips of men with honest praise.'"

QUEEN'S COLLEGE, BIRMINGHAM.

The Introductory Address was delivered on October 1 at the Midland Institute, Birmingham, on the opening of the session of Queen's College, by John Clay, Professor of Midwifery, etc.

After acknowledging the honour conferred upon him, and giving a hearty welcome to all present, he referred to the prosperous financial condition of the College and to the success of the medical teaching, illustrating the latter by the fact that eighteen out of nineteen students obtained the diploma of the Royal College of Surgeons of England during the past year. He mentioned in feeling terms the loss the College had sustained by the resignation of the Warden, the Rev. T. E. Espin (now Chancellor of Chester), and spoke of the great advance made in regard to the education of medical students in this town by the consolidation of the medical schools and the union of the medical staff of the General and Queen's Hospitals into one clinical board; and after giving some excellent advice to the new students and referring in suitable terms to the founder of the College, Mr. W. Sands-Cox, whose name is worthily perpetuated in the Sands-Cox Prize (which was awarded to Mr. Dodson), he proposed to survey generally the subject of public health—to show the agencies at work in relation to it, to trace their operation, and to indicate their probable results.

"Public health is the science which has for its object the study of the laws of health, with a view to applying the knowledge thus obtained to the prevention of disease. It is a question vitally important to the community, individually and collectively, and of primary importance to the profession. The three general elements which are subservient to the nourishment and sustenance of human and generally of animal life are air, water, and food." The speaker pointed out how each of these are necessary for the existence of life; the manner in which they became vitiated and poisonous to life by noxious vapours mingling with the atmosphere and organic and chemical agents dissolved by water as it percolates the earth; how, in thickly populated districts, they become still more intermixed with injurious materials; and how requisite it is that food should be maintained in a pure and unadulterated state. The persistent and laudable efforts of Mr. Postgate, of Birmingham, in obtaining the Adulteration Act were here incidentally adverted to. He then proceeded: "The maintenance in a state of purity of these three great factors of animal life constitutes the chief aim and purpose of the legislation on public health, the regulation of which lengthens life, lessens disease, and increases vital force and productive vigour. To the medical profession the cultivation of sanitary science is of special interest and importance. Medical men have ever been foremost in the advocacy of sanitary improvements, many of which have been carried out regardless of self-interest by distinguished members of the profession. The leading features of preventive medicine, as vaccination, the prevention of scurvy and ague, and the diminution of epidemic diseases by isolation, and other hygienic measures, may be cited as illustrations. But new channels of usefulness are opened to us: the promotion of inquiry into the laws of health, the collection of facts bearing on health and disease, and the control of a vast network of official sanitary agency, created by recent legislation, fall necessarily within our province—the reward, as it were, of the foresight, public spirit, and self-abnegation which dictated to the profession the disinterested advocacy of measures affecting the improvement of the health of the community. There are many individuals, and some few corporations, who are unwilling to recognise the truth that there is a vast amount of preventable misery, disease, and mortality at present existing in this country, and who fail to appreciate the economic value of measures calculated to secure health. Sanitary science is looked upon by them as of special and professional rather than of general value. They ignore the fact that sound legislation, if actively carried into effect, is certain to raise the standard of public health. There is a sublime disregard of consequences on their part, and the problem of how little to expend on sanitary reforms and preventive measures is approached with a determination not to tolerate any sufficient expenditure, however eminent the danger, until serious mischief occurs, and then some tentative measures alone are adopted. It is too much the fashion in the present day to take for granted that all schemes involving public outlay are necessarily objectionable, and that a petty saving, regardless of consequences, is a powerful necessity to those who are in favour of public frugality. The increased longevity of human life, as shown by the report of the Registrar-General on the census returns, by more than one-third, was justly attributed to sanitary reforms." The lecturer then briefly reviewed the history of public health legislation from the time of Richard II. to the present day, and referred to the penalty imposed on Shakespeare's father on two occasions for depositing filth in the public-street, and for not keeping his gutter clean, as an example of salutary punishment. He continued: "The first real attempt to create a national system of public health was made by the Act of 1872, which called into existence the Local Government Board. This Act, the result of the recommendations of the Royal Sanitary Commission, he regarded as a sort of Magna Charta of public health; and curiously enough it brings us back an 'old foe with a new face,' for the sanitary problem of 1873, as in the reign of Richard II., is how to keep our rivers from being polluted." The various kinds of machinery created by recent legislation for the regulation of public health, and the powers given to local authorities under the supervision of a Government department, were dwelt upon. Everywhere medical officers of health and inspectors of nuisances are to be compulsorily appointed, so that, whether in thickly or thinly populated districts, the health of the whole community will be placed under medical inspection. But medical officers of health need fuller powers for initiating reforms, either alone or with the sanction of a central authority, and this was illustrated by what the lecturer termed a discreditable event in our local history, when about twenty years back the Birmingham Town Council appointed the late Mr. Townsend as medical officer of health, and dismissed him when he recommended certain much needed sanitary reforms. The grave responsibilities of medical officers of health were referred to in suitable terms. The preventive arrangements—comprising factory legislation, inspection of graveyards, of manufactories, mines, and vessels, and the Contagious Diseases Acts, and the registration of marriages, births, and deaths—were each pointed out as showing the progress made in sanitary science; and the

different modes of granting medical relief under the Poor-law system were held out as important agencies in dealing with disease and promoting restoration to health. The parochial system was referred to as working very satisfactorily where established, and the speaker regretted that it had not been made compulsory. The voluntary agencies—comprising hospitals, dispensaries, maternity charities, sick clubs, and friendly societies—were spoken of as exercising a powerful influence on the health of a certain class of the public, and their claims for greater encouragement and protection from Government were strongly urged. After referring to vaccination as perhaps the most powerful agency in preventing disease and prolonging life, and contrasting the success of legislation on this matter with the apathy and irresolution shown in carrying into effect other provisions bearing on public health, the lecturer said: "From the rapid survey already taken it will be seen that the ground is now pretty well covered by one or other of these three great divisions of machinery for administering the public health—namely, the powers entrusted to local authorities, Government agencies of a preventive kind, and voluntary restorative agencies. There is great need, however, for these to be strengthened by being placed entirely under one Government department, directed by a Minister of Health, instead of, as now, being divided between the Local Government Board, the Home Office, and the Privy Council. The principle is no doubt sound, that sanitary work, to be effective, must be to a considerable extent a matter of central administration, and rendered independent of local interests, prejudices, and influences; and it may be hoped that the beginning made by recent legislation may soon lead to the constitution of a real Minister of Health, having charge of all agencies and some control over voluntary as well as compulsory machinery. The increasing knowledge and interest displayed on the part of the public in sanitary matters must tend to stimulate and strengthen the action of the Government, which has hitherto fallen behind rather than been in advance of the requirements of the country. This want of skill and strength is strikingly displayed in regard to a part of the subject which just now interests us very deeply in Birmingham—the treatment of sewage and the disposal of the refuse of great towns. The sewage committee of this borough, under the able presidency of Alderman Avery, in the Bill which they presented to Parliament, came to a very fair solution of the difficulties which beset the consideration of the sewage question, and if the measure had not received an ignominious rejection by Parliament, it would have been a safe guide to the central authority as to what should be undertaken by urban governing bodies under such circumstances. Here Government should have stepped in, either by rendering efficient assistance to the local scheme, or by laying down the principles of some general plan for meeting the difficulty and overcoming the opposition of individual landowners." The Professor proceeded to point out how Government should prevent such hindrances to the effectual carrying out of sanitary legislation, how a considerable amount of organic refuse might be systematically destroyed by fire in individual households, and concluded his address by calling on the members of the profession to instruct the heads of families and individuals in the science of preventing disease in their own households, showing how the health of the community depends upon individual action, pointing out to the profession the important, honourable, and responsible positions held out to them, and how by conscientiously and fearlessly discharging these duties they may become public benefactors, strengthening vital force and prolonging human life under the conditions of health and vigour which make life worth having.

LEEDS SCHOOL OF MEDICINE.

Mr. Scattergood said he regarded the presence there of many not directly concerned in the work of the School of Medicine as an evidence that its existence for considerably more than a generation had attached them to it by ties of friendly interest and sympathy; and the assurance of this afforded unfeigned satisfaction. A successful career of two-and-forty years sufficiently justified the wisdom of the eminent and sagacious men who founded the school. In reviewing the changes which had taken place in the methods of medical education in that period (during half of which he had had the honour of being a teacher in that school), the principal one seemed to be the greater attention paid to "practical instruction." The modern education required from the student not perhaps less reading, but more doing, more employment for his hands and his five senses in proportion to that for his memory. The student had not got less to do with written books, but he was more constantly referred to the great book of nature, with which he was to compare them, thus beneficially becoming more of an active seeker after knowledge, and less of a passive recipient of information. This gave him more of the *locus standi* of an original observer. Every student, for instance, who dissected his parts carefully and conscientiously, might be said in a sense to rediscover for himself the facts of human anatomy. With this assumption of the character and spirit of original inquiry there came some of the pleasure attaching to it, as well as still greater benefit in the discipline it gave to the mind. The exercise of the faculty of observation was an excellent antidote to the lethargy which was apt to creep upon the mind by cramming book-knowledge into the memory with too hungry haste. Turning then from medical education to the remarkable progress of the medical sciences, the lecturer said: Forty-two years ago the necessity which was urgently felt in the medical profession for the study of descriptive anatomy was painfully brought before the public mind by the revolting means by which the dissecting-rooms were in some instances supplied. The issue of it all was, however, the passing of the Anatomy Act, which, though by no means free from defects, by securing a better supply of subjects put an end to the disgusting proceedings of the "resurrectionist," and allowed the general antipathy against dissection to subside under the influence of time and of improving general education. But though descriptive anatomy was at that time earnestly cultivated as of the utmost importance to the surgeon, and also for its own sake as a part of comparative anatomy, yet very little indeed was known of the minute structure of tissues: the word "cell" had no very definite meaning, and "histology" did not exist. It could only exist, indeed, when the microscope was used; and with the increased employment and improved character of this instrument the knowledge of tissue has kept steady pace. In physiology a splendid prospect had been opened by the great discoveries of Sir Charles Bell, and the experiments of Magendie and some others. But the questions involved in the relations of vital to chemical changes had scarcely been touched. We cannot now congratulate ourselves upon either certainty or completeness in our knowledge of the chemistry of digestion, the nature of secretion, and the mode of tissue change; but at that time the very conditions and terms of the problems we are now seeking to solve were not stated. After noticing how advance was indicated by numerous new names and headings in modern medical treatises, Mr. Scattergood pointed out that, over and above the improvements in therapeutics, induced by new pathological views or by the introduction of more powerful remedial agents, there had been during the last forty years a gradual change in treatment, indicated by the disuse of bloodletting and of "heroic remedies." He proceeded to show that the field of research constantly enlarged, that the workers in it increased in numbers and in intellectual activity; also that great improvements were made in the number and character of the instruments now employed. Let it not be supposed, however, that the greater exactitude of such improved methods of research would put an end to theory and speculation. The use of instruments of precision in scientific inquiry will no more, he said, put an end to speculation than the use of weapons of precision will put an end to war. By our instruments we ascertain facts; but every fact we discover is the germ and starting-point of new hypothesis and theory; and every fact sown in the soil of the human mind springs up again a whole army of ingenious speculations and inquiries. If we turn now from the internal development and improvement of our science and art to the relations which the individual medical practitioner and the profession in general sustain towards the community, we shall find that the last forty years, and especially the latter part of it, have seen great alterations in this matter. There have long been signs of an increasing appreciation by the public generally of the value of our profession, and a greater and fairer recognition of the service it does to the community. This has been shown not merely by the "reception" of the British Medical Association by a hospitable Lord Mayor, the attendance of a busy and distinguished Prime Minister at its dinner, and the notice taken of its proceedings by the metropolitan press—signs as these are of the way in which the current of opinion is flowing,—but it has been shown in a much

more satisfactory way, namely, by a call to new duties and enlarged responsibilities; by a discovery on the part of the public that besides the Cure of disease we should undertake the Care of health. Rightly to understand our position, it is well to remember that this idea was not of spontaneous growth in the public mind; it was a sentiment implanted there by our profession itself, and the growth of which it has assiduously promoted. In the first year of the present century, not to go farther back, the late Professor Gregory, the author of the "Conspectus," said in his lectures at Edinburgh, "By the practice of physic we mean the art of *preventing* and curing disease." And seventy years later we find Sir William Jenner writing, "I have always taught that the highest branch of medicine is preventive medicine." And in this key have written all the masters of our art. Is it not the usual course with every practitioner, that, when he has treated a patient for disease, he advises him how he may escape the disease for the future? One of the first and one of the noblest measures of preventive medicine was the introduction of vaccination at the end of the last century; and from that time to the present the profession has promoted others, some of greater and some of less importance. Means to arrest the spread of epidemics, to improve the conditions of quarantine, to remove the causes of preventable diseases as they exist in the impure atmosphere, the polluted water supply, the inefficient drainage, the badly constructed dwelling, the food, the clothing, the employments, the recreations of the people—these have been earnestly inquired into and enforced by us, often against much opposition and amid much obloquy. To some branches of the profession the opportunity has been afforded of more direct action than to others. The Poor-law medical officer, the certifying factory surgeon, the surgeons of the army, and especially of the Indian army, have had a more open field for direct work in preventing disease than perhaps most of their brethren, and they will be unanimous in telling us of the difficulties that crass ignorance and official red-tape have too often placed in their way. But we may go a step further. Let us watch the general practical tendency of all scientific research in medical sciences, and we shall find that all points in the same direction. If enlarged knowledge of diseased processes and greater acquaintance with the action of remedies lead to improved curative treatment, this improvement consists in the more speedy arrest of disease, in lessening its disabling or destructive action, in a more perfect restoration of the body to the normal state—that state in which it most strongly resists morbific agencies. In other words improvements in treatment have a preventive effect. But going parallel with the growth of a true pathology and therapeutics, the discoveries in other fields of research have had a more direct bearing on preventive medicine. Take physiology; the more we know of normal cell-growth, are we not the more likely to be able to prevent degeneration of tissue? If we learn that activity of the brain must be sustained by vigour of the heart—that the maintenance of the chemical activity of the blood depends upon the due oxidation of its hæmoglobin, and this on a proper percentage of oxygen in the inspired air—that all intellectual work and all muscular work cause a certain amount of tissue change which must be made up by a proper supply of food, and that different kinds of food have a different nutritive equivalency, are we not learning directly how to promote health? In other words, the practical side of physiology is hygiene. The idea of preventive medicine originated in the mind of our profession, and has there been fostered and nourished. Fed by all the stream of new discovery and enlarging thought, and by all the warmth of devotion to a cherished purpose of philanthropy, it has grown and developed into many branches of practical application. To those which I have already indicated might be added all that relates to the hours of labour, the unhealthiness of certain occupations, and many others. On all such points we have endeavoured to inform the intelligence and to stimulate the conscience of the country; raising the old adage that "Prevention is better than cure" from a dead proverb in the mouth into a living conviction in the thought. And now that this has taken form and action in the shape of an Act of Parliament, and that the people of this country say to us, "You have taught us our need, and we look to you to satisfy it," the serious question meets us, "Is our profession equal to the emergency, and can it fulfil the duties demanded from it?" "Is the wide appointment of officers of health to mark an epoch in the social and sanitary condition of the people?" "Will the field of research thus opened be cultivated by earnest workers with the best implements of thought and knowledge?" "Will the grave questions relating to public health be henceforth dealt with by their administrators in a large and earnest and scientific spirit?" Now, in the first place, it must be admitted that among medical officers of health there will certainly be instances of want of competency: for this holds in all the positions that human beings can fill, from Imperial Majesties down to nursery-maids. In the next place, it may be found that many of those most highly qualified do not feel it to be their duty to devote themselves to the work, in consequence of the remuneration offered them being less than it ought to be—a condition of things which is pretty sure to be the case in places where the convictions of the community are not ripe for the action which the Legislature has forced upon them. It happens also that the very difficulty which many persons of weak brain, imperfect education, or doubtful character find in earning their living, drives them in shoals to seek for appointments and posts of all kinds for which, whether they know it or not, they are absolutely unfitted. And then, if we could suppose (by a somewhat wide exercise of charity) that those who have the responsibility of appointing the medical officers of health were in all cases men of ability and judgment, it must still be allowed that in very many cases the data have been wanting which would enable them to form a correct notion of the qualifications of the candidates. But, while admitting this, I make bold to assert that the country is now provided with, or is being provided with, an army of health officers who will fulfil the task entrusted to them with intelligence, zeal, and even enthusiasm, and with a success which may be expected to increase year by year. None the less true is it that after the first posts are filled a higher standard of qualification will of necessity be imposed. By the general consent of all who are competent to judge, the medical officer of health (unless in the case which ought but rarely to exist, of a very limited area or a very small population) should be unfettered by private practice. He will thus need to be more adequately remunerated for his services; and this being done, candidates for the post will feel the necessity of qualifying themselves by a special course of training, which it now therefore becomes the governing bodies of the profession to provide, or to encourage and direct; and further, to furnish, by means of some diploma or certificate, a guarantee of individual fitness, and a warrant for public confidence. The University of Dublin has already instituted a "qualification in State medicine." The examinations which candidates for this qualification are required to undergo embraces a limited course of the following subjects:—Law, engineering, pathology, vital and sanitary statistics, chemistry, meteorology, and medical jurisprudence. The papers that were set in the last examination were wide in their scope, and of a very searching character, and it is evident that this examination is adapted to maintain a very high standard for State medicine—as high, in fact, as that which in the ordinary branches of education is maintained by the London University for its medical graduates. The qualification is only offered, however, to Doctors in Medicine of the Dublin University, or of Oxford or Cambridge. These latter Universities have also moved in the direction of specifying State medicine as a subject to be studied by the candidates for these medical degrees. The most important movement, however, is that which is being taken by the General Medical Council, and in the initiation of which a committee of the British Medical Association has taken a helpful part. What has been done—slowly, it must be confessed, as this subject has been before the Medical Council for about five years—has been to take evidence from various authorities, both medical, legal, and others, both at home and abroad, as to the need for the study of State medicine, its scope and limitations, and the constitution of an examining authority. The next step is to get clauses, intended to be of a permissive or enabling nature, inserted in an amended Medical Act, by virtue of which examinations may be held and diplomas conferred. It is hoped that this may be done in the next session of Parliament. State medicine may be considered to include preventive medicine, forensic or legal medicine, and from these some would separate a third division, psychological medicine or mental diseases. Upon the point whether these should be included in one certificate, or whether the duties implied in them should be relegated to different classes of persons, the eminent authorities who have given evidence to the committee are not agreed. But it seems to be generally accepted that (1), a diploma in State medicine should not be given except to persons who shall be on the Medical Register;

(2), that the studies qualifying for this shall not be undertaken until after the ordinary diploma has been obtained; it being considered that in the average students' curriculum there is no room for the introduction of many of the subjects which the special diploma would require to be studied; and (3), that all students ought to pay a certain amount of attention to most of these subjects, and to acquire a certain acquaintance with them. After some judicious words of advice to the students present, the lecturer concluded as follows:—"To revert once more to the considerations which I laid before you in an earlier part of this address: is their interest confined merely to us who are practitioners, or who are only outside observers? So far is this from being the case, that it is the students of to-day, and even the youngest of them, whom the present position of scientific research and progress in medicine most concerns. Is the field of observation widening every day? It is to you that its cultivation will be entrusted in the future. See to it that you appreciate its extent, and that you now prepare yourselves for the labour which the coming age demands of you. Every man is a debtor to his art; and what he has received from the past generation he is bound to repay with usury to the generation which will follow him. Have the last few years seen a greatly increased number of workers and an intensely quickened condition of mental activity? Then remember, that with the increasing spread of knowledge and of education the tension will constantly increase, and the competition become keener year by year. None will be able to take a worthy part in the future who do not now assiduously cultivate every faculty of mind which they possess; and no less needful is it that you should miss no opportunity of acquiring the command of all those instrumental appliances by which the power of the senses is so largely extended in range and precision. With the increasing demands of the age upon our profession, its responsibilities will admit of no slackening of the high tone of morality and the noble spirit of self-sacrifice which have always characterised it. The student's career will afford him abundant opportunities of exercising these. And thus acting, in proportion to your diligence will be the consciousness you will feel of frequent failure; in proportion to the amount of knowledge you acquire will be your sense of how little it is in comparison with the great world of thought and experience beyond you; in proportion to the extent to which you exercise your powers and discipline your mental faculties will be your feeling of their weakness and imperfection; and thus to earnest work and devoted sacrifice of self to duty will be added that humility which is the crown of them both."

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

Dr. Caton delivered the Introductory Address. After referring to the changes and improvements made in the Liverpool Medical School, and to the opening of the new buildings which had just taken place, Dr. Caton proceeded:—

The few remarks I have to offer to you to-day are on the following subject:—Physiology in relation to the Health of the Community, and the Advance of Medicine. Physiology, as we are all aware, is the science of animal life. It inquires into the nature of life, and into the modes in which the functions of the body are carried on. I shall here employ the term in its most comprehensive sense. I wish first to point out the importance of physiological science as the foundation of medicine and hygiene, and the desirability of a knowledge of its elements being more widely diffused, as a means of averting disease and death; here it will be necessary for me to glance briefly at the present state of public health. And next, I have a few words to say about the great results likely to be obtained in the future from physiological research, and the desirability of fostering and aiding it as much as possible.

After briefly describing the slow progress of physiology, and consequently of medicine, in ancient times, and the greater advances of medicine and of hygiene which have more recently followed on the establishment of a sound basis of physiological science, the speaker proceeded to answer the question, How far has this progress of physiology and medicine influenced on a large scale the health and life of the community, the benefit of which is the aim and purpose of our profession? Having stated a few facts which proved great saving of life to have been effected in recent compared with former times, Dr. Caton proceeded:—

Still the state of public health is far from what it ought to be. The average duration of life in this country is only forty years—not much more than half of the whole natural term. Among the lower classes particularly the duration of life is much less than it ought to be. How is it that the improvement in the health of the community has not been greater? The answer is this. There are causes connected with the general condition of the people, in our state of civilisation, which have a progressively injurious effect on life and health; so that while medical science is, as it were, continually lengthening life on the one hand, these causes are continually cutting it short on the other. Both these agencies—the beneficial and the destructive alike—are increasing in activity, and it is now a very serious question which of them is to prevail.

Overcrowding, intemperance, etc., tend to shorten life in all town populations. Hence, in large towns, we find an average mortality of one in thirty-seven annually, compared with one in sixty in the country; while the rapid growth of our large towns, the greater increase of town than of country population, makes the evil a growing one. There is also another cause at work among the people, the importance of which I think has not been fully recognised—viz., the interference with the great law of natural selection as regards human life. In an uncivilised state of society the strongest and most healthy alone survive, and become the parents of the succeeding generation; whereas in civilised communities abounding in conveniences and resources, feebleness of constitution or tendency to disease, which would otherwise be weeded out, survive, and give rise to a predisposition sure to develope in bad hygienic conditions. Thus, while nature would destroy the individual, but benefit the race, medical science saves the individual, but (unless the tendency to disease be counteracted by good hygienic conditions) may endanger the vigour and vitality of coming generations.

Sanitary legislation and improvement in the habits of the people are the only remedies for these evils and dangers.

The knowledge we have acquired of physiology, of the conditions affecting life favourably or unfavourably, is now being applied. A good beginning is being made in sanitary legislation. The appointment of medical officers of health throughout the country is important, as also are the efforts made to prevent the fraudulent adulteration of food, to insure sufficient drainage, good water supply, the due regulation of building in towns, the prohibition of nuisances, etc. All these agencies will be beneficial, and have been so already. Many, however, of the causes at work in producing disease are such as no legislation can ever directly reach—they are within the control of individuals only; you cannot by legislation make the people keep their windows open, or feed and clothe their children properly.

Are there no other means of still further bringing our knowledge to bear practically on the welfare of the lower classes? I confess it appears to me there is a method which has not yet been tried—a method which is rendered possible by the establishment of our system of national education. It is this: teaching the people the rudiments of physiology and hygiene. Let the simple rules of health be strongly impressed upon them—such, for example as the following:—The importance of fresh air; the danger of sleeping in close, crowded bedrooms; the danger of inhaling sewage gas; the value of sunshine, of exercise, of the abundant use of pure water; the main rules of diet; a knowledge of the different kinds of nourishment necessary for health, and the forms in which they can best be obtained; the proper diet and bringing up of children; the effects and dangers of intemperance on the individual and on his offspring; simple rules as to clothing; the dangers of unhealthy occupations, and the modes of escaping their injurious effects. These and other simple practical points might readily be taught to the older pupils in all Government schools. If the objection of education be to prepare for *life*, I cannot conceive anything more essential for benefiting the people. To know how to live must surely be as important as how to read, write, and count.

It would certainly seem evident that whatever the people are taught, they ought at least to learn to care intelligently for their own lives, and for those of their offspring. In the words of Professor Huxley, "Were mankind deserving of the title 'rational,' which they arrogate to themselves, there can be no question that they would consider, as the most necessary of all branches of instruction for themselves and for their children, that which professes to acquaint them with the conditions of the existence they prize so highly—which teaches

them to avoid disease, and to cherish health in themselves and those who are dear to them."

In addition to applying and diffusing the practical parts of the physiological knowledge we have at the present time, it is highly desirable that we should extend our knowledge, and that we should attain to more precise acquaintance with the laws of life, for such knowledge would probably lead to great results. The science is making great and rapid progress; its prospects were never so bright and encouraging as at the present time. In this country, and still more on the Continent, many highly trained workers are engaged in research, employing the most exact and scientific methods.

After describing some of the more recent advances made in physiology, Dr. Caton proceeded:—The time will doubtless come when our Government will recognise the importance of aiding this department of science. When we consider the scores of thousands of pounds expended on scientific experiments for the perfecting of weapons, for the discovery of the best mode of defence and attack in warfare, to say nothing of the millions spent in carrying out such results, the ultimate object of which, of course, is the defence and preservation of national life and property; when we consider the vast sums thus spent, it would not appear unreasonable to expend a few thousands—a more fraction in comparison—in aid of the investigation of other modes of saving life—life which is in much greater actual peril in another way. There are other foes besides military invaders. We have enemies at work amongst us at the present time causing as many deaths, and perhaps as much poverty and distress, as any invading army, and we believe we have only to learn more to be able to expel them. For example, 100,000 deaths occur in England and Wales annually from febrile diseases alone (diseases of the zymotic class), and it is not at all unlikely that further knowledge will enable us in time to prevent all or most of these; if so, how desirable to find out the means as soon as possible!

The work of investigation, as I have said, is difficult, laborious, and often expensive. At present it is carried on mainly by medical practitioners, who earn their bread by the practice of their profession, and who gain little or nothing by their scientific work, except the esteem of the few who are able to understand the subject. The public in general know nothing about it. The science is thus at a disadvantage, depending too much on the efforts of isolated men who can only give up a small part of their time. The gain to the science, and the ultimate benefit to the country, would probably be great if one or more Government-supported laboratories were established, and some of the more eminent physiologists paid to devote their entire time to the work.

It is not at all unreasonable to believe that sooner or later a profound acquaintance with the laws of animal life will enable the medical profession to be of many-fold greater service than at present.

We may fairly look forward to a period when, by the aid of science, whole classes of existing diseases will have been swept away entirely, such as the infectious fevers. By further carrying out of sanitary laws, and by improvements in the habits of the people, constitutional diseases may be rendered far less frequent; while a more exact knowledge of the nature of disease, together with advances in therapeutics and surgery, will enable the medical man to give relief and avert death much more speedily and certainly than can be done now. In fact, it is quite reasonable to expect a time when natural death—death at the full term of years, unhastened by any form of disease—shall be the rule, and not as now, the exception, and when the great majority of men may enjoy seventy or eighty years of vigorous life.

Dr. Caton concluded by a few remarks addressed specially to the students in reference to the work of the session about to commence.

NEWCASTLE-UPON-TYNE COLLEGE OF MEDICINE.

The Introductory Address was delivered by Dr. Armstrong, who began by addressing the younger students, assuming that they recognised the importance of the step they were about to take, and at the same time forewarning them that theirs was to be no life of luxury, but one of toil, care, and anxiety. He urged them by the duty they owed to their parents and guardians, as well as by their hopes of success, so to conduct themselves as students that they might in after-life look back upon October 1, 1873, not only as a commencement of a college curriculum, but as the inauguration of an honourable career. Dr. Armstrong cautioned the first year's men against idleness, as the first downward step, and advised them to adhere to a systematic course of study. He also recommended them when in doubt to consult their lecturers, in their general conduct to follow the example of the medallists of their class, and above all to shun the "chronic student" as one who, though not naturally vicious, was certain to exert an influence for evil on new students. The speaker drew attention to the importance of the work of first year's men in the duty of after life; and to excite their interest in these studies he used a simple illustration—"You strike your funny-bone at the elbow so as to feel intense tingling in your little finger, and, if the blow has been severe, in part of the adjoining finger. On studying your anatomy you will find you had not struck a bone at all; it was a nerve. Physiology will teach you why you had the pain in your finger." From this instance the speaker generalised the paramount importance of anatomy and physiology, stating that many examples might be given where ignorance of matters apparently simple might cost them the life of their patient. What would be their feelings if they ever came to reflect that through their negligence as students of anatomy and physiology a wife had been left a widow and children penniless?

In addition to the need for reading and attendance at lectures, the speaker showed the urgent necessity for practice in the dissecting-room and laboratory. Chemistry might appear of less direct importance than the two foregoing subjects in the practice of medicine; it was, however, indirectly of the highest value—such as they could not understand until they came to study subjects allied to it. It behoved them, therefore, to labour diligently to obtain thorough mastery over this branch.

To the men of the second year Dr. Armstrong earnestly recommended diligence, not only on the ground of duty, but as an example to their juniors. He reminded them that they were expected to pass their anatomical and physiological examinations next spring. They were not, through fear of the result, to become nervous, but to think of the cost in time alone of a rejection.

"What," said he, "will be your feelings next inaugural address if from negligence you allow yourselves to be rejected whilst others no more gifted than you pass? What will be the feelings of those whose every hope you are—those who have for years lavished on you their love and care? These motives should incite you to redouble your efforts," etc.

To the third and fourth year students, in addition to the recommendation to work until the goal towards which they were pressing was passed, the speaker gave important practical and general advice for their guidance in after-life. He cautioned them against the idea that they had nothing to learn after they had obtained their diploma—a time when their ignorance would become most palpable to them. He advised them, when questioned by friends as to the state of their patient, to steer between the two extremes of offending friends by reticence and hurting patients by gossip.

The speaker also alluded to several matters of interest of an ethical nature, and cautioned those for whom his remarks were intended, in case a fellow-practitioner were guilty of a breach of etiquette towards them, never to retaliate, but to remember that "Two blacks do not make a white." Behaviour at coroners' inquests and in courts of law, the disastrous effects following want of care in the ordering of alcoholic stimulants, fashion in medicine, hospital practice and its abuses, afforded the speaker fruitful themes for practical advice to those about to enter the profession. There was one matter, he said, to which he would draw their serious attention, the more so that it was a subject not hitherto publicly discussed. Sick benefit societies, so long as they were properly used, were undoubtedly a great blessing to the working man; but, as medical officers of those societies, many of his hearers would think it a very suspicious circumstance that one person should be in four or five different societies. This was sufficiently demoralising, but unfortunately this was not all. A sum of money for funeral expenses, etc., is usually allowed on the death of any member of the family. This multiplied four or five times gives the parent an interest in the death of his offspring, the effect of which is more terrible than can be conceived. The speaker gave examples from his own experience of the sad results of this system, and called upon his hearers to exert their utmost influence to check it.

ORIGINAL COMMUNICATIONS.

ON LUMBAR COLOTOMY.

By C. F. MAUNDER,
Surgeon to the London Hospital.

Having already recorded in the pages of this journal half a dozen instances in which the above operation was performed, I now add three more, the limit to my personal experience.

Case 7.—Scirrhus of the Rectum—Partial Obstruction.

A male adult, whose chief symptom, of about six months' duration, was frequent diarrhœa. He has lost flesh somewhat; his appetite is bad; he is very anæmic and debilitated. Latterly incontinence of fæces has been added to his ailment. During the last forty-eight hours constant vomiting has prostrated him very seriously. At my request Dr. Down examined the patient very carefully, and detected no evidence of any malignant disease of the important viscera. The question of colotomy was put to the patient, and its probabilities and possibilities having been thoroughly explained, he accepted the operation as the alternative. It was performed in the left loin by the transverse incision, and the bowel found and the operation completed with the greatest ease. Vomiting did not recur, but the patient died after the lapse of forty-eight hours from asthenia.

Case 8.—Tertiary Syphilitic Ulceration of the Rectum.

Female adult, about twenty-eight years of age, married, had been under my care at intervals during two years. Varied treatment—on one occasion locking up of the bowels for a fortnight with opium; country and seaside air—failed to relieve her. A frequent desire to evacuate the rectum (a copious flow of highly sanguineous muco-purulent discharge being the general result) greatly distressed and debilitated her. Colotomy seemed to offer the only chance of relief from her sufferings, and to this she readily consented. She was not an absolute stranger to the operation, having on one occasion occupied a bed adjacent to a patient who had been similarly treated. The operation was performed by the transverse incision, but the bowel was found with difficulty. There was no lack of fat, and her muscles were very well developed.

In undertaking the operation, I hoped that by diverting the flow of fæces the ulceration would heal, and though with a tendency to strictnre, this latter could be controlled by the use of the bougie. In this I was disappointed; she could not bear the introduction of the bougie. Fæces passed at the artificial anus, and with this latter, after some months' sojourn in hospital, she left for America. The above patients were submitted to operation within a very few days of each other, and the facility in the one case, and the difficulty in the other, with which the bowel was reached, were well contrasted.

Case 9.—Incomplete Obstruction.

Mrs. —, about sixty years of age, extremely stout, and the mother of a very large family, had been for many years the subject of umbilical and inguinal hernia of the right side. During the last five years she has been liable to frequent attacks of constipation, associated with vomiting of a most alarming character. By treatment for two or three weeks with emollient enemata, opium, and the avoidance of purgatives, these symptoms would yield, a very large quantity of accumulated fæces having come away. About two years since she complained of constant dragging and sense of weight in the left side. On examination, a thickening could be felt on a level with the crest of the ilium. This induration gradually became an appreciable swelling, pain augmented, and some sanguineous mucus had passed. In April, 1871, this lady sustained another severe attack of constipation and vomiting, which was overcome as on former occasions. The bowels now acted fairly every day, and continued to do so until the fatal illness. During at least a week previous to my seeing her a great distaste for food existed—very little was taken, and nearly all returned. This state of things persisted, and on June 7 violent attacks of vomiting, with faintness, came on, although large quantities of fæces passed with and without injections. On June 8 violent sickness and stercoraceous vomit recurred. I saw her, in consultation with Drs. Stilwell and P. Jackson, when she was easier and sickness quiet. It was agreed to give a copious enema under chloroform, with a view to unload the cæcum and ascending colon, and to administer the watery extract of aloes and nux vomica by the mouth. The injection came away untinged, and in the evening another fit of vomiting occurred.

June 9.—10 a.m.: In consultation with Drs. Stilwell, Jackson, and Brown, it was agreed that I should perform colotomy under chloroform, after all the circumstances had been fully explained to the patient and her relatives. I selected the right loin in this instance, lest the tumour should be found to involve the descending colon. The transverse incision was made, and the bowel reached and opened at a depth of from three to four inches of fat. The adipose tissue present was almost incredible, being separated into two chief layers by the broad muscles, which had almost disappeared. On recovering consciousness the patient was greatly exhausted, and it was thought chloroform had not improved her condition. On the following morning fæces passed by the wound, and in the afternoon she died—about twenty-six hours subsequent to the operation.

It is easy to be wise after the event, and under the circumstances we regretted that the operation was not performed earlier. Still, under corresponding conditions a similar line of treatment would probably be adopted, on the ground that the patient, having already recovered from several like alarming attacks, might again do so.

A post-mortem examination disclosed all the organs smothered in fat. At the junction of the descending colon with the sigmoid flexure was an annular stricture, occupying some three inches in length of the intestine. The coats of the bowel were infiltrated and thickened, and adherent in one-half its circumference to the abdominal wall by scirrhous cancer, and the mucous surface was uneven and slightly abraded. A portion of the bowel indicated being the seat of deposit; its original power of contraction, with a view to propel towards the anus fæces travelling thither, was lost. Its calibre also was greatly diminished, and incapable of enlargement. The bowels above this were therefore never emptied by natural means; but when accumulation to a certain degree occurred, regurgitation and vomiting set in, and the life of the patient depended upon the unloading of the bowels before exhaustion had time to kill. The post-mortem also showed the descending colon to be empty, and the day previous to operation we believed the transverse colon to be empty, and the ascending colon to be loaded. At the time of operation we believed the ascending colon had been emptying itself during the night into the transverse, and the post-mortem appearances supported that belief, as the latter bowel then contained masses of fæces.

It has been said that the use of an enema will materially aid the diagnosis in cases of obstruction—a remark which only holds good in cases of complete occlusion of the large gut. The passage of the tube through the stricture was appreciated by the manipulator in this instance, and very large enemata had been employed.

Queen Anne-street, W.

A CASE OF COBRA POISONING

TREATED BY INCISION, AND LIQUOR POTASSÆ LOCALLY AND INTERNALLY, TERMINATING FATALLY IN ONE HOUR AND TWENTY-FIVE MINUTES.

By H. P. ESMONDE WHITE,
Triplicane Hospital.

C., aged 14, male, Gentoo, admitted into the Triplicane Hospital on August 5, 1873, at 8.45 a.m. His friends stated that he had been bitten by a cobra about half an hour previously when attempting to take some young birds from a crevice in a wall. Nothing had been done for him beyond applying some white-looking stuff to the wound. He was driven to the Hospital, and when admitted was in a drowsy state, appearing weak and fainting. A ligature of cord was immediately applied round the forearm, and afterwards replaced by a double roller. On examining the parts a small punctured wound was seen on the internal side of the middle finger of the left hand, just above the articulation of the first and second phalanges. An incision one inch in length was made over the puncture, but no blood came. Some cold water was dashed over the face, and this at once had the effect of producing a large flow of both arterial and venous blood, a small vessel being divided. His pulse was now 68 beats per minute; respirations 29. Eyes closed, but pupils normal. A solution of liquor potassæ and

water was prepared, and the whole hand kept immersed in it, pressure by an assistant's finger being used to arrest the flow from the small artery. Half a drachm of liquor potassæ in an ounce of brandy was then offered him; but although it was greatly diluted with water and given in a feeding-cup, he refused to swallow it. This was twice repeated, with the same result. Each time he vomited, so that he probably took one-half drachm of the liquor potassæ. The pulse now rose to 102. He continued in this state for some minutes, the pulse falling to 96, and the pupils being dilated; but it was impossible to count the respirations, as he lay in a doubled-up position, and moved continually, frequently putting his right hand to his head as if in pain. Two ounces of brandy and one drachm of liquor potassæ were thrown up the rectum. It was not retained, and was immediately repeated—this time with success. Pulse continued to fall, numbering 90; breathing quiet; jugular veins distended; and visible pulsation of the right carotid artery. He remained in this state some minutes, vomiting some slimy and frothy fluid. A strong convulsive movement of the whole body ensued. Pulse fell to 76, and became weak. He now fell into a semi-comatose state, breathing easily. Pulse became very weak, and only 68. From this time he continued to sink, until his pulse numbered only 35, became intermittent, but full at times, and finally flickering so that it could not be counted; and he died at 90.40 a.m., having been in the Hospital fifty-five minutes—the entire time which elapsed from his being bitten to his death being one hour and twenty-five minutes. In this case the wound had not been sucked, as there was no volunteer for so dangerous a duty, and the boy was unable to do so himself when admitted. Everything else was done in accordance with the instructions issued for Dr. Shortt's plan of treatment; but no good effect followed. The treatment got a fair trial, and did not succeed, which at least shows it is not infallible. The snake was a hooded cobra over three feet long.

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Medical Times and Gazette.

SATURDAY, OCTOBER 11, 1873.

THE INTRODUCTORIES.—No. II.

At Charing-cross Hospital Mr. Bellamy well pointed out to the students that, besides the study of their profession during their working years at the hospital school, they would have ample opportunities for another and most important study—that of the different tempers, habits, and manners of those with whom they would be brought into contact. In our "Address to Students" we spoke of the special importance of this study of mankind to the medical student, and we are always glad to see it referred to, and its immense value to the medical practitioner somewhat dwelt on. Mr. Bellamy reviewed the various scientific subjects which the medical curriculum obliges the students to work at, and warned them against working at anything merely with the view of being able to pass an examination in it; they must work for the sake of knowledge and the power it gives; and when they should come to the practical part of the curriculum they should "live in the wards and the post-mortem theatre"; no *cramming* would serve to give them an insight into disease. In one part of his lecture Mr. Bellamy spoke of the "Hospital Sunday" movement as a great boon. We trust it may prove to be one, but we confess to some misgivings as to its being an unmixed good. We know that already it has been found that when aid for one of our London hospitals has been asked, "Hospital Sunday" has been made the excuse for refusing to give help at any other time, and we fear that this excuse will be made no little use of. We shall, we need not say, be glad indeed should it turn out that we are mistaken, but at present at any rate our fears are not without foundation.

The address delivered by Mr. Henry Morris at the Middlesex Hospital is an especially thoughtful and able production. Having first drawn the attention of his hearers to the complexity of composition of man, whose individual and social well-being will be their care, he shows that this necessitates their studying chemistry and natural philosophy, human and comparative anatomy, botany and physiology, morbid anatomy and pathology, and psychology, as the means of gaining a thorough knowledge of the "subject matter" of their work. And then, in order to know how to influence and act upon it, they must study—"first, materia medica, which gives a descriptive account of drugs, and of their effects upon the human system; second, the art of therapeutics, which instructs how to substitute physiological for pathological actions otherwise than by the agency of drugs; third, the various kinds of surgical instruments and appliances." And then he points out that there are "two offshoots from this great tree of medicine to which attention must be especially drawn"—medical jurisprudence, a knowledge of which may be "but rarely demanded, yet is absolutely requisite, because the committal of any error therein will be very damaging to reputation, both on account of the gravity and the publicity of such a mistake"; and State medicine, or the science of public health, "one of the very corner-stones of the social safety of mankind." While on this subject the lecturer was naturally led to observe on the present most unsatisfactory state of things in which "medical officers of health are subject to the opinions of lay inspectors who are unacquainted with the fundamental principles of sanitary science," and to lament that preventive medicine should be "groaning under an Act of Parliament which has excited surprise, dissatisfaction, and indignation."

Mr. Morris next discussed the kind of education best suited for those destined to recruit the ranks of medicine, and then the best method of studying the chosen profession; and, quoting a well-known aphorism from the "Novum Organon," he showed how "we must neither do as the ants, which only lay up and then use their store, nor as the spiders, which spin all out of themselves; but as the bee, which takes the middle course, and, after gathering from abroad, digests and arranges by its own faculty all that it has gathered. We must avoid the mistakes of the 'doctrinaires' and of the self-styled 'practical men.' We must avoid both false theory and blind empiricism." We especially commend to the study of our readers that part of Mr. Morris's address which treats of the faculty of observation. After commenting on assisted and unassisted, unintentional and intentional observation, he summed up thus:—"To observe well we must educate thoroughly our

organs of sense. As we have ears to hear, eyes to see, and hands to touch, we ought so to train and discipline them that they reach the highest possible degree of perfection. But we must not only see sights, hear sounds, and touch surfaces; we must, in addition, perform all kinds of mental analysis and synthesis of the facts we observe, treating them as words and letters, resolving the former into their component letters and building up the latter into words. To do all this requires great sagacity and sound judgment, and good powers of reasoning and paying attention." To know how to observe is of such paramount importance to the medical man that Mr. Morris deserves great credit for the fulness with which he treated this part of his subject; the whole of his address, indeed, is admirable for both knowledge and style.

Dr. Shepherd, at St. Mary's Hospital, took for the especial subject of his lecture—the "Relation of the Medical Man to Society," and as a kind of text quoted the following sentence from No. 21 of the *Spectator*:—"If . . we look into the profession of physic, we shall find a most formidable body of men. The sight of them is enough to make a man serious, for we may lay it down as a maxim that when a nation abounds in physicians, it grows thin of people." Dr. Shepherd expressed an opinion that this maxim has not much truth nowadays; but we remember hearing not very long ago of a lady who, on inquiring of some village crone if any medical man lived in or near the village, was answered, "No, ma'am, we mostly dies a nat'ral death." However, it is quite certain that, as Dr. Shepherd said, whatever truth the maxim had or has "should become less with each succeeding year, as the real science of medicine makes more ground among ourselves, and through us bears more upon those whose advisers, in all relating to their health, we are." He dwelt upon the work of medicine in the prevention of disease; upon the danger of an undue respect for authority; upon the evils of pretension and quackery; and on the duties of loyalty between members of the profession, and the necessity of provision for accident or disease; and insisted that the type of our mind ought to react on the mind of the people; and that our science ought to be brought home to them; that we are very much to blame if the nation is not bettered physically, intellectually, and morally by the existence in it of a well-educated body of medical men.

At St. George's Hospital, the Introductory Address was delivered by Mr. Brudenell Carter, who treated of medical education according to the definition which Paley gave of education in general, as the process of preparing in every possible way, during our youth, for the sequel of our lives. He pointed out to his student-hearers the many advantages that they possess over the students of former days, the greatest advantage of all being that they are compelled, by the requirements of the preliminary examination, to come to their work with minds exercised and strengthened by a liberal education; and at the same time warned them against setting too great store by the knowledge already gained and the training already gone through. "Much of the school teaching of the present day," he observed, "seemed to be guided by a belief that the introduction of compressed facts would mechanically expand the intellect"—instruction by "cram," that is, instead of true education; and he not unhappily compared the "show pupils of the period" with the wooden cannon known as "quakers": these "require for their production in unlimited numbers, besides the blocks of wood, only a turning-lathe and a paint-brush, and then are placed, to deceive an enemy, in embrasures which would otherwise be vacant." "Only," as he observed, "there is one grievous flaw in the analogy, for our English 'competition wallahs,' instead of being used to deceive an enemy, are used only to deceive ourselves." The qualities of mind most useful to the student, and therefore the qualities that we should seek especially to develope and strengthen by preliminary education, are—"First, the power of observation—the power of searching out and recognising facts, so as to obtain materials for the operations of the judgment; secondly, the faculty of imagination, by which to link together the known with the unknown; thirdly, the power of maintaining a suspended judgment whenever certainty is unattainable; fourthly, the love of truth." And he well remarked that strict truthfulness is not an easy or natural thing, but "in fact, and in its widest sense, one of the last attainments of the disciplined and cultivated intellect." When speaking with grateful pride of the high character of our brethren in general, he reminded his hearers that Mr. Prescott Hewett had, on a similar occasion, well told them that "It is not enough for a doctor to be honest, he must be chivalrous"; and he concluded an able address (which was delivered without the aid of notes) by quoting from "Bleak House" the charming description given by the doctor's wife of the riches her husband had acquired for them.

Dr. Prosser James, at the London Hospital, took for his subject the advances made in his days in the medical sciences and the art of applying them; and illustrated his subject by reference to the work done by London Hospital men. He drew attention especially to Dr. Herbert Davies's contributions to the comprehension of the circulation, and his law of the series and shapes of the several cardiac orifices; to Dr. Andrew Clark's researches into the nature of tubercle and phthisis; and to Dr. Hughlings-Jackson's eminent services in the elucidation of the functions of the brain and the study of its diseases. He treated also of the value of the laryngoscope and the clinical thermometer, and of the advances made in the treatment of disease by means of cool baths in pyrexia, by electrolysis, and by the introduction of new drugs, foremost among which he placed the chloral hydrate.

We cannot do more than direct attention also to the Introductories given at the provincial schools of medicine, though we are very glad to be able to find space in our pages for short summaries of some of them. It will be observed that Dr. Armstrong, in his address at Newcastle-upon-Tyne, besides the more usual topics, drew attention to the way in which the blessings of sick benefit societies may be turned, and are turned, into curses. By abuse of them a "parent's interest in the death of his offspring may be multiplied four or five times"; and he gave from his own experience examples of the evils of this system, and rightly called on his hearers to exert their utmost influence to check it.

It will be noticed that in all the other provincial Introductories sanitary medicine was the chief topic. At Queen's College, Birmingham, Professor John Clay gave an interesting review of the history of public health legislation from the time of Richard II. to the present day, and pointed to the Act of 1872, which he looks on as "a sort of Magna Charta of public health," as "the first real attempt to create a national system of public health." And he concluded by calling on all members of the profession to become instructors in the science of preventing disease, and pointed out "the important, honourable, and responsible positions held out to them, and how, by conscientiously and fearlessly discharging these duties, they may become public benefactors, strengthening vital force and prolonging human life under the conditions of health and vigour which made life worth having."

Dr. Caton, at the Liverpool Royal Infirmary School of Medicine, took "Physiology in relation to the Health of the Community, and the Advance of Medicine," as his chief subjects, and insisted on the importance of educating the people in a knowledge of the rudiments of physiology and hygiene, quoting in this connexion the words of Professor Huxley, "Were mankind deserving of the title 'rational,' which they

arrogate to themselves, there can be no question that they would consider, as the most necessary of all branches of instruction for themselves and for their children, that which professes to acquaint them with the conditions of the existence they prize so highly—which teaches them to avoid disease, and to cherish health in themselves and those who are dear to them."

And Mr. Scattergood, in his able address, at the Leeds School of Medicine, enlarged, *inter alias*, on the great importance of the art of preventing, as well as that of curing, disease.

It must be acknowledged that the Introductory Lectures of this season more than justify the continued observance of the old custom of in this way opening the winter session at the various medical schools. And it is to remembered that these addresses may have an influence over a much wider circle of readers than the profession. The daily press makes the gist of many, if not of all of them, known to the public at large, and no little good may be done by this means in awakening public interest in, and sowing seeds of knowledge of, the subjects spoken of.

HOSPITAL REFORM.

Whilst we here in London have been busy talking on hospital reform, our brethren in Birmingham have undertaken the matter in earnest, and have been able to produce a fairly good working scheme. The first step has been taken by the Queen's Hospital there, whose authorities, through the agency of the Charity Organisation and Mendicity Society, early this year undertook an investigation into the conditions of a certain number of persons who presented themselves as out-patients, whilst a certain number of the patients in the wards were examined as to their condition in life, and their statements carefully inquired into. The plan adopted was this:—The officer of the Charity Organisation and Mendicity Society attended at the Hospital on certain mornings, to take down names, addresses, and other particulars of persons who applied at the out-patient department. These persons were then visited at their own homes by an agent appointed for the purpose—a man of considerable penetration and of reliable character. It was his business to verify the statements they had made at the Hospital, and to ascertain their circumstances as accurately as possible. A circular was then sent, where necessary, to the employers, asking for the average wages, and a printed form, together with stamped and directed envelope enclosed for reply. Some of the patients lived at too great a distance to be visited, and in their cases information was sought from the clergy of the parish or the relieving officers. The nature of the disease from which each patient suffered was obtained from the Hospital registers. As regards in-patients, particulars were obtained from the Hospital of the patients who were in the wards on May 19, and the cases were followed out as above.

The result, as regards the out-patients, was that out of 366 cases investigated, information was refused in 2 and false addresses given in 34 instances, 6 were parish cases, 64 were unsuitable, and 260 legitimate. In certain instances the case was considered suitable, independently of means, the disease being of an unusually serious or prolonged character, especially where the patients' means had been exhausted in paying for medical attendance. Parish cases, too, were justly considered unsuitable when the Poor-law medical officer had not been seen; but when the patient had been treated for some time by this official without relief, and a better opinion was wanted, they were held to be suitable. The unsuitable cases were classed in two divisions, the first including those who were able to pay for medical advice; but many circumstances were taken into account, no rigid rule being adopted, and each was judged on its own merits. The following examples will show that the special circumstances of each case were allowed full weight:—

"No. 44.—Passed as legitimate because the husband's earnings were stopped by reason of his poisoned hand.

"No. 146.—Single man, wages 18s.; passed because consumptive.

"No. 189.—Young woman, whose family earn good wages; passed because she had been ill a long time.

"No. 224.—Child; parents earn good wages, but had provided medical advice for six months, and wanted a higher opinion. Passed.

"No. 260.—Young man, wages 22s.; passed because he and his brother support their aged parents."

The second division included such as were unsuitable from idleness, drunkenness, and otherwise dissolute character. From the experience thus gained the committee found themselves in a position to suggest a scheme for carrying out a systematic examination of all who present themselves, which as their experience showed was greatly required. This scheme we cannot but think fair, and it certainly is well worthy of consideration. It has been well worked out, and we would, without pledging ourselves to it in any way, earnestly bespeak it all due consideration.

"*Out-Patient Department.*

"1st.—Rules to be drawn up, by which the fitness or otherwise of applicants for hospital treatment shall be determined.

"2nd.—The Charity Organisation and Mendicity Society to be asked to undertake the investigation into the circumstances of the applicants at the hospital at a fee of .... per head. In case of their refusal the hospital to appoint its own inspectors for the purpose.

"3rd. A sub-committee, hereafter called the Revising Committee, to be appointed for the purpose of deciding upon the fitness or otherwise of the persons whose cases have been previously investigated. It is of great importance that this committee should be so constituted as to inspire the working-classes with confidence that the rules will be judiciously and impartially applied.

"4th. Every applicant who *appears* to come within the rules to receive medical treatment *on the day that he applies;* subsequent admission to benefit of hospital to be determined by the Revising Committee. Each person to be charged a registration fee of sixpence on his *first* application. This fee to be again paid whenever a month elapses between the attendances of the patient.

"5th. Any applicant who does *not* come within the rules to be referred to the medical staff, that they may decide whether the disease is of a grave order, or one calculated to conduce to the educational efficiency of the institution as a clinical hospital. If so, the applicant to be received.

"*In-Patient Department.*

"6th. Persons to be admitted as in-patients upon satisfying the Revising Committee that they are proper objects of hospital charity.

"All cases of accidents and extreme urgency to be immediately admitted, upon the general understanding that, if their means allow, they shall subsequently give a donation to the hospital.

"In order to meet the cases which (as this inquiry shows) arise from time to time of persons who are not strictly objects of charity, but whose maladies require professional skill or surgical appliances *beyond their means*, the Revising Committee to have the power of admitting such on the recommendation of the honorary medical or surgical officer, and of requiring such payment for their maintenance as, with regard to their means, may be determined upon by the said committee.

"7th.—In order to secure the clinical efficiency of the hospital, the honorary staff to have the power of directing the admission into the wards of any *special* case, each admission to be entered in a register, and subsequently laid before the Revising Committee."

We confess that the arrangements for seeing each apparently suitable case on the days when presented, and the power granted to medical officers to admit special cases on their own authority, obviate very serious objections to most ordinary

schemes; but, on the other hand, the payment of a registration fee of sixpence, though a trifle to most, would be a difficulty to some of the most deserving without a previous visit to the poor man's banker—the pawnbroker.

THE WAR ON THE GOLD COAST.

If the axiom that "in the multitude of counsellors there is wisdom" be true, the Government should have derived a vast amount of benefit from the advice which has been heaped upon it from all quarters on the subject of the conduct of the war on the Gold Coast. It is somewhat amusing to contrast the free and open-handed method of discussing our fighting difficulties of the present day with the reserve and taciturnity which distinguished the commencement of hostile operations in former times. It must be admitted, however, that if the method which now obtains is the better of the two, it is open to some few objections which did not exist under the older system. One of these to which we more particularly allude is the eager anxiety exhibited by the proprietors of every known nostrum and patent appliance to force their wares upon the unfortunate and bewildered authorities. No sooner has the first whisper of aggressive tactics obtained credence, than applications are showered upon the heads of departments soliciting orders for every description of the most anomalous products. Every inventor emphatically asserts that without a supply of his invaluable medicine or remedial agent the most unheard-of catastrophes are absolutely certain to follow, and the extra-taxed time of the offices is wasted in replying to individuals who seek to render their patriotism a means of extending their profits.

Amongst the later suggestions for the equipment of the expeditionary force which is shortly to leave this country for the West Coast of Africa, is one to provide our soldiers with respirators and mosquito-nettings. These articles would doubtless be of use, the former for modifying to some extent the inhalation of malarious and pestiferous exhalations, and the latter for protecting the slumbers of the men at night; but we almost fear their perfect applicability to the case of soldiers, who, we imagine, would be inclined to regard them rather in the light of incumbrances, and—certainly as regards the respirators—as an approach to molly-coddling.

There is a decided lull in the more active preparations for the coming campaign, not attributable in any degree to supineness on the part of the authorities, but referable, as we last week explained, to the necessity for awaiting Sir Garnet Wolseley's report. The Government, we believe, are fully alive to the importance of rapidity in action when the proper instructions from the seat of the forthcoming operations have been received; meanwhile, to prepare heaps of material which after all might not be required would only entail useless expense upon the country, and in no way facilitate the supply of what will turn out to be actually necessary.

A further contingent of army medical officers who had volunteered for service on the Coast embarked last week at Liverpool for Cape Coast Castle, and this included Surgeons R. Bennett, W. F. Bennett, D. Thornton, and W. McNalty. The Medical Department has, up to the present time, been enabled to provide officers for the peculiar service now required entirely from volunteers, and has not yet been compelled to place any others under orders; indeed, it would appear that in all branches of the service, combatant and non-combatant, there is a universal desire to take part in the forthcoming proceedings. An ample staff of willing and experienced medical officers is above all things to be desired, and we may congratulate ourselves upon possessing a large body of brave and skilful men who are anxious to place themselves at the disposal of their chief in the present emergency.

THE WEEK.

TOPICS OF THE DAY.

An exhibition of sanitary, educational, and domestic appliances in connexion with the meeting of the Social Science Congress was opened on October 2 by Dr. Bateman, Sheriff of Norwich and Physician to the Norwich and Norfolk Hospital. In opening the exhibition, Dr. Bateman delivered an address upon subjects connected with hygiene. He drew a picture of the time when, some diseases having disappeared and others becoming much less formidable, the *rôle* of the physician will become a passive one, and the hygieist will take the place of the therapeutist. Such a sanitary millennium is not yet; although when we find that by good drainage and water supply the death-rate of Salisbury, which twenty years ago used to be over twenty-six in the 1000, during the last quarter was only ten per 1000, it may be argued that it is nearer than some people suppose. England will, perhaps, some day answer to the satirist's description of Scotland and Ireland a hundred years ago, when all whom hunger spared with age decayed. At present, however, our prospects are not bright. The high price of fuel and of provisions cannot but have its influence on the health of London and the great towns during the coming winter. A scarcity of fuel always encourages overcrowding and neglect of ventilation. Dear food and coal and overcrowded dwellings are the necessary factors in the production and spread of typhus and relapsing fever, and it will be a marvel if they do not bear their accustomed fruits. Already an outbreak of typhus is reported in Drury-lane, which is supposed to have been caused by the removal of an accumulation of filth in clearing away the *débris* of a fire in Lincoln-court, Little Wild-street, or by the breaking open of coffins which were being removed from a cellar under an old Baptist Chapel in the same locality, and the consequent escape of offensive gases. This removal has been stopped by the order of Dr. Ross, the Medical Officer of Health for St. Giles's. But the seeds of typhus are probably never entirely wanting in densely populated metropolitan districts, and it only requires starvation, filth, and overcrowding to develope them into activity.

No fresh cholera cases have been reported from Liverpool; but on Tuesday last the captain of the schooner *Juliana* from Caen, an infected port, was found on board his ship, which had passed Gravesend and been hauled into the Surrey Commercial Docks, prostrate with cholera. Mr. Harry Leach, the officer of the port, had the ship taken to the isolated moorings granted by the Thames Conservators, where she will be kept with her crew in quarantine until disinfection has been properly instituted. The sick man was taken to the Seamen's Hospital.

Mr. Disraeli's celebrated letter which charges the present Government with having "worried every profession" is now matter of history. The medical profession, we suppose, is included as affording ground for the stinging censure. We believe a good many of our army medical brethren would agree as to its justice, but with regard to certain other sections of the medical world it may be a matter of dispute on which side most worry was inflicted. We should think Lord de Grey and Ripon cannot have a very pleasant recollection of his venture in medical politics during his term of office.

CHOLERA IN HOLLAND.

Our Rotterdam correspondent writes that the *Staatsblad* (official journal) of October 7 states that from September 21 to 22 three cases of cholera occurred in Bergen-op-Zoom, a town in the vicinity of the river Scheldt. From September 28 to October 4 three cases of cholera (Asiatic) occurred in Dordrecht (a seaport). No other cases had occurred in the country, or at least had been officially acknowledged as cholera.

AN IMPORTANT JUDGMENT.

THERE is, we believe, but one court of judicial inquiry in this country at which accusations of the gravest character can be brought against a prisoner in his absence: this court is the coroner's. The injustice of this is manifest, and has on many occasions been noticed by the presiding judge. With the view of remedying this abuse, coroners have frequently, particularly in the county of Middlesex, made strenuous efforts to have the prisoner before them. The magistrates in whose custody the prisoner has been have invariably refused to comply with this requisition. The Home Secretary has been appealed to, but, with a solitary exception, this official has endorsed the conduct of the magistrates. It appears that magistrates and Home Secretaries, in this obstruction, have acted in violation of the law. At least, that is the case if the decision recently given by one of the Irish judges remains a sound one. We cannot give a better summary of the proceedings before Mr. Justice Fitzgerald on Saturday last than the following extract from the *Times*:—

"A blacksmith named Reardon has been arrested by the police and brought before the magistrates, who have remanded him, on a charge of causing the death of a young woman by throwing her into the Liffey. At the coroner's inquest, which is still pending, the police authorities refused to direct that the prisoner should be in attendance, and the coroner declined to proceed in his absence. An application was made on the prisoner's part for a *habeas corpus* to have him tendered for examination, and the law officers of the Crown opposed it on the ground that there were no special circumstances to call for the issue of the writ. There had been a usage in Dublin of obtaining a warrant from the magistrates for the attendance of a prisoner, but there was no legal authority for it. Counsel on behalf of Reardon, contended that great injustice might be done if the inquest proceeded in his absence, because the result might be a finding of "wilful murder" upon which he could be indicted. In these respects the current jurisdiction of the coroner was greater than the magistrate. Mr. Justice Fitzgerald held that the applicant was entitled to be present at the inquest, in order to give evidence or put such questions on cross-examination as might tend to exonerate him, and that it would not be right to have evidence given behind his back upon which he might be indicted. He therefore granted the writ, subject to the filing of a proper affidavit setting forth that he was advised that the attendance at the inquest was necessary. A similar conflict of authority between the coroner and the police occurred recently in Belfast in a murder case.

"Subsequently, at the inquest held in presence of the prisoner Reardon, it was clearly proved that the deceased committed suicide. Reardon is still in custody under remand of the police magistrates."

It is difficult to understand, after this verdict, upon what ground Reardon remains in custody. It may possibly be solved by the obstinacy of the magistrates, who it seems are not satisfied with evidence which appears to a common jury to be perfectly conclusive and incontrovertible. We trust that this case will form a precedent of which coroners in the future will take advantage, and thereby give an importance to the coroner's court to which its usefulness clearly entitles it. A writ of *habeas corpus* over-rules not only the dicta of magistrates, but the decision of a Home Secretary.

DEATH FROM AN ANÆSTHETIC AGENT.

AN inquest was held at Southampton on Saturday last on the body of a boy aged fourteen, who died from the effects of ether administered to him at the South Hants Infirmary. It had been decided to perform an operation on deceased, for which purpose he was placed under the influence of ether. The jury, having heard all the facts of the case, at once returned a verdict of accidental death. The foregoing is reported to be the first fatal case of the kind which has taken place at the South Hants Infirmary for a period of twenty-four years.

DR. WHITMORE'S REPORT ON TYPHOID FEVER.

A LONG and animated discussion took place on the report of the Medical Officer of Health for the parish at the meeting of the Marylebone Vestry last week. The adoption of his report was proposed and seconded; but Mr. Emery, a member of the Sanitary Committee, moved an amendment, on the ground that the report was one-sided, and did not contain all the facts. He did not believe in the milk theory at all, and thought it was more likely that Dr. Murchison, being himself, as he (Mr. Emery) believed, attached to a fever hospital, might have carried the fever home to his family, and also to the houses of patients he visited. This amendment was seconded by Mr. Stevens, who objected to Dr. Whitmore having given a certificate in favour of a particular farm being free from contamination, and it was held that, as Medical Officer of that Board, he had no business to do so. Dr. Whitmore defended his right, and stated that he had not only the support of Dr. Murchison, but that he had also consulted Sir William Jenner, who had taken a deep interest in the matter, and had largely assisted him in its solution, and was of the same opinion as Dr. Murchison. Ultimately the report was adopted by a majority of 44 to 7. A vote of thanks was also carried to Dr. Whitmore for his energetic action in reference to the recent outbreak of typhoid fever, and for his valuable report thereon; to Dr. Murchison, for the zeal and scientific skill he had brought to bear in his assistance to the Medical Officer of Health in the conduct of his inquiries; and to Sir William Jenner for the assistance he had also afforded in pursuing the investigation. Dr. Whitmore, in suitable terms, thanked the Vestry on the part of himself and his medical colleagues for this expression of its approbation. It is due to Dr. Whitmore to state that he has carried on the inquiry respecting the outbreak of typhoid fever with great ability and judgment, and he was fully entitled to the gratitude of his fellow-parishioners.

SANITARY AND ADULTERATION ACTS.

WITH the view of meeting some of the difficulties which our medical and sanitary officers have had to contend against to secure a proper removal of dust, Dr. Meymott Tidy, the Medical Officer of Health for Islington, has proposed a new plan, the principal feature of which is that the contractor should only be paid for the quantity removed. In reference to the enforcing the Adulteration of Food Act in the parish of Islington, Dr. Tidy reports to the vestry that, as a proof that the prosecutions in milk cases have been of very considerable benefit, the last twenty samples of milk he examined proved to be very superior in quality to those he previously analysed. He had also examined twenty samples of bread, and it was a matter for congratulation that only in four cases did he find alum. The amount in these was small, and therefore no action was taken. He had also examined two samples of tea, both of which were pure.

CHOLERA IN NAPLES.

"THE cases of cholera," observes the Naples correspondent of the *Times*, writing on the 28th ult., "up to this day may be put down as being nearly 300, many of which have proved fatal. On the 24th inst. there were 12 cases and 9 deaths; on the 25th, 22 cases and 19 deaths; on the 26th, 11 cases and 7 deaths. For the last two days we have had a cold north wind blowing, and there has been an evident decrease in the number of those who are said to have been attacked. It is supposed that the real extent of the malady is not declared. Making allowances, however, for concealment, the cholera of this year is by no means so formidable as it was on its former visitations. The proportion of deaths is larger, but the malady does not spread so rapidly; it is better understood, and sanitary regulations are more attentively observed."

THE LONDON HOSPITAL MEDICAL COLLEGE.

After the Introductory Lecture, the following prizes were distributed by Edmund Hay Currie, Esq., Chairman of the House Committee of the Hospital. Clinical Medicine: £20 Scholarship, given jointly by the House Committee and the Medical Council—Mr. R. Kershaw. Clinical Surgery: £20 Scholarship, given jointly by the House Committee and the Medical Council—Mr. T. D. Watson; Honorarium £15—Mr. W. Lang. Clinical Obstetrics: £20 Scholarship, given jointly by the House Committee and the Medical Council—Mr. T. D. Watson; Honorary Certificate—Mr. R. R. Llewellyn. Dressers' Prizes for zeal, efficiency, and knowledge of Minor Surgery, given by the House Committee: £15 Prizes—F. B. Collenette, S. D. Clippingdale, A. Brandum; £5 Prizes—H. E. Price, E. G. C. Snell, J. Needham. Buxton Scholarships, given for proficiency in the subjects required for the Preliminary Examinations: £30 Scholarship—Mr. W. P. Mears; £20 Scholarship—Mr. S. H. Fisher; Honorary Certificate—Mr. E. Brumwell. Human Anatomy: £20 Scholarship, given by the Medical Council—Mr. John Neylan; Honorary Certificate—Mr. H. T. Batchelor. Anatomy, Physiology, Chemistry: £25 Scholarship, given by the Medical Council—Mr. R. H. Fox; Honorary Certificate—Mr. H. Habgood. Special Certificates awarded to Medical Assistants for three months' service—J. Blunson, H. T. Shapley, C. W. Drew, F. E. Pocock, R. R. Llewellyn, R. Kershaw, W. Porter, H. M. Leckler, W. H. Todd, B. Crawshaw, R. D. Smith, C. A. Low, E. O. Bark, J. H. Allden.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

A conversazione was held in the board-room at St. Mary's Hospital at the conclusion of the Introductory Address by Dr. Shepherd. Both the address and the social gathering afterwards were attended by a very numerous company of past and present students, members of the staff, and medical men and others residing in the neighbourhood. Amongst them were Dr. Sibson, F.R.S., Mr. Spencer Smith, Dr. Handfield Jones, F.R.S., Mr. Gascoyen, Dr. Meadows, Mr. W. B. Owen, Dr. Leadam, Dr. Norton, Dr. T. King Chambers, and many others of well-known name and reputation.

THE ATCHINESE EXPEDITION.

A convoy of 250 Dutch troops sailed on Monday last for Java and Sumatra from Nieuwe Diep, at the entrance of the Zuyder Zee, in the steamship *Celebes*. These are the last who will reach the islands in time for the expedition against Atchin. There are two English doctors on board—Dr. Mayo and Mr. Galton,—who go with the expedition. The arrangements made by the company to which the ship belongs for the treatment of any sickness that may make its appearance among the troops or passengers were of the most moderate kind. There were plenty of drugs, and a ship's doctor; but the doctor had no place given him to put his drugs in, and was obliged to put them in his berth, in a very small cabin which he shared with another passenger, the fact being that the company had simply put passengers into the cabin which ought to be the doctor's. Some improvement was insisted on and enforced before the ship sailed, but everything had to be done in a hurry and imperfectly. Very contradictory reports are given of the climate of Java and Sumatra. Some represent it as most deadly, especially on the low ground near the coasts; others, and the majority of those who have much to do with the islands, take the climate as a matter of course, and do not seem at all afraid of it. On the other hand, several Javanese ayahs, or "baboos," on board the *Celebes* wear the same light clothing that they would use in their own country with apparent impunity, though the weather has been by no means warm at night and in the morning.

A LIBERAL BOARD OF GUARDIANS AND OVER-PAID DOCTORS.

On the proposal of a motion to increase the medical officer's salary, the following discussion occurred at the last meeting of the Wakefield Board of Guardians. The pecuniary value at which they estimate the services of gentlemen in our profession is amusing and characteristic. Mr. Oliver moved that the salary of Mr. J. Heaps, the Medical Officer for Lofthouse-with-Carlton, be increased from £10 to £15. He said the rateable value of the township had been nearly doubled and the population increased by a thousand since the appointment at £10 was made. Mr. Marshall said the rateable value of Shaulston was nearly as much as that of Lofthouse-with-Carlton, and yet their officer only received £5. Mr. Oliver urged that they could not estimate a doctor's work by the rateable value; it was the population they had to go by. Mr. Marshall's impression was that he (the doctor) was well paid. The Chairman explained that the township paid half the salary and Government the other. Mr. Connor reminded the board that the application had been strongly recommended by the ratepayers of the township. The resolution was thereupon put and carried. Mr. Heaps was then formally reappointed at the salary named.

A BAVARIAN HOSPITAL.

The correspondent of a contemporary gives the following interesting particulars from Wurzburg of the Julius-Spital (or hospital), founded in 1576 by the Prince-Bishop Julius, whose statue, by the celebrated Schwanthaler, of Munich, fronts the building. Notwithstanding the disastrous effects of war and other misfortunes the revenues of this beneficent establishment remain intact, and its capital is at the present time over five millions of florins. It has also an enormous estate, consisting of arable land, forests, and vineyards. In the hospital are forty-six wards, capable of accommodating 350 patients, and there are also twenty rooms appropriated to 200 pensioners, who, however, must be of the Catholic religion and natives of the *ci devant* dukedom of Franconia.

HEALTH OF KENSINGTON.

In his annual report on the health of the Kensington district, comprising Kensington Town and Brompton, Dr. Orme Dudfield seates that the mortality during the year was 17·17 per 1000, and was lower than the rate in Dover, Hastings, Brighton, Bath, and Cheltenham. Compared with Hastings, which stood at 17·80, and Cheltenham at 17·60, Kensington may well be called a health-resort of high character.

ROYAL INFIRMARY, LIVERPOOL.

The new buildings which have recently been added to the School of Medicine in Dover-street, Liverpool, were formally opened by Mr. John Torr, M.P., on the 1st inst. The opening ceremony was well attended by members of the medical profession, and a large number of the students of the school were also present. Dr. Waters, the treasurer of the fund which had been subscribed for the extension and improvement of the School of Medicine, read an address to the meeting.

GLASGOW SOUTHERN MEDICAL SOCIETY.

At the thirtieth annual meeting of this Society, held on the 2nd inst., the following office-bearers were elected for the session 1873-74:—*President:* James Dunlop, M.D. *Vice-President:* John White, M.D. *Treasurer:* Edward Macmillan, L.R.C.S.E. *Secretary:* John Dougall, M.D. *Seal-Keeper:* Robert T. Paton, M.D. *Court-Medical:* Eben. Duncan, M.D. (convener); Robert W. Forrest, M.D.; David Tindal, L.F.P.S.G.; William Rice, M.D.; and J. H. Menzies, M.D.

FROM ABROAD.—THE FACULTY OF MEDICINE AT KIEL—BELLADONNA PLASTERS IN VOMITING.

Dr. D'Espine furnishes to the *Gazette Hebdomadaire* (No. 37) some interesting particulars concerning a visit he has recently paid to the Faculty of Medicine at Kiel. Among 250 students at this University from sixty to seventy are medical. The Faculty enjoyed a great reputation when Kiel was the capital of the Duchy of Holstein, such names as those of Stromeyer and Langenbeck in surgery, Griesinger and Frerichs in medicine, and Michaelis in midwifery, show that this was well deserved. Its fame seems likely to continue since the annexation. Its present Professor of Clinical Surgery, Esmarch, is well known by his operation in constriction of the jaws, and by numerous publications. Among these his recent treatise on nervous affections of the joints (*Gelenkneurosen*) is highly esteemed, relating as it does to a portion of the domain of surgery that has been but little explored. Stromeyer also has quite lately published a *brochure* on the same subject, recalling the well-known researches of Brodie, and communicating a series of corroborative cases that he has met with in his own private practice. The professor of clinical medicine, Dr. Bartels, who like Esmarch is a Schleswig-Holsteinian, is a good *eliniciens*, professing a great admiration of Trousseau, many of whose views he has adopted. What is rare for a German practitioner, he admits no distinction between croup and diphtheria, and has resorted to tracheotomy on a large scale. His paper in the *Deutsch. Arch. f. Klin. Med.*, Band ii., is an interesting monograph on the cases of diphtheria observed at Kiel. Among other important contributions is one of the earliest papers on catarrhal pneumonia (*Virchow's Arch.*, B. xxi.); another on the treatment of pleurisy by paracentesis; and a very lucid exposition of recent investigations on diseases of the kidney, contained in Volkmann's *Vorträge*. The professor of gynæcology and obstetrics, Dr. Litzmann, is a worthy successor of Michaelis, and like him is known on account of his researches on contraction of the pelvis.

"The hospital is the centre of the medical life of Kiel, all the lectures, except those on anatomy and physiology, being given within its walls, either at the bedside or in theatres adjacent to the wards. Nothing can be more pleasing than the park well shaded with trees in which it is placed, situated on a hill outside the town, with a view of the magnificent harbour. Here are all the university buildings, and the sick are lodged, as it were, like princes. The buildings are recent and well-arranged in their hygienic relations; and, while there is great simplicity in its beds and other furniture, there is an ample supply of air and water, and the greatest cleanliness prevails. There are many small rooms and few large wards, allowing of bed-curtains being dispensed with, and securing sufficient isolation. The maternity is in a separate building, and small-pox patients are strictly isolated in separate pavilions. Croup, which is of frequent occurrence at Kiel, is treated in the ordinary wards, and measles and scarlatina have never prevailed sufficiently to call for isolation. In the surgical wards, hospital gangrene is the only disease treated separately, separation having been tried in vain for erysipelas. The park also contains sheds for surgical affections, a small but well-appointed pathological institute, an ophthalmological clinic, and the residences of the professors."

The writer gives, as an example of the mode of procedure, an account of one of his fully employed days at the Faculty.

It commenced at seven with the *Demonstrations-Kurs* at the pathological institute. At this, Professor Heller describes various of the pathological specimens, illustrating them by plates and microscopical preparations. In reference to each lesion he gives a short account of the state of that portion of pathology. The students are divided into several groups, so that each is enabled to see and touch the parts; and while the Professor repeats his demonstration to some of them, others are examining the microscopical preparations. At nine the obstetric clinic commences, the system being the same as that observed at Paris. The patients are examined in their beds, or, if they are easily transportable and their cases very remarkable, in the theatre. It is in this department that the advantages of small hospitals for teaching come out. *Das Material*, as the cases are called, is not very abundant, but each pupil superintends a delivery and reports the case in full next morning at the clinic. Puerperal fever is very rare, and almost always sporadic. Great precautions are also taken, no student being allowed to touch a woman without having washed his hands in permanganate, while the autopsies are always performed by the professor of pathological anatomy, and never by the students. Each woman, too, has a syringe or other apparatus to herself. The student-midwives, who are usually women from the country, do all the duties of the wards, and take, three or four times a day, under the direction of the *Assistent-Arzt*, the temperature of the women who have been delivered. In attendance on each woman in labour are a student-midwife and a medical student, a pelvis with the head of a fœtus and a midwifery manual being always close at hand. Crédé's method of expelling the placenta by expression is always followed.

At ten the medical clinic commences, the patients having been first passed in review by the *Assistenten*. The most interesting cases are picked out for the clinic, and are interrogated in turn by the senior students (termed *Practikanten*), the professor discoursing to the class on their diagnosis and treatment. After this the patients are visited in their beds, and then the class adjourns to the dead-house to witness with their professor the autopsies of cases that have proved fatal, these being performed by the professor of pathological anatomy. At midday, Professor Esmarch's surgical clinic commences, and the observer is at once struck with the numerous examples of the various forms of scrofula that are presented. Lupus, necrosis, and white-swelling constitute more than half of the whole material. The treatment adopted, designated as *Abkratzen*, is quite peculiar. It may be translated as *abrasion* or scraping, and is a modification of Sédillot's *évidement*. Esmarch does not perform excision in the regular manner, but, with the object of saving as much of the bone as possible, scoops away all carious portions, breaks off carious protuberances by Liston's forceps, and bores here and there, if required, the carious extremity, leaving in the track one of Lister's drains. These operations are very long and laborious, and the Professor has of late employed, during their performance, the compressive caoutchouc bands lately described in our columns, which entirely prevent bleeding, and allow him to pursue his dissection as on the dead body. This complete compression is sometimes continued for almost an hour without any ill effect. Lupus has also for some time past been successfully treated by abrasion, all the diseased portions of skin or mucous membrane being scraped away by means of the acorn-cup-shaped gouge of Bruns. The bleeding parts are then covered by wadding soaked in perchloride of iron, giving the patient a most hideous appearance, due to the mixture of black, yellow, and red which covers his face. Cicatrisation is completed at the end of some weeks, the treatment being repeated if relapse takes place, until the extinction of the disease is attained. All wounds are dressed with what is called Bruns' wound-dressing cotton, which is brought in bales from Schaffhausen, small slips of muslin soaked in phenic acid being laid beneath it, and the whole covered by impermeable varnished paper. This dressing remains three days *in situ*. Cataplasms are rarely used, bladders with ice being substituted. For wounds that bleed much after indispensable ligatures or torsions have been employed, gauze bags containing perchlorated wadding are introduced. Irrigation, which had long been employed, has been reduced to within the limits of strict necessity, as Professor Esmarch has met with bad results from its continuance. In the evening the Pro-

fessor delivers a course of lectures on surgery, which he illustrates by drawings of cases that have occurred in his wards.

At a recent meeting of the Paris Therapeutical Society, Dr. Guéneau de Mussy read a communication on the good effects of belladonna plaster in the symptom of vomiting, whatever the nature of this may be. Bretonneau, whose name is so familiar in modern therapeutics, paid great attention to the action of belladonna, and strongly recommended it in the incoercible vomiting of pregnancy. He prescribed frictions of the extract diluted with water, which was rubbed into the hypogastrium during several minutes two or three times a day. In many instances this treatment succeeded in relieving vomiting in pregnancy when all other means failed. As belladonna absorbed by the skin will thus relieve the morbid irritation of the uterus which is the cause of the vomiting, so will it also modify that of the stomach itself; and for more than twenty-five years Dr. Guéneau de Mussy has extended Bretonneau's treatment to all descriptions of vomiting, whatever the cause of this may be; but he has found that a plaster is a better excipient of the extract, allowing of its continuous application being conveniently made. It consists of diachylon plaster and theriac plaster of each two parts, and extract of belladonna one part, the plaster being twelve centimeters in diameter. It may remain applied to the epigastrium for twelve or fifteen days without being renewed; and out of the thousands which he has employed the author has only met with one case in which an idiosyncracy caused some ill effects to result. It is not meant to be asserted that this means always succeeds, but it has succeeded in a very great number of cases, either in entirely relieving vomiting or greatly mitigating it, some remarkable examples of which are alluded to in the paper. This success has encouraged Dr. Guéneau de Mussy to try the effect of the plaster as a prophylactic and curative in sea-sickness, and although as yet he has only tried it in four cases, he entertains great hopes of the benefit to be derived, and at all events thinks that so simple a remedy deserves further trial in so extremely painful an affection which has hitherto resisted all measures of relief. The first of these four cases occurred in the person of a young married lady, who never could place foot on a vessel without being tortured by sea-sickness, and who always landed in a state of exhaustion and semi-syncope. Having to make a voyage to Australia, she was advised to try the belladonna plaster, and after having had some vomiting on the first day, she, when last heard of, had traversed the Red Sea without sickness and in good health. A Brazilian physician, who had made several visits to Europe, and every time had been tormented by repeated and obstinate vomiting, and suffered greatly from this, eagerly adopted the plaster, and although in his last voyage the passage was a very bad one, he only felt slight nausea. A great personage of the same country was also a constant victim of sea-sickness, but on the last occasion he made the passage without any attack, and was able to walk the deck, which he had never done on any of the other passages. On board the same vessel was a lady in whom sea-sickness had produced, if not alarming, yet very distressing symptoms. One of the plasters was applied, and in the course of a few hours the vomiting, which had been incessant, completely ceased, so that the patient was enabled to join the other passengers on deck. These observations are given only for what they are worth, wanting as they are in exact details; but they may serve to draw further attention to the means employed.

In reference to the cholera at Liverpool it has been officially stated that there was already sufficient hospital accommodation for any cases of cholera which might arrive suddenly, and that in twenty-four hours additional accommodation could be provided to a much larger extent.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Forty-third Meeting.

(*From our Special Correspondent.*)

Of the Action of Light on the Retina and other Tissues.

Dr. McKendrick gave an account of the observations made by Mr. Dewar and himself on the physiological action of light. He described the method employed. They succeeded in the first instance with the eye of the frog. The eye was placed on an apparatus in connexion with a delicate galvanometer, and the electro-motive force determined. It was then observed that the electro-motive force was affected by light. On the impact of light there is an increase; during the continuance a diminution; and on its removal there is another increase. They have found the same results in the eye of the living cat, pigeon, owl, serpent, frog, toad, newt, stickleback, goldfish, rockling, crab, lobster, hermit crab, and swimming crab. They have also observed the effects of the various colours of the spectrum, and found that those rays which to our consciousness are the most luminous produce the greatest amount of change in the electro-motive force.

Physiological Researches on the Nature of Cholera.

This was a paper by Dr. Brunton. The search after a true remedy for cholera, the author thought, had hitherto been fruitless. The cause of the disease was now generally admitted to be a poison of some sort which could be transmitted from one person to another, but there must also be a proper soil for the development of the poison—in other words, the blood and tissues must be in such a state that it can act upon them. In the state of collapse there was constant vomiting and purging, and the intestinal canal was speedily washed clean out, the stools consisting of the secretion alone; the blood stagnated in the great veins of the thorax and abdomen, and left the skin shrunken, pale, and cold, the interior of the body being hotter even than in a state of high fever. The blood which filled the small cutaneous veins, being no longer driven forward by fresh supplies from the arteries, became completely deoxidised and black, imparting to the surface a livid hue. It still retained its power to take up oxygen and give off carbonic acid; but notwithstanding this, it passed so slowly through the pulmonary vessels that only about one-third of the usual quantity of carbonic acid was given off from the lungs, and little oxygen being taken in, there was a distressing feeling of want of breath. At the same time the voice was hoarse, low, and weak; but this seemed to be simply a consequence of the general exhaustion of the patient. The symptoms of cholera all arose from disturbance of the circulation and the altered intestinal secretion, and it might be thought that the only way to remove those conditions would be to eliminate from the body the poison which was producing these effects, and that so long as it was still circulating in the blood any remedy which was simply intended to counteract it would be administered in vain. But the researches of Fraser and others on antagonism had shown that the elimination of a poison was not required in order to prevent its injurious or fatal action. The administration of an antidote would deprive it of its hurtful power; and as it was with other poisons so might it be with that of cholera. It occurred to Dr. Bruton that, if any poison should possess actions similar to those of the cholera poison, an antidote to it might possibly prove to be a remedy for cholera. He therefore began to look for a drug which would produce the same changes in the circulation which occurred in cholera. These were, he believed, first attributed by Dr. Parkes to spasmodic contraction of the vessels in the lung, which prevented the blood from passing through them; and this opinion found a warm supporter in Dr. George Johnson. Most of the symptoms, though not all, could be explained on this hypothesis. Professor Schmiedeberg, in investigating the physiological action of a poisonous mushroom, the *Amanita muscaria* or *Agaricus muscarius*, noticed that when given to animals it caused great dyspnœa, and at the same time the arteries became empty, so that when cut across hardly a drop of blood issued from them, this being the condition which existed in cholera. Administering atropia to the warm-blooded animals suffering from these symptoms, Professor Schmiedeberg found that they at once recovered; but he had not thought at all of contraction of the pulmonary vessels as a cause of dyspnœa. He attributed it rather to excitement

of the nervous centre in the medulla oblongata, which regulates the respiratory movements; and the effect of atropia itself being to excite this nervous centre, it ought, according to his supposition, to have increased instead of removing the breathlessness. When the idea that the dyspnœa was due to contraction of the pulmonary capillaries suggested itself to Dr. Brunton, he proceeded to test it by experiment. He first gave a rabbit such a dose of chloral hydrate as to deprive it of all sensibility, then put a tube into the windpipe, and connected it with a pair of bellows. He was thus able to inflate the animal's lungs at regular intervals and keep up respiration artificially when the animal could no longer breathe itself. He next opened the thoracic cavity so as to observe the slightest change in the lungs or heart. He injected a little muscarin into the jugular vein, when the lungs which had been previously rosy became blanched; the right side of the heart swelled up, the veins passing to it became enormously distended, and the left side of the heart became almost empty. Shortly afterwards he injected a little atropia into the jugular vein. At once the effects of the muscarin disappeared, and everything assumed its normal appearance. From the want of muscarin he had not pursued his investigations, but hoped shortly to do so. Hitherto he had proceeded on the assumption that Drs. Parkes' and Johnson's theory of cholera was correct, and that the stoppage of the circulation is due in cholera, as in muscarin poisoning, to contraction of the arteries of the lungs. In poisoning by muscarin the great veins of the thorax and abdomen and the right side of the heart seemed to be almost equally distended, and exactly the same condition was found in persons who had died of cholera. But it was not certain that the right side of the heart was always so much distended during life, even when the symptoms of cholera were present in their most pronounced form. It would almost seem that the veins dilated still more in cholera collapse than they did in muscarin poisoning. Nitrite of amyl has the power of dilating the arteries throughout the body, and those of the lungs also. But it was found practically to be of no use in cholera. The pulse might become a little stronger and the surface a little warmer, but the improvement was so slight that it was hardly worth mentioning, and the patient felt no better for the medicine either when inhaled or when injected subcutaneously. If the weakness of the pulse depended only on contraction of the vessels in the lungs, this result would be astonishing; but if they supposed it to be caused by dilatation of the great veins, it was just what they would expect. From these and other facts Dr. Brunton concluded that the veins were dilated, and that, therefore, some remedy must be employed which would make them contract. There had been few experiments on the contractility of the veins, but in the condition of depression or shock following severe injuries in which the veins were much dilated, digitalis had been found useful, and it might be found useful in cholera also. Atropia had been lately tried in cholera by an American practitioner with considerable success, and it seemed deserving of more extensive trial. It would not do, however, to consider the action of any proposed remedy for cholera on the circulation alone, and to leave out of account its effect upon the intestinal secretions. He therefore set to work to discover the action of atropia upon those secretions. Since the effect of cholera upon the intestine was the same as that of division of the nerves, which was one cause of secretion, they were justified in believing that if any drug could stop the secretion in the experiment of dividing the nerves it was likely to have a similar effect on cholera. Now, atropia had a remarkable power to stop secretion from the salivary and sweat glands when their nerves were irritated, rendering the mouth and skin quite dry. What its effect on paralytic secretion in the salivary glands might be he did not know, but thinking that it might arrest the flow of fluid into the intestine he repeated Moreau's experiment, and injected some solution of atropia into the veins of an animal. The result was disappointing, and rendered the use of atropia in cholera somewhat doubtful. It was, however, difficult to foretell the effect of any drug under particular circumstances, and he should therefore continue his experiments. The points to which he wished to direct particular attention were these: —(1) That, assuming Parkes' and Johnson's theory to be correct, and the impeded circulation in cholera to be due to obstruction in the pulmonary vessels, atropia was likely to prove beneficial to a certain extent; and since it had been empirically found to be useful in the disease, it ought to receive a fair trial at the hands of the medical profession. (2) The fact that the right side of the heart was not dilated during life in cholera patients, as well as the uselessness of nitrite of amyl, which dilated the pulmonary vessels, showed that Parkes' and Johnson's theory, if not erroneous, was at least imperfect, and that one of the most important pathological conditions in cholera collapse consisted in an active dilatation of the thoracic and abdominal veins. Any remedy, to be useful in cholera, must have the power of counteracting this condition; and the administration of digitalis in cholera collapse might be useful. (3) The profuse secretion from the bowels in cholera was due to paralysis of some of the intestinal nerves; and a remedy which will arrest it is still a desideratum.

GERMAN ASSOCIATION FOR THE ADVANCEMENT OF NATURAL SCIENCE AND MEDICINE.

(*From our Special Correspondent.*)

WIESBADEN MEETING, SEPTEMBER, 1873.

(*Continued from page* 395.)

Abstracts of some of the most important Papers:—Dr. Köhler on the Physiological Action of Bitter Principles—Professor Kollmann on the Influence of Water on the Red Corpuscles of the Blood—Dr. Ponfick on the Pathological Changes in Relapsing Fever—Professor Eberth on Embolism by Fat—Professor Jürgensen on a Mild Form of Typhoid.

IN the Section of Anatomy and Physiology, Dr. Köhler, of Halle, related the results of his experiments on the physiological action of bitter principles on the circulation and blood-pressure. When cetrarin, columbin (and probably other bitter principles), are injected into the veins, they cause first a diminution, and thereafter a gradual elevation of the arterial pressure. The fall of the pressure also occurs after division of the spinal cord and vagus, and its cause is to be found in the heart itself. It occurs as well after the terminal branches of the vagus in the heart have been paralysed. The rise of the blood-pressure on the other hand, which is observed as the second effect of the injection of columbin, etc., must be referred to the irritation of the vaso-motor centre, for it does not occur after section of the spinal cord. The frequency of the heart in these experiments is not altered until shortly before death.

In the same section, Professor Kollmann, of Munich, described certain observations which he had made upon the effect of water on the red corpuscles of the blood. If the blood of a decapitated frog be allowed to flow into water, and a drop examined after a quarter of an hour, the coloured corpuscles are found—not swollen, as one might expect—but shrunken, with an irregular surface and outline and a stellate nucleus. This condition lasts for days, and cannot therefore be due to a "vital" contraction. Kollmann would refer it to a coagulation of the stroma of the corpuscle, as described by Brücke, Stricker, and Rollett.

In the discussion on this subject, Professor Gerlach, of Erlangen, confirmed the observation of Kollmann: the condition described he has seen last for fourteen days. He could positively say that the same effect never follows the addition of a drop of water to a drop of blood, and he confessed that no explanation can be given at present of these remarkable phenomena.

In the section of Pathological Anatomy, Dr. Ponfick, of Berlin, assistant to Professor Virchow, read a description of the pathological changes in Relapsing Fever. A very large number of post-mortem examinations were made in the Pathological Institute at Berlin during the late severe epidemic of the disease, but only a few of the most striking changes would be described on this occasion. Most of the patients died of pneumonia, with abundant exudation. This was a mere complication, but remarkable nevertheless from its frequency, and from the disease having been usually developed in the hospital without evident external cause. The spleen presented at times very considerable alterations. In about a half of the cases it was swollen, sometimes extremely so. In other cases there was infarction of the organ, very much as in endocarditis, the form and true characters of the infarct being present, without any alteration in the heart or thrombus in the veins, except in a single case. Ponfick would refer this infarction, therefore, to a local cause. The condition may advance, adhesions form, ulceration take place, and even perforation of the diaphragm may be found. In one case the splenic swelling ended in rupture and fatal hæmorrhage. A third alteration

found in the spleen in some of the cases was the appearance of a number of small yellowish-white points and streaks—altered Malpighian bodies. In these spleens there were found with the microscope enormous granular cells, as in other diseases of the same organ. They could also be discovered in the bloodvessels throughout the body, sometimes in great numbers, as very large nucleated cells. Some of these were probably endothelial cells, but others were so characteristic that there could be no question of their splenic origin. Besides these cells, the bodies discovered and described by Obermeier were found in the blood. The medulla of the bones was examined in fifteen cases, and in four of these definite appearances were observed—namely, hæmorrhagic infarcts passing into yellow masses.

In the same section, Professor Eberth, of Zürich, made a short but important communication on Embolism by Fat, which has lately excited fresh interest among pathologists. Eberth finds a source of the fatty-embolus in breaking down coagula in the heart. If the coagula occur in the right side of the heart, embolism of the pulmonary capillaries results, and severe dyspnœa should the condition be at all extensively distributed. Fresh coagula form upon the broken surfaces of the older ones in the heart, and these undergoing in their turn fatty degeneration, a great part of the pulmonary capillaries are filled with fatty emboli.

In the section of Medicine, Professor Jürgensen, of Tübingen, described what he designated a "Mild Form of Typhoid Fever." He had observed over a hundred cases, of the specific nature of which there could be no doubt. The following are the principal characteristics of this form of the disease:—1. The infection seems to be sudden: 57 per cent. could give an account of their being suddenly taken ill. 2. Pyrexia lasts from ten to sixteen days. 3. The absolute temperature varies much: in some it reaches even 42° C., in others it is low; but it is more steady, and less affected by quinine, etc. 4. The spleen is nearly always enlarged. 5. The eruption occurs in about one-half of the cases. 6. Bronchitis occurs in about 28 per cent., and is mild. 7. Diarrhœa is present in but 16 per cent. 8. There is a frequent and early alteration of the urine. Jürgensen believes that these cases may develope into ambulant typhoid fever. There is nothing new to be said in regard to treatment. Of the etiology of these cases—especially in regard to infection by milk—he could say nothing. A full description of this form of typhoid fever will shortly appear in Volkmann's *Klinische Vorträge*.

REVIEWS.

The Microscope and Microscopical Technology: a Text-Book for Physicians and Students. By Dr. Heinrich Frey, Professor of Medicine in Zurich, Switzerland. Translated from the German and edited by George R. Cutter, M.D., Clinical Assistant to the New York Eye and Ear Infirmary. New York: William Wood and Co. 1872. Pp. 627.

It may be taken as characteristic of the German mind, rather than as any pretence at modesty, when Dr. Frey, in his introduction, speaks of this thick, large octavo volume as his "little work." It is, in reality, a very complete and full treatise on the employment of the microscope in medicine, giving a description of the mechanism of the instrument, and of using its several parts; of the various methods of investigation now in use; and directions for the examination of the various tissues and parts of the body in their normal and pathological conditions.

The work is divided into twenty-two sections, and the best way, perhaps, of showing the fulness of the treatment of the subject will be to name the subjects of the several sections. The first treats of the "Theory of the Microscope"; the second, of "Apparatus for Measuring and Drawing"; the third, of "The Binocular, the Stereoscopic, and the Polarising Microscope"; the fourth, fifth, and sixth, of "Testing the Microscope," of the "Use of the Microscope," and of "The Preparation of Microscopic Objects"; the seventh, eighth, ninth, and tenth deal with "Fluid Media and Chemical Reagents," with "Methods of Staining, Impregnation with Metals, and the Drying and Freezing Processes," with "Methods of Injecting," and with "The Mounting and Arrangement of Microscopic Objects"; and the rest of the sections, from the eleventh to the twenty-second, both inclusive, describe the various fluids and tissues of the body, from "Blood, Lymph, Chyle, Mucus, and Pus," through "Epithelium, Nails, and Hair," the "Connective Tissue and Cartilage," the "Bones and Teeth," "Muscles and Nerves," and so on, down to the last two sections, which are devoted to the "Sexual Organs," and the "Organs of Sense."

The sections on "Testing the Microscope" and the "Use of the Microscope" strike us as being particularly good, and we are pleased to see that the author insists especially on the value of low powers. At page 74 he says—"We would here call to mind what we have previously said with regard to the great value of weaker powers. They should never be wanting. At least one objective of medium strength is also a valuable additiou. Finally, a stronger objective, which with a weak eye-piece magnifies from 200 to 250 times, and with a stronger one affords a good and thoroughly serviceable magnifying power of 300 to 350, should not be wanting on any microscope." And he shows "that he who can obtain about the same magnifying power in a double manner—that is, by means of a weak objective and a strong eye-piece, or by means of a strong objective and a weak eye-piece—should always have recourse to the latter." But though the clearness, preciseness, and fulness of this part of the work have seemed to us especially praiseworthy, the rest is also excellently done. The microscopical appearances of diseased tissues is not very fully treated of; but Dr. Frey, in his introduction, gives a good reason for this. "Possibly," he says, "in the department of pathology we have been too concise for a portion of our readers. The investigation of sputum, pus, urinary sediment, and tumour usually occupies a much larger space in books on this subject. But, true to our maxim that the most accurate knowledge of the normal relations should precede every investigation of their pathological condition, we endeavour, first of all, to make the former clear, and then join the latter supplementarily. As every pathological new formation repeats, more or less, the type of the normal structure, so are the methods of investigating diseased conditions and portions of the body almost the same." Most of the author's readers certainly will, we suspect, think that he has been "too concise" in the department of pathology when he treats of the nervous system. "We have already noticed above," he observes, "the great difficulties which the investigation of the normal textural conditions of the central organs of the nervous system still present. Hence we shall comprehend that their numerous pathological alterations are still very inadequately known, and can only be assailed histologically with slight results. It is usually accepted that the nervous elements indeed undergo numerous secondary processes of degeneration, such especially as the fatty, and also amyloid and colloid transformations, but that the true new formations proceed from the connective-tissue framework and from the vessels. The correctness of the former doctrine has more recently, however, become doubtful, and the lymphoid migratory cells exert at present a deep and disagreeable influence on the latter. The finer textural conditions of the framework substance are also uncommonly difficult to follow, as the very methods of hardening which are customary for the normal structure frequently render very little service in the domain of pathology, so that often one is able to examine only fresh objects." And that is almost all that he says on the subject.

The work is freely and well illustrated; and the illustrations are, we suppose, for the most part original, for, so far as we have observed, but very few are acknowledged to have been taken from other works.

Two faults we will venture to point out. It seems to us that very often, to say the least, it is not mentioned what magnifying power has been used for the illustrations; and the author rarely gives any opportunity of verifying statements that he makes on the authority of other observers.

Dr. Cutter apologises for the literalness of his translation; but it appears to us that he has performed a by no means easy task very well. The book is provided with a good index as well as a table of contents.

An Introduction to the Study of Clinical Medicine: being a Guide to the Investigation of Disease for the use of Students. By Octavius Sturges, M.D. Cantab., F.R.C.P., Assistant-Physician to Westminster Hospital, etc. London: Smith, Elder, and Co. Pp. 131.

About the little volume before us very various opinions have been expressed—it has been highly extolled and sharply

criticised. For our own part, whilst freely admitting the excellent quality of the work in many respects, it seems as if Dr. Sturges had entirely mistaken his auditory—it is a work for teachers, if they want such, rather than for students. It takes for granted a vast deal of knowledge which the student does not possess, and seems to teach the philosophy of the subject before a man knows anything at all about the basis of this philosophy. Students should as far as possible be taught by practical examples, not by didactic discourse, which is the method here pursued; and certainly theory without example is worse than example without theory. It is all very well when a man has acquired a certain skill to philosophise on what he has already acquired, but to begin with the philosophy is a mistake. Nevertheless, the book is justly entitled to favourable notice, for every page of it shows that it is the work of a man well skilled in his profession. Our only regret is that, having done so well, he did not do better. In many respects the work is unequal, the earlier part overbalancing the latter; and though described as a book on clinical medicine, it does not go beyond a critique on the examination of signs and symptoms. Treatment is cursorily dismissed; yet most people practically look upon this as being the most important thing of all. Nevertheless, in the former part there is so much that is good, and so true to nature, that we are sorry there is not more of it. But with all this, dealing as the book does with the philosophy of the thing, there are not a few—indeed, there are very many—passages where we should be prepared to join issue with the author; for such is the difficulty connected with many of the subjects of which he treats that we can easily conceive several explanations, all more or less plausible, of the phenomena; and the final verdict must too often be—"Well, in *my opinion* it is so-and-so." And yet Dr. Sturges has fallen into mistakes—time-honoured fallacies, perhaps, yet palpable mistakes. Thus, he tells us in order to detect fluid in the abdomen to place the two open hands on opposite sides of the abdomen, and gently to tap with the fingers of one of them. Now, this process is all very well if there is a good deal of fluid, but will certainly not succeed when the quantity is small; in point of fact you have to bring the fingers close together as a surgeon does in case of an abscess. Again, in speaking of the detection of sugar in the urine, he mentions the old-fashioned Trommer's test, whereas Fehling's test fluid is now generally employed. Used as recommended, the test for sugar is as full of fallacies as it can well be. This part of the book is decidedly inferior to that which refers to chest diseases.

OBITUARY.

JOHN BISHOP, F.R.S.

The obituary of the *Times* one day last week recorded the death of a man of some note in his time, and who was deservedly well known to the members of two different professions—viz., medicine and music. The gentleman whose name appears at the head of this notice received his professional education at St. Bartholomew's Hospital, and on its completion was admitted a Member of the Royal College of Surgeons, nearly half a century ago—viz., May 21, 1824. Whilst waiting for patients he occupied his leisure time by writing for the medical and other journals. His first paper "Researches into the Pathology and Treatment of Deformities of the Human Body" appeared in the pages of the *Lancet*, and it brought him into favourable notice. These investigations were afterwards collected into a volume, published in 1852, in which the author shows his preference for mechanical over surgical treatment. His earliest public appointment was that of Surgeon to the Islington Dispensary. When the new charter was granted to the College of Surgeons, empowering them to grant the Fellowship to its distinguished Members, Mr. Bishop was one of the first elected—for he received that distinction December 11, 1843; and in 1849 the Fellows returned him a member of the Council, in conjunction with Messrs. Hodgson, Wormald, and Pilcher. His last official connexion with the College was as Hunterian Orator, his address being delivered in 1859. He was exceedingly anxious to be elected an Examiner in Mathematics for the Fellowship of the College, and there is no doubt that his high attainments in mathematical science eminently fitted him for the post. The Council, however, thought otherwise, and elected Professor Stokes. At a succeeding election for Councillors he lost his seat, being displaced by Mr. John Adams, who subsequently became one of the examiners. Elsewhere, however, he was more fortunate, as an admirable paper "On the Physiology of the Human Voice," published in the *Philosophical Transactions*, justly obtained for him the Fellowship of the Royal Society. His articles on the Larynx, Motion, and Voice in the "Cyclopædia of Anatomy and Physiology" greatly added to his literary reputation. Another work, "On Articulate Sounds and the Cause and Cure of Impediments of Speech," brought him a new class of patients; as, with the exception of the late Mr. Poett, no one at that time appeared to devote much attention to this important subject. As a member of the London Medical Society, an institution in which he always took a warm interest, he was appointed Lettsomian Lecturer, and took for his subject the "Physical Constitution, Diseases, and Fractures of the Bones." His other works—"On the Construction of Hearing and Speaking Instruments," "Observations made on the Movements of the Larynx when viewed by the Laryngoscope," and "On the Influence of the Pitch of the Tuning-fork on the Mechanism of the Human Voice"—brought him much in contact with members of the musical profession, who, however, whilst seeking his professional assistance, did not add much to his emoluments. His last work appears to have been "On the Pathology of Tinnitus Aurium, with remarks on the Acoustics of the Sense of Hearing." Latterly he was obliged to throw aside his pen in consequence of failing sight and ultimately of the complete loss of one eye. He left his town residence—Bernard-street, Russell-square—for a short time, to try the effects of his native air, but he gradually sank, and died on the 29th ult., at Strangeways, Marnhull, Dorset, in his seventy-sixth year. The deceased, who was twice married, leaves a widow, but no family.

Mr. Bishop in his early life was a handsome man, with an expressive countenance and a very agreeable manner, and of a somewhat short and slender stature. The list of his published works and the honours he received show him to have been a man of no ordinary acquirements; and his conversation, although far from being pedantic or dictatorial, was most intelligent and instructive. He never made any great effort to obtain an extensive practice, and he lived very quietly but comfortably, having acquired a moderate independence, which rendered it unnecessary for him to continue in later years the struggle for professional gain. He had, indeed, the reputation of being a rich man, which, however, in the ordinary sense, he was not.

JOHN THURNAM, M.D., F.R.C.P.,

Was, we believe, a native of Yorkshire, and pursued his medical studies at Dermott's School of Anatomy in Gerrard-street, Soho, and at the Westminster Hospital. He became a Member of the Royal College of Surgeons of England in 1834, graduated at King's College, Aberdeen, in 1846, and was elected a Fellow of the Royal College of Physicians, England, in 1859. He commenced general practice in Brewer-street, Golden-square, in 1835. Shortly afterwards a vacancy having occurred in the "Retreat," York, he was elected Medical Superintendent of that institution. He was subsequently appointed Medical Superintendent to the Wilts County Asylum, at Devizes, which office he retained until his lamented death a few days since. Dr. Thurnam was a Member of the Society of Friends, and for some years wore the characteristic dress of the disciples of George Fox. He was diligent as a student; most painstaking and industrious as a practitioner. It could not be said that he was brilliant or suggestive, but he had one quality of genius, at least—that of untiring perseverance. His services to the cause of medical science obtained for him the honour of the Fellowship of the College of Physicians, and no man more justly deserved it. He was a man of singularly unobtrusive manners, somewhat reticent and difficult of access. His contributions to medicine were the following:—"The Statistics of Insanity," 1845; "Memoirs on Aneurism of the Heart," 1838; "Spontaneous Varicose Aneurism of the Aorta, etc.," *Medico-Chirurgical Transactions*, 1840; joint author of "Crania Britannica," 1856-65; "On Ancient British and Gaulish Skulls," 1865-69; contribution "On the Weight of the Human Brain," *Journal of Mental Science*, 1866. Dr. Thurnam succumbed to an attack of apoplexy, consequent upon the excitement caused by the escape of a patient from the Asylum. He was found insensible, and never recovered consciousness.

NEW INVENTIONS.

J. & F. ALLEN'S IMPROVED ENEMA AND DOUCHE. This apparatus, which we have already noticed (*Medical Times and Gazette*, November 16, 1872) as likely to be found "most useful for patients suffering from disorders of the rectum and uterus," has been fitted by the inventors in a full-sized *bidêt* on a stand, and in this form must prove a very useful appliance in the sick-room. It can likewise be had packed in a portable tin case for persons travelling. The apparatus seems to us very well suited for the auto-administration of enemata and injections by the patient.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Oct. 2:—

Chambers, Eber, Ryde, Isle of Wight.
Collinson, Alfred Cockburn, 36, Elgin-road, W.
Vowell, Charles Martin, Cheltenham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ATTHILL, WILLIAM EYRE BLENNERHASSETT, M.R.C.S. Eng., L.R.C.P. Lond. (late Assistant-Surgeon Prussian Army).—Parochial Medical Officer of the Middlebie Union, Dumfriesshire, N.B., *vice* Mr. Jardine, M.B., M.C. Edin., resigned.

FABER, Dr. CARL (of Freudenstadt, Würtemberg)—Resident Medical Officer at the German Hospital, Dalston, *vice* Dr. Paul Schliep, resigned.

HESSEL, Dr. JULIUS (of Kreuznach)—Resident Medical Officer at the German Hospital, Dalston, *vice* Dr. Adolphus Nieden, resigned.

SYMES, E. WEST, M.B. Edin., M.R.C.S. Eng.—Medical Officer of Health for the Skipton and Settle Rural and Urban Sanitary Districts in the West Riding of Yorkshire.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—William H. Patterson, Surgeon to the *Active*.

WAR OFFICE—MEDICAL DEPARTMENT.—Surgeon-Major Alexander Richmond retires upon temporary half-pay; Surgeon-Major Robert Watson is placed upon temporary half-pay; Surgeon-Major William Henry Price is placed upon temporary half-pay; Surgeon-Major Joseph Salkeld Johnston, M.D., retires upon temporary half-pay. Surgeon Francis Edward McFarland to be Surgeon-Major, *vice* George William Powell, who retires upon half-pay; Surgeon John Dallas Edge, M.D., to be Surgeon-Major, in recognition of his gallant services when engaged against the Indians at Orange Walk, British Honduras.

ARMY HOSPITAL CORPS.—The Christian name of Captain of Orderlies Wallis is Llewen, and not Lewin, as stated in the *Gazette* of June 24.

BREVET.—Surgeon-Major George William Powell to have the honorary rank of Deputy Surgeon-General on retiring upon half-pay.

MEMORANDUM.—Staff Assistant-Surgeon James Francis Deakin, M.D., commuted his half-pay.

BIRTHS.

CARTER.—On September 29, at Lichfield, the wife of Graham Atherley Carter, M.D., of a daughter, stillborn.

GRAY.—On October 1, at 45, St. Giles's, Oxford, the wife of Edward B. Gray, M.D., of a son.

HOLMAN.—On October 2, at High Bank, Forde Park, Newton Abbot, Devon, the wife of W. Holman, M.R.C.S. Eng., of a son.

LUBBOCK.—On October 3, at Foulis-terrace, Onslow-square, the wife of M. Lubbock, L.R.C.P., F.R.C.S., of a daughter.

MARRIAGES.

ALLEN—HALL.—On October 7, at Allhallow's Church, Tottenham, Lewis Philip Allen, Esq., of Stoke Newington, to Agnes Millicent, second daughter of William Hall, M.R.C.S. Eng., L.S.A., of Tottenham.

BARTLET—ROSE.—On October 1, at St. George's, Bloomsbury, Alexander Edward Bartlet, Surgeon Royal Artillery, to Alice Harriet, only child of the late Thomas Rose, Esq., of Madeley, co. Salop, and stepdaughter of Borlase Hill Adams, Esq., of 55, Torrington-square.

BARTHOLOMEW—RYE.—On September 22, at the Anglican Collegiate Church of St. Paul, Malta, Charles Eugene, eldest son of Eugene G. Bartholomew, Esq., of Cathcart-hill, Upper Holloway, London, to Edith Annie, third daughter of Arthur B. Rye, F.R.C.S., late of Banbury, Oxon.

DURRANT—COCKBURN.—On October 2, at St. James's, Leith, Christopher Rawes Durrant, Captain 48th (Northamptonshire) Regiment, eldest son of Christopher Mercer Durrant, M.D., Ipswich, to Elizabeth Martin, youngest daughter of the late James Cockburn, Esq., of Ramporc, Baulcah, Bengal, and Trinity-grove, Edinburgh.

JONES—FENTON.—On August 2, at the British Legation House, Yeddo, Japan, Richard Oliver Rymer Jones, son of Professor Rymer Jones, F.R.S., London, to Isabella Mary, daughter of C. D. Fenton, M.D., Doncaster, Yorkshire.

MACKRAY—HENDERSON.—On October 1, at 19, Ainslie-place, Edinburgh, the Rev. Archibald Neilson Mackray, M.A., of St. Andrew's English Presbyterian Church, Torquay, to Anne Emily, second daughter of the late William Henderson, M.D., Professor of Pathology in the University of Edinburgh.

MILLER—MORSE.—On October 4, at St. Philip's Church, Kennington-road, John, youngest son of Charles Miller, Esq., of The Terrace, Kennington-park, to Emily, eldest daughter of Edward Morse, F.R.C.S., L.S.A., of Upper Kennington-lane.

PLAISTER—GREENWAY.—On October 4, at St. John the Evangelist's, Clifton, W. H. Plaister, M.R.C.S., F.R.G.S., of Tottenham, to Alice Emma, daughter of the late Wm. Greenway, Esq., of Bristol.

READ—BENCRAFT.—On September 25, at St. Mary's Church, Southampton, George Read, Esq., of Bridge-street, to Lucy Grace, eldest daughter of Henry Bencraft, M.R.C.S., L.S.A., of St. Mary-street, Southampton.

SPOONER—CASSWELL.—On October 4, at North Ormsby, Louth, Lincolnshire, Edward Monro Spooner, M.R.C.S., of Blandford, Dorset, to Elizabeth, youngest daughter of the late Thomas Casswell, of Pointon, Lincolnshire.

WAILE—NORTON.—On October 2, at Llanon Church, Thomas Waile, son of the late David Waile, Esq., of Crawley, Hants, to Mary (Minnie), second daughter of J. Howard Norton, M.D., of Nantglas, Llanelly.

WHITEHOUSE—MCALPIN.—On September 30, at Stratford, Thomas G. Whitehouse, M.D., to Elizabeth, widow of the late David McAlpin, Esq., formerly of Grenada, West Indies.

DEATHS.

ARMSTRONG, RICHARD LEPPINGS, Captain Madras Staff Corps, attached to 5th M.N.I., youngest son of the late Robert Armstrong, M.D., Inspector-General of Hospitals and Fleets.

BOUSTEAD, MARY JANE, wife of Surgeon-Major R. Boustead, H.M. Bombay Army, at sea, off Gibraltar, on her passage from India, on September 10, aged 36.

CARTER, FRANCIS RODNEY BECHER, son of Robert Brudenell Carter, F.R.C.S. Eng., L.S.A., at 69, Wimpole-street, Cavendish-square, after a few days' illness, on October 8, aged 12.

CRAVEN, JOHN, M.R.C.S., of Dockroyd, near Keighley, Yorkshire, at the Salisbury Hotel, London, in the 47th year of his age.

HUNTER, MARY LUTYEUS, elder daughter of James A. Hunter, M.D., at Edinburgh, on October 3, aged 17 months.

LEDSAM, JOHN JOSEPH, M.D., at 17, Esplanade, Scarborough, on October 2, in his 75th year.

LYON, GILBERT, M.D., L.R.C.S., at 1, Lansdown-place, Clifton, on October 5, aged 70.

MICHELL, DANIEL, M.R.C.S., late of Delaney-street, Gloucester-gate, and of Old Cavendish-street, Cavendish-square, at Launceston, of rapid consumption, on September 30.

SIEVEKING, HENRY DROOP, youngest son of Edward H. Sieveking, M.D., on September 2, aged 13.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

ANDOVER UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to T. Lamb, Clerk to the Guardians, on or before October 14.

BIDEFORD UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Charles W. Hole, Clerk to the Guardians, on or before October 20.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CHELTENHAM.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to E. T. Brydges, Clerk to the Urban Sanitary Authority, Public Offices, Cheltenham, on or before October 11.

GUEST HOSPITAL, DUDLEY.—Honorary Surgeon. Applications, with testimonials, to Mr. E. Poole, Secretary, on or before October 31.

HOO UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to F. Furrell, Clerk, Rochester, on or before October 15.

LIVERPOOL DISPENSARIES.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 29.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Medical Officers. Candidates must be duly qualified. Applications, with testimonials, to P. Goldschmidt, Esq., Chairman of the Board, 100, Albert-square, Manchester, on or before October 15.

ST. PETER'S HOSPITAL.—House-Surgeon. Candidates must attend personally, with their testimonials, on Monday, October 20, at 4 p.m.

TARBUT (PARISH OF), ROSS-SHIRE.—Medical Officer. Applications, with testimonials, to John Ross, Inspector of Poor, Stafford-street, Tain, N.B., on or before October 17.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WEST HAM, STRATFORD, AND SOUTH ESSEX DISPENSARY.—Resident House-Surgeon. Applications, with testimonials, on or before October 14, care of Mr. T. G. Tonge, 2, St. John's-terrace, Stratford, E.

WEST LONDON HOSPITAL, HAMMERSMITH.—House-Surgeon. Candidates must be duly qualified, and attend at the Hospital on Monday, October 20, at 10.30 a.m.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

VACANCY.

New Winchester Union.—The Twyford District is vacant; area 15,567; population 3911; salary £105 per annum.

APPOINTMENTS.

Alderbury Union.—John R. Perkins, L.R.C.S. Edin., L.S.A., to the Second District.

Bridgnorth Union.—Alfred Bethell, M.R.C.S. Eng., L.S.A., to the Fourth District.

Cheltenham Union.—Charles J. Newton, M.R.C.S. Eng., L.S.A., to the Third District.

Croydon Union.—Thomas H. Barnes, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Fourth District.

Henstead Union.—John B. Pitt, L.R.C.P. Edin., F.R.C.S. Eng., L.S.A., to the Workhouse.

Knighton Union.—Thomas J. E. Brown, M.R.C.S. Eng., L.S.A., to the Llanbister District.

Manchester Township.—William Berry, L.R.C.P. Edin., L.R.C.S. Edin., M.R.C.S. Eng., as Junior Assistant Medical Officer at the Workhouse Hospital.

Newmarket Union.—Clement F. Gray, M.R.C.S. Eng., L.S.A., to the First District.

St. George-in-the-East Parish.—George Levick, M.R.C.S. Eng., L.S.A., to the Schools at Plashet.

Sheffield Union.—Augustus T. V. Packman, M.R.C.S. Eng., L.S.A., to the South-East District.

Strand Union.—Mr. Charles H. Piesse as Analyst for the Strand District.

FORTY-FOUR children out of 472 in the Holborn Union Schools at Mitcham are suffering from ophthalmia.

A RESOLUTION expressing the regret they felt at the loss they have sustained in the death of the late Dr. Donald Dalrymple, M.P., has been passed by the Bath Town Council.

A COTTAGE INFIRMARY has been established at Watlington, and John E. Boyton, M.R.C.S. Eng., L.A.H. Dub., and Henry Dixon, M.R.C.S. Eng., L.S.A. Lond., have been appointed medical officers.

PRESENTATION.—Dr. Justyn Douglas, on resigning the post of Resident Medical Officer to the Bournemouth Dispensary—which he has held for two years—in order to begin private practice, has been presented by the patients who were under his care with a microscope and other valuable apparatus. The amount subscribed for this purpose was £10.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this Corporation, held on the 6th inst., the following office-bearers were elected for the ensuing year, viz. :—*President :* Eben. Watson, M.D. *Visitor :* Andrew Fergus, M.D. *Treasurer :* John Coats, M.D. *Honorary Librarian :* J. D. Maclaren, M.D. *Vaccinator :* Hugh Thomson, M.D. *Councillors :* The President, *ex officio ;* The Visitor, *ex officio ;* J. G. Fleming, M.D. ; H. R. Howatt, M.D. ; James Steven, M.D. ; James Morton, M.D. ; George Buchanan, M.D. *Board of Examiners :* William Lyon, M.D., Surgery and Surgical Anatomy ; Eben. Watson, M.D., Anatomy and Physiology ; James Morton, M.D., Surgery and Surgical Anatomy ; Robert Perry, M.D., Chemistry ; P. A. Simpson, M.D., Midwifery and Medical Jurisprudence ; James Steven, M.D., Medicine and Materia Medica ; Alexander Lindsay, M.D., Chemistry ; George Buchanan, M.D., Anatomy and Physiology ; R. Scott Orr, M.D., Medicine and Materia Medica ; J. G. Wilson, M.D., Midwifery and Medical Jurisprudence. *Clinical Examiners in Medicine :* The Physicians of the Royal Infirmary. *Clinical Examiners in Surgery :* The Surgeons of the Royal Infirmary. *Clerk :* William Henry Hill. *Librarian and Secretary :* Alexander Duncan, B.A.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The London Medical Record of this week has done us the peculiar honour of reproducing, without one word of acknowledgment, a large portion of one of the letters of our correspondent at Madras on the subject of the "Poisonous Snakes of India," which appeared in the *Medical Times and Gazette* of September 20. The letters of our correspondent bear the well-known signature "R. D.," and although all readers of the *Medical Times and Gazette* are doubtless well aware that these are the initials of our valued *confrère*, Dr. Druitt, it appears that the editor of the *London Medical Record* conceives that his readers require enlightenment on the subject. He therefore commences his excerpt—which plain-spoken people might designate by a harsher term—with the introduction, "Dr. R. Druitt writes from India—". We must leave our readers to form their own opinion of this ingenious, if not ingenuous, mode of appropriating the correspondence of another journal.

J. C., St. Bartholomew's.—Registration is not necessary for the Fellowship of the College, only Membership ; it closes on the 15th inst.

L. D. S., St. Austell.—Only the *examination* for the dental diploma has been altered, not the diploma itself. All candidates have now to undergo a *written*, in addition to an *oral* examination.

N. C. C.—The North Cambridgeshire Cottage Hospital at Wisbeach was opened on the 2nd inst.

Ted O. S.—An International Congress of Oculists met on the 27th and 28th ult., at Heidelberg. England, France, and Russia were represented.

A. B. E.—Professor Tyndall is, we believe, a native of Leighliubridge, near Carlow.

K. W.—The medical staff of the new Temperance Hospital in Gower-street will consist of a House-Surgeon, two Visiting Physicians, and one Visiting Surgeon.

Philip G.—From an official return recently issued it appears there are 1500 private slaughter-houses, and they are distributed generally over the whole metropolitan district.

Dr. Mott.—A portrait of Professor Bumstead, M.D., New York, appeared in the last number of Messrs. Barraud and Jerrard's "Medical Profession in All Countries," and is an admirable likeness.

An Old Subscriber.—The first number of the *Medical Times* appeared on Saturday, September 28, 1839, under the editorship of the late Mr. Frederick Knight Hunt, M.R.C.S., subsequently, and at the time of his early death, chief editor of the *Daily News.*

Gill.—"The Science and Art of Nursing the Sick," by E. Munro, M.D. Glasgow : James Maclehose.

T. C. O. S.—The Board of Trade return recently published of all the railway accidents which have occurred during the year 1872 is the first which has been prepared for an entire twelvemonth, under the regulation of Railways Act, 1871 (34 and 35 Vict., cap. 78), which came into operation on November 1 in that year.

M. A. P.—The Professorship of Experimental Physics in the Royal College of Science for Ireland, Dublin, is in the gift of the Lords of the Committee of Council on Education, South Kensington. It is of the value of £200 per annum, besides a share in the fees paid by the students.

Plica Polonica, Scarborough.—There are specimens in the Museum of the College of Surgeons. The affection is common and endemic in Poland ; hence the term "Polonica" that has been given to it.

In answer to X. B. (see *Medical Times and Gazette*, September 20) we are informed that Mr. Paleologus (not Paliolgus), whose name is referred to, was a Staff-Surgeon in the Army Medical Department. It was understood in the Department that Mr. Paleologus was a descendant of the Emperors of the Eastern Empire, but we are not aware whether this belief is correct. His name was mentioned in one of the English papers at the time of the last election for the Greek throne.

Statistics.—In England the population is equal to one person to every 7340 square yards, in Wales one person to 18,777 square yards, in England and Wales together one to 7953 square yards, in Scotland one to 28,084 square yards, in Ireland one to 18,621 square yards. In the United Kingdom as a whole the population is one person to every 11,935 square yards, or about 260 persons to the square mile. In the United Kingdom the area of a county averages 1037 square miles, in England 1273 square miles, 1017 in Ireland, 923 in Scotland, and 615 in Wales.

Prizes.—The following are the subjects for the prizes offered by the Council of the Royal College of Surgeons for competition amongst the members—viz., for the Collegial-Triennial Prize, consisting of the John Hunter Medal executed in gold to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of fifty pounds. The subject of this prize is—"The Structure and Functions of the Medulla Oblongata, including the Connexions of the Central Nerve-Roots." The dissertation may be illustrated by preparations and drawings. The Jacksonian Prize is the dividend (between £10 and £11) received from the trust. The subject for the prize for the present year (1873) is—"Ununited Fractures." The dissertation may be illustrated by drawings, preparations, etc. The subject for the prize for the ensuing year (1874) is—"Tracheotomy—with particular reference to the Causes of Death after the operation and the rules for rendering the operation more generally successful." The essays for the Collegial Prizes must be delivered on or before Christmas-day next.

THE ARMY MEDICAL OFFICERS IN INDIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is stated out here, on good authority, that the numbers of Surgeons-Major in this country is to be considerably increased, and that this cold season some forty or fifty are to be sent out to replace an equal number of Surgeons who go home, and that at the same time they are only to receive the pay of their former rank. Whether this will prove true as regards the new arrivals time will show, but it has already proved to be the case with those out here recently promoted. There are over fifteen Surgeons-Major promoted in the *Gazette* of April 1 at present in this country, who up to date have been refused the pay justly their due, and are obliged to serve on the pay of their former rank. Nay, even more, as I have been informed on good authority, two Surgeons-Major who came out since promotion were informed by the Pay Department on arrival that they could only issue pay to them as Assistant-Surgeons, they being in excess of the fixed establishment. Whether they have been lucky enough to come on the establishment since I cannot say, but being seniors they may have.

Paragraph 5 of the new and much-abused Warrant states :—"The relative rank of these officers shall regulate choice of quarters, rates of lodging-money, servants, fuel and light or allowances in their stead." My object in writing to you is that the Surgeons-Major ordered out may, previous to coming to this country, ascertain by an appeal to those in authority whether Paragraph 5 is to be over-ruled and made a farce of by the Government of India, who appear to be at liberty to play ducks and drakes with Royal Warrants as suits their fancy.

I need scarcely tell men who have served fifteen years that everything in India costs double what it does at home, or treat of the expense entailed by servants in this country (my own cost me 90 rupees per mensem, screw how I will); but at the same time, for the benefit of all, I annex a statement showing how things stand and what they will gain by coming to India. In England a Surgeon-Major over fifteen years' service receives £1 per diem, equal to about 304 rupees per mensem; in addition, he has quarters, fuel, light, servant, and (as a rule) forage for one horse. In India a recently promoted unfortunate receives his old rate of pay as Assistant-Surgeon, 451·14·5 rupees a month, or 148 rupees a month more than his net pay in England: out of this he has to pay house-rent, 40 to 60 rupees per mensem; keep a host of servants, costing from 50 to 90 rupees,—more than the latter if married; keep of a horse, say 30 rupees; provide himself with tents (the Government allowance for which to a Major is 100 rupees); pay all expenses on the line of march, as Indian allowances are supposed to cover cost of carriage, etc.,—though, in fact, he receives no Indian allowances, as the average of the before-mentioned sums exceed the 148 rupees.

I trust you will give this letter a place, and use your influence as one of the leading medical journals to procure for medical officers in India their just rights; and that my brother officers at home will try and bring any Parliamentary influence they may have to bear on the India Office, more particularly the juniors, or else some one of them may find his promotion on April 1 has made of him, like me,

An April Fool.

P.S.—The proper pay of a Surgeon-Major under fifteen years' service is 789 rupees odd per mensem; over fifteen, 825 rupees.

Paypoore, India, August 29.

COMMUNICATIONS have been received from—

Mr. O. R. Thomson; Dr. John Dougall; Mr. Feldman; Dr. Handfield Jones; Mr. Haviland; Mr. Burdett; Dr. E. W. Symes; Mr. John Clay; Dr. Caton; Mr. Scattergood; Mr. J. Chatto; Mr. Brudenell Carter; Dr. Ramskill; Dr. Shepherd; Dr. Prosser James; Dr. Armstrong; Mr. W. E. B. Atthill; Mons. Cowze; Dr. Mayo; Mr. J. W. Groves Blennerhassett.

BOOKS RECEIVED—

Pirrie's Surgery, third edition—De la Régénération des Organes et des Tissus en Physiologie et en Chirurgie, par J. N. Demarquay—Du Traitement des Rétrécissements de l'Urethre par la Dilatation Progressive, par le Dr. T. B. Curtis—Origine de la Syphilis, par le Dr. Edmond Bassereau—Report of the Reigate and Redhill Cottage Hospital—Page on the Value of certain Signs observed in cases of Death from Suffocation—Annali Clinici dello Ospedale dei Pellegrini de Napoli, vol. ii.—London University College Calendar—Cobbold on the Internal Parasites of our Domesticated Animals.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—West Country Lantern—Le Progrès Médical—Le Mouvement Médical—La Tribune Médicale—Gazette Médicale—La France Médicale—Pharmaceutical Journal—Eastern Daily Press—La Gazette Hebdomadaire—Nature—Allgemeine Wiener Medizinische Zeitung—Westminster Review—Practitioner—CroydonChronicle—L'Union Médicale—Liverpool Daily Post—London Medical Record—Edinburgh Medical Journal—Newcastle Chronicle—Melbourne Age—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

October 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

13. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

14. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Henry Lee, "Imperfect Development of the Circular Fibres of the Rectum and Vagina." Mr. Spencer Watson, "On Acute Inflammation of the Vitreous Humour of both Eyes."

15. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

16. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Opbtbalmic, 1½ p.m.

Harveian Society, 8 p.m. Dr. A. Meadows, "On Pelvic Hæmatocele."

17. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

Medical Microscopical Society, 8 p.m. *Conversazione*, at the residence of the President, 1, Bedford-square, W.C.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 4.

BIRTHS.

Births of Boys, 1162; Girls, 1072; Total, 2234.
Average of 10 corresponding years 1863-72, 2066·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	706	680	1386
Average of the ten years 1863-72	650·5	618·5	1269·0
Average corrected to increased population	...	...	1396
Deaths of people aged 80 and upwards	...	...	53

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	2	1	1	5	3	2	...	11
North... ...	751729	...	6	2	2	7	1	6	2	12
Central ...	334369	...	2	1	...	8	...	5	...	7
East	639111	...	12	13	3	11	3	5	2	21
South... ...	967692	...	10	2	2	7	6	5	3	20
Total	3254260	1	32	19	8	38	13	23	7	71

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·842 in.
Mean temperature	57·2°
Highest point of thermometer	75·1°
Lowest point of thermometer	41·8°
Mean dew-point temperature	52·5°
General direction of wind	Variable
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 4, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Oct. 4.	Deaths Registered during the week ending Oct. 4.	Temperature of Air (Fahr.): Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.): Weekly Mean of Mean Daily Values.	Rain Fall: In Inches.	In Centimetres.
London	3356073	43·0	2234	1386	75·1	41·8	57·2	14·00	0·00	0·00
Portsmouth ...	118280	12·4	74	33	73·2	40·0	59·7	15·39	0·01	0·02
Norwich	81677	10·9	45	24	69·5	36·0	54·1	12·28	0·06	0·15
Bristol	189648	40·4	138	62	69·1	40·0	55·5	13·05	0·08	0·20
Wolverhampton ...	70084	20·7	27	29	69·2	32·2	54·8	12·66	0·02	0·05
Birmingham ...	355540	45·4	284	184	70·0	35·2	56·5	13·61	0·26	0·66
Leicester	102694	32·0	87	42	74·0	31·0	56·0	13·33	0·18	0·46
Nottingham ...	89557	44·9	59	52	73·1	30·1	54·9	12·72	0·08	0·20
Liverpool	505274	98·9	307	215	68·0	41·0	54·1	12·28	0·75	1·90
Manchester ...	354057	78·9	234	187	68·0	33·0	53·7	12·06	0·72	1·83
Salford	130468	25·2	87	73	68·4	31·7	53·5	11·95	0·79	2·01
Oldham	85141	20·4	68	28	63·0	...	...	...	0·77	1·96
Bradford	156609	23·8	113	87	72·4	36·6	53·6	12·00	0·22	0·56
Leeds	272619	12·6	291	161	75·0	34·0	54·6	12·55	0·24	0·61
Sheffield	254352	11·1	232	111	68·0	32·7	52·9	11·61	0·09	0·23
Hull	128125	35·9	83	70	67·0	28·0	52·0	11·11	0·49	1·24
Sunderland ...	102450	31·0	81	45	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	124	78	...	...	...	...	...	...
Edinburgh	208553	47·1	115	74	57·4	41·8	50·0	10·00	...	...
Glasgow	498462	93·5	374	218	58·5	38·0	48·6	9·22	3·20	8·13
Dublin	314666	31·3	154	129	70·6	30·0	54·5	12·50	0·93	2·36
Total of 21 Towns in United Kingd'm	7507575	34·5	5211	3288	75·1	28·0	54·2	12·33	0·49	1·24

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·84 in. The highest was 30·04 in. on Monday at noon, and the lowest 29·69 in. on Friday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON DUST-INHALATION AS A CAUSE OF LUNG DISEASE.(a)

By E. SYMES THOMPSON, M.D., F.R.C.P.,
Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

Gentlemen,—It is not my intention to-day to attempt a complete *résumé* of the subject selected, but rather to refer to some of those practical points which have been brought before my notice in the extensive field afforded by the in-patient and out-patient departments of this Hospital. In the out-patient department cases of disease clearly traceable to dust-inhalation are very numerous, and among the in-patients there are always some in whom dust has exercised decided influence in the causation of lung disease. I say *lung* disease, because it is not easy to find a more specific general term which will comprehend the varieties of which I am about to speak. Sometimes the term "asthma" might be appropriate, sometimes "subacute" or "chronic bronchitis," or "bronchorrhœa"; and in other cases, again, the term "phthisis" is quite appropriate, for there is progressive destruction of lung with wasting of the body, a definition of phthisis which appears to me the best that can at present be ventured upon. The destructive disease is accompanied often, though not always, by an extensive deposit of pigment, the lung-substance and the bronchial glands being quite melanotic (as in the diagrams now shown, taken from Carswell and Lebert's works). But to the pathological changes I shall refer presently, when I have described more in detail the conditions met with during life.

I have said that cases due mainly to dust-inhalation are common in London. This is true, but they are still more common in some of those centres of industry in which the chief occupation of the townsfolk is connected with some dust-producing work. First and foremost among these are the metal-grinders—the knife, fork, and needle-makers of Sheffield; next, those employed in the pottery trades of Staffordshire.

My friend Dr. Greenhow, in his laborious and exhaustive Blue-book issued in 1858, gives a comparative statement of the destructive effects of these and other trades. He considers the pottery trade very injurious; that the coal and iron trades are more injurious than the coal or iron alone, but less so than the lead, tin, and copper mines.

As regards lead mines, this interesting generalisation has been made—that when the lead exists in limestone, mining is not hurtful; but when in sandstone, it is very fatal, so much so that at Alston, a place where lead has been extracted from sandstone for centuries, the mortality among men from lung disease is very large, and the proportion of widows is larger than in any other place, being 21·4 per cent. of all the women in the town. The women are healthy and long-lived, but the men die young.

Again, in Dr. Ballard's more recent report (see Appendix to Report on the Staffordshire Potteries, noticed in *Lancet*, May 10, 1873, p. 667), the death-rate in the pottery districts is shown to be less from pulmonary disease between the ages of 15 and 25 than elsewhere, but between 25 and 45 the reverse is the case; and between 45 and 55 the mortality, especially among males, is very large indeed. It is sad to notice that the excessive mortality among the males above 45 years of age is on the increase. Dr. Ballard observes that the pottery manufacture is prominent among dusty occupations which set up lung disease. The effects are slow; health is destroyed and existence rendered miserable for many years before the death-rate is affected. Fewer females are now employed than formerly, and thus the death-rate among women under 55 is reduced; but those above 55 have died in larger proportion of late, because many are included who had been employed in the trade before the recent movement against the employment of women took place. The women of this class are now dying of the chronic lung disease developed during the years of their pottery life. Improvements as to steam power, ventilation, etc., are confined to the new buildings, where the best and oldest hands are employed. Children still work in the old and badly ventilated rooms. The improvements operate but slowly, and do not yet reduce the mortality, for those formerly engaged in bad factories have enough dust in the new ones to keep up and ultimately render fatal the old disease long ago established. It is sad that the children should begin in the worst places, and thus have the seed sown of disease which could only be eradicated by complete removal from the trade. It would be better to kill off the old hands who are already hopelessly diseased, instead of subjecting those at present healthy to conditions which will destroy them like their predecessors.

Dr. Ballard adds that lead-poisoning is still as bad as ever, for the workpeople dip their hands into the glaze and also scatter a preparation of lead on to the coloured wares.

I must be forgiven for referring here to the success which a few years ago attended my efforts to lessen the evil of lead-poisoning arising from dusting on whitelead in the straw hat manufactories. I applied to a practical and scientific chemist (Mr. Tomlinson, the editor of the "Cyclopædia of Arts and Manufactures") to ascertain whether an innocuous white powder might not be found possessing similar qualities as a dressing for white straw hats. He made various experiments, and hit upon two white powders—one oxide of zinc, and the other the insoluble white sulphate of baryta. I was able to induce the chief hat-makers at Luton to try these powders, and they found that the last-named was equal in every way to the lead formerly used, and was not noxious; and, being less expensive, I believe it is coming into general use. Possibly a similar powder might be found equally effective in the pottery trade.

After this digression I pass on to consider the varieties of lung disease dependent on dust as their cause. The nature of the irritant has less to do with the character of the resulting disease than has the constitution and temperament of the patient. The dust given off from horsehair mattresses or highly dried flour sets up ulcerative disease of as destructive a character as that which follows the inhalation of particles of forks, needles, and millstones.

The dust causes first increased secretion from the mucous surfaces. The tubes become narrowed, partly from congestion and secretion, but chiefly from muscular spasm; the respiration is consequently impeded, and dyspnœa occurs. Among persons inheriting asthmatic proclivities, spasmodic dyspnœa is the first and chief ailment; whereas among those subject to winter cough, aggravated and very chronic bronchitis supervenes. In either case a good deal of emphysema is sure to follow, caused possibly by the act of coughing (*vide* Parsons on "Potters' Bronchitis," p. 26). The dyspnœa is often so urgent that expiration and inspiration become intermingled, and it seems as if both were going on together in different parts, or even in the same parts, of the chest. Under such circumstances relief may be sometimes obtained by exercising a voluntary control over the breathing, so as to equalise the length of the expiratory and inspiratory waves. Do not look upon all your cases as alike, unless you desire to be a mere routinist, but in every case seek out the distinguishing features and characteristics, and modify your treatment in accordance with these rather than with the vague general notion that you are dealing with a case of pneumonia, bronchitis, or what not.

In the malady, or rather in the group of maladies, before us the aptness of this remark is well exemplified; for there are cases without perceptible pathological change in which the asthmatic element alone is to be detected, and there are others in which pulmonary disorganisation is so advanced that it is a marvel that life can be prolonged. It is by no means uncommon to meet with instances in which, with the appearance of fair health, the physical signs are indicative of a surprising amount and extent of disease. There are indeed few lung diseases in which the physical signs are more prominent and the auscultatory phenomena more marked. The disease is generally widely diffused, morbid sounds occurring in various parts, with healthy breathing around.

In tubercular disease there is often an amount of constitutional deterioration disproportionate to the lung disorder, whereas in dust bronchitis the reverse is usually the case. The first stages of the former are often independent of the lung; in the latter the pulmonary affection is always primary, and the

(a) Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton.

general deterioration is secondary and often long delayed. Difficult breathing on exertion, irritation of the larynx and trachea, with cough and frothy mucous expectoration, are the first symptoms, and it is exceptional for grinders suffering thus to apply for treatment in the early stages. The urgency of the dyspnœa—a symptom more marked than in consumption—generally leads the patient to seek medical aid; even in the last stage the pulse may remain quiet, rarely rising above 80 or 85.

Men of feeble constitution are usually the first attacked, but the hale and vigorous do not escape. Those of stunted growth generally die first, while those with sound constitutions live on for years, the body becoming bent as from premature old age. The progress of general constitutional deterioration is slower at first than in ordinary phthisis, but in the advanced stages of the malady there is no difference in this respect. In ordinary bronchitis mischief does not usually spread to the lungs, nor does pneumonia affect the bronchial membrane; but in dust bronchitis the irritant acts both on the lungs and bronchial tubes. In persons of the tubercular diathesis—hereditary or acquired—the symptoms are scarcely to be distinguished from those of ordinary phthisical disease. Our wards afford several examples of this. I may instance the case of

Mary Ann H., aged 15, in the Eldon ward, under Dr. Pollock's care. This child has no hereditary tendency to phthisis. She has been employed in the chignon manufacture, and her branch of the business has been a very dusty one—viz., pulling out the long and short hairs from a dusty mass of unarranged locks. Her cough was first troublesome two years and a half ago, and now it is constant and distressing. The appearance of the child suggests the idea of advanced phthisis, and on physical examination this is confirmed, for she has flattening with dulness at the left apex in front, humid crepitation and gurgling sounds, conducted cardiac sounds, and the impulse, probably of the auricle, is seen in the second and third interspaces. There is no present evidence of bronchitis, and except at the commencement of the attack there does not appear to have been any. The case may be regarded as one of tubercular phthisis early developed in consequence of exposure to a trying and irksome occupation; the dust having a secondary and perhaps not essential relation to the disease.

Another patient, named Thomas G., now in the Paget ward under my care, who has been a baker for years, and exposed to dust, has the appearance and symptoms of ordinary phthisis, the physical signs being dulness with feeble breathing at the left apex, and crackling in the supra-spinous fossa. Notwithstanding what has been said above, I think that a distinction may be drawn between the disease as it affects those who have worked with metal—grinders or drillers, for instance—and those who have worked with a less keen-edged irritant—as bakers or chaff-cutters. In the former case the disease, when once established, is apt to run its course—tedious and protracted though it be—unchecked, even though the occupation be deserted; but in the latter case the disease may be arrested, and, under favourable conditions, life may be prolonged for the natural term. The following cases of Walter B. and of Robert G. illustrate these two positions. I will briefly detail them:—

Walter B., aged 36, engine-fitter, when working in the midst of steel filings, was seized with hæmorrhage to the extent of one or two pints. He was previously quite well, and the hæmorrhage has never returned severely. Three years ago felt pain in the left side, with gradually increasing dyspnœa and cough. Does not inherit chest disease, though his father was short-winded. His wife and child are phthisical.

Physical Signs.—Chest flat, with high, rounded shoulders, cord-like sterno-mastoidei and latissimus dorsi; respiration chiefly diaphragmatic. Right side: Cooing and prolonged expiration, amphoric sound (dilated bronchus) at apex, and diffused crepitation over the upper third. Behind, respiration feeble, with diffused scanty crepitation to base. Left side: Percussion dull; just beneath the sterno-clavicular articulation is a small patch of very superficial fine crepitation. Behind, breathing blowing (compensatory), with sibilant râles. Cough violent, tearing, spasmodic, causing profuse perspiration. Skin greasy. Eight weeks ago, when first examined, the physical signs were the same, but rhonchus and sibilus were diffused throughout. So urgent was the dyspnœa that the patient was confined to bed, though he could not lie down. Expectoration at first scanty, now (under chloric ether and ammonia) copious, frothy, and easy. Respirations 44; pulse 90; weight on admission 9 st. 5½ lb., and has gradually risen to 9 st. 9 lb. Has taken ol. morrh. ℥ij. bis die; bismuth powders; mist. fe. per. c. eth. Hydrate of chloral gr. xv. o. n. in camphor water was useful. Nitric acid and bark mixture disagreed. Iron suits well. Tincture of iodine has been less useful than croton oil liniment.

(To be continued.)

ORIGINAL COMMUNICATIONS.

CASES OF HEART DISEASE AFFORDING EVIDENCE RESPECTING THE ACTION OF DIGITALIS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

As in one of the addresses recently delivered at the meeting of the British Medical Association some surprise was expressed by the accomplished speaker that digitalis was stated by M. Loraine to augment the force of the heart's action, it may not be useless to contribute some clinical evidence confirming the above statement. I had, indeed, imagined that this view—long held more or less firmly by many physicians—had been settled by Dr. Fothergill; but in a matter literally so vital as the influence of a powerful drug upon the heart we can scarcely have too much testimony.

Case 1.—*Dilatation and Hypertrophy of Heart—Engorgement of Lungs—Anasarca—Use of Digitalis—Great Improvement.*

A. S., aged 42, cook, admitted November 29, 1872. She had been ailing some time with dyspnœa and anasarca of lower limbs. Her breath was very short. Her urine was scanty, thick, specific gravity 1020, rather highly albuminous. The lower parts (about the half) of both lungs were a good deal engorged and the tubes obstructed. The pulse was small, quick, weak, and irregular. The heart's sounds at mid-sternum were short, the first like the second; at the fifth space, both outside and inside the nipple-line, the first sound was louder, especially its valve element, but there was no bruit. She was ordered at first tinct. digitalis ℥x., liq. ferri muriat. ℥x., inf. calumb. ℥j., t. d.; brandy ℥iij.

From December 4 to 11 she was very ill with constant orthopnœa; could only doze a little in the sitting posture; had bloody muco-purulent expectoration; very small and weak and irregular pulse; signs of much obstruction in more than lower half of both lungs; highly albuminous urine; and diarrhœa. On December 4 the mixture first ordered was replaced by tinct. senegæ ℥ ss., ammon. carb. gr. iv., inf. cascarill. ℥j., quater die. On the 11th, tinct. digitalis ℥xv. was added to each dose.

16th.—Patient was better; sputa less bloody, and appetite improved.

19th.—She was much better; took food better; slept three or four hours at night; urine was much less albuminous, nearly clear and natural.

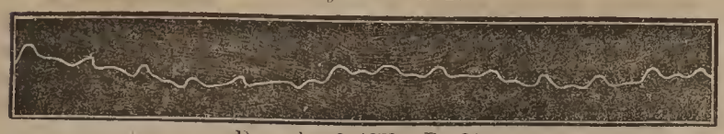
The same treatment was continued till January 9, when she was a great deal better, taking food nicely. She had on December 23 a cough mixture of Indian hemp and squills to take occasionally, to which on February 6 pot. iod. gr. j. was added. The dose of digitalis was now reduced to ℥x.

January 15.—The pulse was much more regular, the backs were fully resonant, and the breathing free—only crepitations were heard in the lower right. The senega was now replaced by ferri ammonio-citrat. gr. viij.

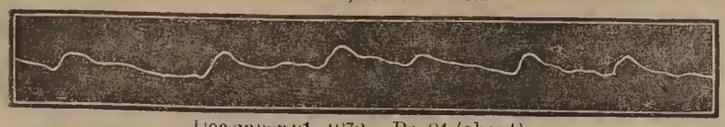
On February 10 she left the hospital, having improved still further: her urine then was not albuminous, neither was it on January 20, or 23, or 30, but was to some extent on February 6.

This patient at one time appeared doomed—with engorged lungs, a feeble and failing heart, albuminuria, insomnia, and anorexia her case seemed hopeless; but after she got the tinct. digitalis ℥xv. quater die she improved in a very remarkable manner, and left the hospital so well that she but half credited, I think, my warnings that she was unfit for any but very light work. The tracing taken December 21 shows a decided improvement in the circulation compared with that of December 3. Digitalis was commenced December 11. It is unfortunate that I omitted to take another tracing at a still later date, when she was further improved.

Tracings in Case 1.



December 3, 1872.—Pr. 84.



December 21, 1872.—Pr. 84 (about).

Case 2.—*Dilatation and Hypertrophy of Heart—Free use of Digitalis—Great Improvement for about Three Months—Relapse—Death—Autopsy.*

W. C., aged 54, coachman, admitted September 25, 1872. Has been ill on and off about six months. Had first pain in left side of abdomen and chest, and some in right side. Has had some palpitation of heart. Never could eat much, and lately has hardly been able to take anything; has had no solid food for some months. No epigastric tenderness; no tumour. Præcordial region is bulged, a slight tremor is perceptible at epigastrium, and a diffused impulse all over præcordial region and lower left front and side. No special apex-beat discoverable; head raised by jog of heart while auscultating. Dulness area appears increased. No murmur; second sound loud at apex and xiphoid. Resonance in both fronts is pretty equal and good; good resonance and breathing in right back. Left back dull in lower half, and breathing much weakened; some crepitation heard in this region. Breathing tolerably good in left supra-spinous fossa, but weaker than in right. At mid-part of left back there is more breathing, mingled with crepitation. Pulse 108, very weak; temperature 100·8°. Vocal fremitus much weaker in left lower back than in right. Breath very short on exertion. Coughs a good deal. Urine full-coloured, clear, notably albuminous, deposits some nearly homogeneous casts. Bowels act twice a day with loose, watery motions. Liver dulness of normal extent. Is made sick by solid food, and even milk if drunk quickly is rejected as large lumps of curd. Feels a heavy weight at epigastrium. Was always a healthy man until this illness; family healthy. Strychniæ gr. $\frac{1}{24}$th, acidi muriat. ℥ij., spt. chloroformi ℥x., aq. ʒj. ter die; brandy ʒij. Spoon diet: beef-tea, pudding.

28th.—Yestermorning the pulse was so weak it could hardly be felt. At 2 p.m. it was more distinct, but extremely frequent. He complained of increased dyspnœa, and of being unable to get any sleep. Tinct. digitalis ℥x., aq. ʒss., 6tis horis.

29th.—He was better for some hours, but this morning became worse again, and appeared almost moribund. Mr. Hickman, the House-Surgeon, with excellent judgment doubled the dose of tincture of digitalis, and increased the brandy to eight ounces.

30th.—Last night was the best he has had yet. To-day the pulse is much more distinct, 108. Says his breath is very much better to-day. Impulse of heart more evident all over præcordia. No distinct murmur to be heard; first sound is weak.

October 2.—Pulse is very large and soft, 120, fairly regular. He lies down well and sleeps well; asks for meat—chop ordered. Extensive dulness and absence of breathing in left back; at scapular spine some breathing and moist râle is heard. Good full breathing in right back. Urine free, cloudy, not albuminous.

On the 3rd the pulse was very irregular, 84. The mixture was ordered to be given only ter die, and he was to take besides vini ferri ʒj. ter die.

On the 5th there was some temporary loss of power in the left thumb and two next fingers. The dose of digitalis was reduced to ℥x. ter die. On the night of the 5th he had much delirium, got frequently out of bed, and went about the ward; had a good deal of diarrhœa also. The flux ceased with astringents and opiates, and on the 24th he was doing very well; the sounds of heart were fairly normal; its impulse was seen at the xiphoid and at the vertical line. Pt. mist. bis die. The steel wine was omitted about the 7th.

31st.—There was some return of delirium on nights of 24th and 25th, but he seems to be going on well. He can walk briskly up and down the long ward where his bed is, and make himself useful in the ward without experiencing any distress. His pulse before walking in the ward was 84, afterwards about 90. Urine very pale, sp. gr. 1008, not albuminous at all. Ferri carb. saech. gr. x., bis die. He continued to do well, and left the Hospital on November 8.

I saw him again January 2, 1873, when he was looking very well, but his appetite was failing. His heart's action was fairly regular; there was no bruit; the sounds and impulse were extensively diffused, the latter rather forcible. He continued the carbonate of iron.

He applied again for admission on February 28, when it was stated by his wife that he had been getting worse for a month, and had been much worse the last ten days. He complained first of loss of appetite, then cough and dyspnœa came on. His hands were cold, and his pulse scarcely to be felt at the wrist. The next day his hands were warmer, and the pulse more perceptible, though still feeble and indistinct. He was very drowsy, his face yellowish, his lips not livid. The drowsiness may have been owing to an enema of liq. opii ℥xv., which he had on admission for diarrhœa. His feet and legs were of a dull red, slightly swollen. The lower right chest expanded in inspiration, the left fell in. He had begun tinct. digitalis ℥xx., aq. ʒss., quater die; and was now ordered besides ammon. carb. gr. v., m. camph. ʒss., 4tis horis.

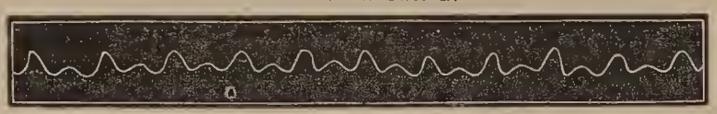
5th.—Had much diarrhœa yesterday; was very delirious in the night, getting out of bed often. He has been wandering and half-conscious, the sister says, ever since his admission. Pulse scarcely to be felt; some rusty mucous expectoration; jugular veins full on both sides. Temperature 99·32°. Takes nourishment well; has six ounces of brandy. The delirium and diarrhœa lessened, but he gradually sank and died on the night of the 7th.

Autopsy.—Heart weighed twenty-one ounces and a half; left ventricle dilated; the cavity contained small masses of old fibrine at the apex entangled among the columnæ. The aortic and right valves were healthy; the mitral flaps moved well, but did not completely prevent regurgitation when water was poured in from the aorta. Right lung healthy, but much congested; left shrunken and congested, and adherent to ribs. Liver nutmeg. Kidneys fairly healthy. The muscular tissue of right and left ventricles was similar; to the naked eye it did not appear abnormal, except that it was very flaccid and flabby. Under the microscope the fibres were well seen; they were not broken up nor atrophied by encroaching fibroid tissue, but they showed no trace of transverse striation, and but little of longitudinal. They seemed to consist of an homogeneous soft material, in which were embedded a few fatty granules, often in streaks, and a good deal of very fine molecular or granulous matter. On the addition of acetic acid very many elongated nuclei came into view, and the tissue became more transparent, but there was not much to be seen of fatty particles. The muscular fibre seemed certainly degenerated, but it could not be properly said to be in a state of fatty degeneration; it was more like the granular degeneration of Ormerod. The masses of fibrine at the apex of the left ventricle consisted of celloid corpuscles, most of them probably nucleated, mingled with a large quantity of coarse granular matter. A section showed grey areas, separated by red lines and streaks or patches. These were full of blood, and seemed to be blood-channels or vessels in an early stage of development.

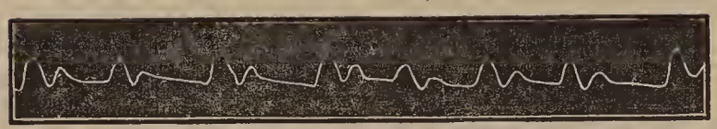
The foregoing case is a simple one: the phenomena during life and the results of dissection are quite intelligible and accordant. One organ alone showed unmistakable signs of failing vital power, and that organ after death is found changed in such a way as to explain readily the symptoms. One remedy on the first occasion is administered in sufficient doses, and recovery immediately commences and goes on satisfactorily. The dyspnœa and consequent insomnia were due to the insufficient propulsion of blood to the lungs by the debilitated right ventricle. The quick, weak, and small pulse, the cold surface, the general debility, and the delirium, showed how feeble was the current sent from the left ventricle. The albuminuria and diarrhœa may be traced to the stagnation of blood in the large veins, depending on defective contraction of the ventricles, causing congestion of the capillaries of the kidneys and intestines. As the heart became able to impel the blood more actively the stagnation was dissipated, and the disorders consequent on it ceased. It is a fact often witnessed in microscopy of the frog's web, as well as at the bedside, that a feeble arterial current gives rise to repletion of the small vessels with stagnant blood. The action of digitalis was, in this instance, as marked as it well could be, and beyond question its effect was to invigorate the heart, and enable it to carry on the circulation more efficiently. As there was no dropsical

accumulation to be removed, the result cannot be attributed to its operation on the kidney. Some consider, I believe, that the remedy acts chiefly on the vessels contracting their vascular coat, and regard the increased vascular pressure observed in experiments on animals as obtained in this way and not by augmentation of cardiac force. However this may be in such experiments, I think it is clear it was otherwise in the instance narrated. Had the drug acted on the vessels, and not on the heart, it must have increased the resistance to the blood-flow, and in so doing must have arrested the already failing play of the ventricles. The evidence afforded by the tracings is to the same effect, for that taken on October 26 is much more ample than that taken on October 1, when the drug had only been given three days. It is not too much to say that this patient's life was prolonged three months by Mr. Hickman's sound knowledge of the use of digitalis, and firmness in acting on it. Had he, seeing the patient *in extremis*, and knowing that he was already taking ℥xl. in the day, vacillated and omitted the remedy from fear that it was doing harm, in all probability he would have sealed his fate. By doubling the dose he saved his life for the time. So it is in medical as well as in military strife, that exigencies occur which show whether a man has true insight or no. The rate of the pulse was reduced under the use of digitalis from probably over 130 to 68; at the same time it became much fuller and more distinct, though it continued irregular or intermittent. It is worth remarking that though vin. ferri appeared to disagree with the patient, yet carbonate of iron suited him very well. Judging from the steady improvement which took place while the patient remained in the hospital, it seems reasonable to think that if the same treatment had been persistently carried out under favourable circumstances life might have been preserved and rendered enjoyable for many years. When he returned to the hospital, the life of the cardiac muscle had died out too far to make restoration possible. All the tracings are markedly dicrotic, the first two eminently so. This is no doubt indicative of the unfilled state of the arteries, and perhaps, also, of the resistance to the onward current occasioned by the semi-stagnation of the blood in the veins. The first tracing is much like one of typhus, where indeed the state of the circulation is very similar, the heart acting quickly and feebly. The pressure employed in the last tracing, when improvement was most advanced, was notably greater than in the two others, yet the rise is considerably higher.

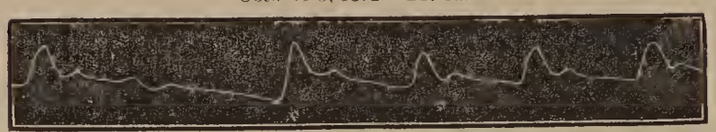
Tracings in Case 2.



October 1, 1872.—Pr. 84; rate 120.



October 5, 1872.—Pr. 84.



October 26, 1872.—Pr. 108; rate 68.

(To be continued.)

GLEANINGS IN WAR SANITATION

FROM N. PIROGOFF'S "BESICHTIGUNG DER MILITAIR-SANITÄTS-ANSTALTEN IN DEUTSCHLAND, LOTHRINGEN, UND ELSASS."

By NATHANIEL ALCOCK, L.K.Q.C.P., A.M.D.

(*Continued from page* 253.)

Beds.

The most feasible improvement in the various elaborate fracture beds was the division of the mattress into pieces, any one of which could be withdrawn singly from beneath the patient, according to the object in view—whether to use a bed-pan or to dress an ulcer.

Continuous Extension in the Treatment of Compound Thigh Fractures.

For the purpose of counter-extension, the French continued to use the old plans of Desault and Boyer; but the Germans had adopted much later methods. They sometimes allowed the body of the patient to make the counter-extension by giving the pelvis an inclination backwards, so that its weight would counteract the extension made from the foot. Again, they effected the extension by means of a weight attached to a cord which passed over a roller at the bottom of the bed, and to avoid excoriation of the limb by the cord, applied first a plaster-of-Paris bandage. Notwithstanding, however, the various apparatus devised, shortening for the most part followed these fractures. The remaining and more energetic treatment of compound fractures—the resection of the broken ends—was not put in practice, nor is it likely ever to gain a place in conservative surgery.

Neither was resection of the knee-joint for fracture through the femur and patella often used. Only two cases of this operation were seen, and three heard of. Of the former, in one the wound appeared comparatively healthy, but the bones were in a bad position; in the other, pyæmia supervened. Of those reported, all died. Subsequently, thirty cases were reported to have been operated on at Munich, but without success. Just as little satisfactory were the resections of the head of the thigh-bone.

When, on the other hand, the conservative method afforded such brilliant experiences in the treatment of compound thigh and knee fractures, it is no wonder that in shoulder, elbow, and ankle-joint wounds the result should have been still more favourable.

Fifty cases were discovered in which penetrating wounds of these joints had healed without surgical interference beyond the opening of succeeding abscesses; and, if there be such grounds for expecting a successful issue in penetrating joint wounds without resection, wherefore shall it be hastily undertaken? The extent and anatomical peculiarities of each wound must decide the necessity of operation. In elbow-joint wounds it may be desirable to expedite the performance of the operation on the chance of preserving the mobility of the articulation, which by delay will usually be lost in anchylosis. On the other hand, in ankle-joint wounds the probability of subsequent mobility is not so great, and its advantage over anchylosis is very doubtful. Again, where anchylosis of the elbow-joint has taken place with the forearm in the extended position, resection may be employed, but otherwise, after anchylosis is completed, should only be carried out at the entreaty of the patient.

The treatment of joint wounds and of wounds after resection consisted for the most part in the application of an immovable bandage, in swinging the limb, and in local baths. This last is but a process of maceration, and was not often employed.

It is, however, less intelligible why the plaster-of-Paris bandage was not used in all cases of resection. Dr. Pirogoff since 1848 has made its application under these circumstances an invariable rule, and in no instance during twenty years' experience has he observed the supervention of those evils which usually follow undue movement of the limb—viz., pus infiltration and œdema,—and to which those treated with ice compresses, splints, and slings are exposed. In fact, only by the use of this immovable bandage can the dangers of resection be reduced to a minimum, inasmuch as the patient is by this means alone spared the enervating effects of long confinement to bed. In Berlin, resected elbow-joints were laid on Esmarch's splint, and secured by a plaster-of-Paris bandage; but this was removed long before the wound had healed, and the patients were in consequence to be seen lying in bed without any support to the limb. It may be laid down as a first principle that the bandage should be continued till the fragments become covered with callus, and never less than six weeks. During this time the bandage will require to be renewed about three times, and these occasions afford opportunities of giving to the limb the most favourable position.

Of the death-rate after these resections no positive information is attainable.

Among the resources of conservative surgery may be reckoned the operations for the arrest of bleeding, the most important of which is the ligature of arteries. Of seventeen such cases which came under observation three only offered any prospect of success, and even these succumbed at a later period. In every instance had aneurism or secondary hæmorrhage indicated the wounding of the arteries. These cases were universally fatal in the Crimea, and have been so in all wars. Failure seems to be due to two circumstances—to the operation being too long deferred, and then carried out

when the patient had, from loss of blood or extensive suppuration, become weak and anæmic; and to error in selecting the place for ligature. For example, in bleeding from the femoral artery, instead of at once securing the external iliac, the femoral is taken up in its middle or upper third, thus leaving a large, deep branch between the ligature and the heart; so, also, in bleeding at the bend of the elbow, the brachial is obliterated instead of the axillary. Besides this, if the operation be put off too long the aneurismal sac will be found to contain decomposed blood and its walls to have begun to soften; the coats of the artery, also, will be in such a state that they mortify rapidly under the ligature, and not unfrequently the patients are affected with pyæmia even before the operation.

Five instances of successfully treated artery wounds were encountered, but they had been dealt with in a different manner from the foregoing. In one Professor Langenbeck checked bleeding from the "tibialis antica" by cutting down through the muscles and securing the vessel at the seat of injury; in another a traumatic crural aneurism was cured by digital compression; and in the three remaining, hæmorrhage from the carotid, external iliac, and crural was in each case controlled by digital compression kept up in the wound itself. This latter method Professor Simon considers more safe than ligature, but Dr. Pirogoff doubts that it will ever command universal confidence. Success in either case depends on the formation of a clot, and the only objection that can be urged against the ligature is that it crushes and tears the arterial coats. Yet every practical surgeon knows that secondary hæmorrhage can follow only under three conditions—the extension of unhealthy suppurative action from the wound to the walls of the artery, an originally diseased state of those walls, or the application of the ligature at a place too close to the origin of a large arterial branch. Under circumstances where, from the exhaustion of the patient and the evil condition of the wound, ligature offers no promise of success, digital compression may be tried, but even in such cases Dr. Pirogoff would prefer to have recourse to galvano-acupuncture of the main vessel.

It is incomprehensible why the artery is not at once taken up when the position of the wound is diagnosed, without waiting for the occurrence of bleeding or the formation of an aneurism; and it is still less rational to hesitate when strong pulsation, dilatation, or bruit in the vessel indicate the beginning of aneurism. In the cases detailed, ligature was only undertaken when the aneurismal sac was much distended or passing into gangrene: thus, in a case of wounded axillary seen at Karlsruhe, the operation was carried out after the hæmorrhage had recurred three times and the shoulder had become swollen and distended; also at Berlin a ligature was put on the femoral below Poupart's ligament when the patient was pyæmic and the toes of the injured limb had begun to be gangrenous.

Of three cases of varicose aneurism observed, all were situated in the groin, and the wounded, with the exception that they limped when walking, did well. An instance of varicose aneurism in the supra-spinous fossa was mentioned by Professor Langenbeck; ligature of the arteria innominata was contemplated, but the patient died before it could be effected.

In concluding this account of the brightest side of modern war surgery—viz., the conservative plan—but little need be added concerning that method which is opposed thereto, viz., the removal of limbs. As in the Crimea, so in more recent campaigns, it presents a sad chapter. "Death and again death"—such was the result of early, as well as late, amputations during the past war.

In his address delivered at the seventy-fourth anniversary of the Frederick William Medico-Chirurgical Institute of Berlin, 1870, Professor von Langenbeck asserted that "the duties of a field-surgeon can be of practical use to the severely wounded only when they begin immediately after the battle, and cease not later than two days after the same: therefore must all unavoidable amputations be performed and all conservative treatment be commenced in the course of the first twenty-four to forty-eight hours succeeding the engagement, before the sending away of the wounded with the distant transports; for the late and intermediary amputations afford the most unfavourable death-rate." From this expression it follows that the distinguished Berlin surgeon considers it possible within the first twenty-four hours after the battle to make all unavoidable amputations, and to be able to apply permanent bandages on all limbs destined for the conservative mode of treatment; and that he may be reckoned among the supporters of Bouchet's and Larrey's doctrine, since he regards all early amputations without exception as less dangerous than the later. One must now reflect that the Prussian administration did not lack opportunity of testing in practice during the past war these maxims of German surgery. It had at its disposal undoubtedly a sufficient number of surgeons, since, for example's sake, for 1000 amputations and for the application of 1000 permanent bandages, not more than 100 surgeons and some experienced surgeons for classifying the wounded would be necessary; that is, supposing that each one of them carried out about twenty amputations and an equal number of bandagings in the course of one day. But just here lies the difficulty, that neither any administration nor any science can show Professor Langenbeck's convictions to be founded on fact and in truth—firstly, because, owing to the scant supply of sanitary detachments in all European armies, it is impossible, not only to render help within the first twenty-four hours to all the severely wounded, but even to remove them from the scene of action; secondly, because the classification of the wounded in the ambulances is not established, and therefore the indications for amputations and for conservative treatment cannot be recognised immediately after the battle; thirdly (and this is the chief reason), because once the possibility and advantage of conservative treatment be conceded in principle, then also the necessity for late amputations cannot be gainsaid. No surgeon, be he ever so skilled, will be at any time in a position to predict whether he will be able to avoid a late amputation; not unfrequently will circumstances occasion him to desist from the conservative method, which may have in the beginning appeared so very possible and even probable. The conservative treatment and late amputation are so inseparably united that if the possibility of the first be granted the probability of the second must of necessity be admitted. The early doctrine of Bouchet and Larrey was as follows:—They laid down that amputations should be carried out in war as quickly as possible, because they regarded the retaining of a limb as generally more dangerous than amputation, and taught that whoever did not amputate immediately after the wound jeopardised more lives than he saved hands and feet. As soon, however, as modern science had announced the conservative treatment to be, even in war, not only possible, but also in many instances less dangerous, so must it, to be consistent, declare against the pressing necessity of early amputation. To defend conservative surgery, and at the same time to uphold the principle of early amputation, means to prove it in contradiction with itself.

"In order to obviate this contradiction in the words of Professor von Langenbeck cited by me, one must accept it that when he spoke of the necessity of making the unavoidable amputations as early as possible, he only wished to express the universally received rule, not to defer the operation in those cases in which it is obviously unavoidable. Yet the last war showed that even this indisputable axiom could not be observed, partly owing to unforeseen strategical circumstances, partly by reason of the abnormal military medical system, but partly too in consequence of the nature of the wounds themselves, many of which, resulting from large projectiles, were probably accompanied by such torpor and collapse that they would admit of no operative help before thirty-six to forty-eight hours; so was it at least the case with us in the Crimea. But even of those early amputations which were achieved on the field of battle in the first twenty-four hours, it can scarcely be assumed that they were to the advantage of the wounded, who were immediately after the operations despatched to a distance on country carts, were by this exhausted, and arrived at the hospitals with the bones sticking out of the wounds; and even where the indications for unavoidable amputation were unusually evident and very abundant—namely, in siege fights,—the early amputations, according to the independent testimony of the surgeons, gave favourable results only at the beginning of the siege. But as the communications from the theatre of war by 'L. Z.' (who visited the Strasburg hospitals twelve or fourteen days after the capitulation, as I also did) have shown, even there out of 180 early amputations 130 died. Likewise was I astonished that Professor Langenbeck should in general give the preference to all early amputations over the later, since experience with us in the Crimea, as well as in still more recent campaigns, afforded indisputable evidence that early amputation yielded a really good result in the upper extremity only, in which, too, the conservative method is most successful. In wounds of the leg, of the knee, and especially of the thigh-bone, the early as well as the late operations so often

eventuated fatally that neither deserves preference over the other.

"Still more, however, did the circumstance surprise me that Professor von Langenbeck allowed the preference to early amputations; since he in that same address, agreeing with me, showed himself an advocate for late resection of the shoulder, elbow, and ankle joints. Now, any surgeon who has convinced himself of the advantage of late resection must give the preference to late amputation over early, and certainly at once on the ground that in recent wounds the choice between amputation and resection is not unfrequently extremely difficult. In a word, from whichever side we regard these things, we come to the conclusion that the introduction of conservative treatment into modern war surgery is in and by itself already a protest against early amputation, which allows no saving of the limb."

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

NINE CASES OF FATAL FRACTURE OF THE SKULL, WITH POST-MORTEM REPORTS THEREON.

By Mr. HENRY MORRIS, Senior Assistant-Surgeon to the Hospital.

During the two years 1870 and 1871 there were 170 post-mortem examinations of surgical cases made in the Middlesex Hospital. Among these 170 cases were nine of fatal fracture of the skull, the details of all of which are here given. The object in view in publishing these cases is to show the situations in which the fractures have occurred.

Case 1.—*Fracture of Right Temporal Bone extending vertically downwards through the Squamous Portion nearly to the root of the Petrous Portion, and then backwards at right angles across the root of the Petrous Portion, exposing the Cavity of the Tympanum.*

No. 438.—Henry T., aged 27, was admitted on May 19, 1870, having been struck by a skittle-ball twelve hours before admission. When admitted he was quite unconscious, and breathing stertorously. Neither pupil acted, and the left was widely dilated. There was no scalp wound present, nor could any fracture be detected, but there was a soft tumour felt, which could be pitted on pressure, in the right temporal region. There was no bleeding from the ears, nose, or mouth. He died one hour after admission.

Post-mortem Examination.—A vertical fracture curving at the upper extremity a little forwards was found in the right temporal region, but as the edges were not at all displaced, but perfectly level, it could not have been felt during life. The squamous portion of each temporal bone was remarkably thin, especially the left, which only measured three lines. The fracture extended vertically downwards nearly to the foramen spinosum, and then backwards at right angles across the root of the petrous portion of the temporal. The roof of the tympanic cavity was very thin, and a piece of it as large as a hempseed was detached, so that the small bones of the ear could be seen. Immediately beneath the bone, and between it and the dura mater, was a large clot spread over the whole side of the membrane and compressing the brain so as to form a considerable depression upon the right hemisphere. The weight of the clot was four ounces and three-quarters, its source the posterior branch of the right middle meningeal artery, around the ruptured seat of which some of the clot was very firmly adherent.

Remarks.—Direct violence upon very thin bone, which gave way at the point struck. Meningeal artery ruptured, and a large clot, five inches in antero-posterior measurement, three inches and a quarter in vertical, and one inch and three-quarters in thickness. Fracture extended to, but not across, the base, and to this only by continuity.

Case 2.—*Fracture of the Left Frontal Bone extending along the Roof of the Orbit through the Greater Wing of the Sphenoid to the Petrous Portion of the Temporal Bone.*

No. 472.—Thomas B., aged 9, admitted in March, 1870, having fallen out of a window about ten feet above the ground. When brought in the forehead was much bruised, and his left eyelid was ecchymosed and swollen. There was no coma, and no bleeding from any source whatever. He died twelve hours after admission.

Post-mortem Examination.—A fracture extended through the vertical portion of the frontal bone parallel with the frontal suture, and down to and then along the margin of the orbit; it thence reached backwards along the inner side of the roof of the left orbit, taking a course farther back somewhat, through the small wing of the sphenoid, and then backwards through the greater wing near the foramen in its base. In the centre of the vertical part of the left frontal bone there was a slight depression, and between the dura mater and this part of the bone was a layer of coagulated blood spreading over the bony roof of the left orbit. The periorbital membrane was not ruptured, but a good deal of blood was effused within it amongst the fat and muscle of the space. The brain was contused, and even lacerated, at the base and fore part of the left anterior lobe. There was some extravasation of blood into the arachnoid cavity about the lower part of the pons and the medulla.

Remarks.—History as to exact part of the body which first impinged on ground could not be ascertained. The violence in all probability was over left frontal bone, and the fracture extended from that to the left side of the base of the skull.

Case 3.—*Fracture of the Base of the Skull across the Anterior Fossa—Skull Fractured also on the Right Side through the Frontal and Parietal Bones—The Right Anterior Convolutions of Brain considerably Bruised—Arachnitis.*

No. 457.—George R., aged 10, was admitted on May 26, having shortly before fallen from the top of a baker's van while it was standing still. In his fall he struck the right and front part of his head against both van and ground. There was ecchymosis, with swelling of the eyelids of both eyes, a circular abrasion on the right side of the forehead, and blood of a bright colour was flowing from the mouth. The pupils were equal and acting. He became delirious, with muttering delirium, but could be roused when spoken to in a loud voice. The semi-consciousness rapidly passed into almost complete coma, and he expired on June 2, thus living seven days from the date of injury.

Post-mortem Examination.—Blood extravasation between hairy scalp and frontal and fore part of parietal bones. A fracture extended upwards from the outer angle of the right orbit towards the right frontal eminence. This was joined nearly at right angles by another, which crossed the lower anterior corner of the parietal bone to reach the squamous suture. Another fracture extended vertically from the margin of the right orbit, near the inner angle, upwards to the frontal eminence, but this did not meet the other. Both extended across the roof of the orbit, which was quite detached and separated. There was a double transverse fracture in the base of the anterior fossa of the skull—one was limited to the left half, and was close to the vertical portion of the frontal bone; the second traversed the whole length of the floor immediately in front of the lesser wings of the sphenoid, both of which were, however, fractured, and the left quite detached. The crista galli was also detached. The dura mater over the roof of the orbit was lacerated, and detached by effused blood from the bone. The arachnoid around the optic commissure and covering the pons and cerebellum was thickened, and covered by a firm layer of yellow purulent lymph. This condition was confined to the parts specified. No lymph was seen on parts near the fractures.

Case 4.—*Fracture of the Base of the Skull through the Horizontal Plate of the Frontal Bone and Cribriform Plate of Ethmoid, extending from the Right Side of the Median Line in front to the Optic Foramen of the Left Side, and continuous with an obliquely vertical Fracture of the Frontal Bone—Arachnitis.*

No. 587.—J. S., aged 44, was admitted on July 18, 1870. While at work repairing the outside of a house, he looked up, and, seeing a brick falling, he tried to avoid it striking him; in doing so he slipped and fell from the ladder on which he was standing to the ground, a height of seven feet. He walked to the Hospital between two men immediately afterwards. On admission he was conscious and able to answer questions. His eyelids on both sides and the conjunctiva of the left eye were ecchymosed. No fracture could be detected, although the nose was much distorted and appeared pushed over to the right side. The day after admission he became restless, and turned from side to side constantly, but answered questions rationally. This restlessness increased, but consciousness

when spoken to continued up to the hour of his death, on July 25, the second day after admission.

Post-mortem Examination.—The base of the brain was coated by a thick layer of yellow puriform lymph. This was beneath the arachnoid, and was chiefly marked about the cerebellum, pons, and as far forwards as the circle of Willis. The ventricles were distended with pinkish serum. There was a fracture through the frontal bone near the median line, but bearing to the right side near the orbital ridge. It reached along the horizontal plate of the frontal and obliquely across the ethmoid, just behind the crista galli, and ending at the inner angle of the lesser wing of the left sphenoid bone.

Case 5.—Fracture of the Base of the Skull extending along the Anterior Surface of the Right Petrous Portion of the Temporal Bone. This was continuous with a vertical Fracture through the Squamous Portion of the Bone, which reached upwards and backwards for an inch upon the Parietal Bone.

No. 800.—George B., aged 41. About five hours before admission on October 9—the patient being drunk at the time—he fell down some stone steps, and struck his head against a stone slab. He was picked up insensible, and remained so up to his admission, when he was bleeding from the right ear; he could, however, be roused when spoken to. His pupils were small, but acted to light. His unconsciousness increased, his breathing became stertorous, and he died in a comatose state at seven o'clock on the evening of October 13—the fourth day after his admission.

Post-mortem Examination.—A fracture extended vertically upwards and slightly backwards from just in front of the external meatus to an inch beyond the squamo-parietal suture. Near the ear the bone was splintered into two or three fine spicula nearly an inch long, which were lying loose between the fractured edges. On removing the calvarium a large clot ($3\frac{3}{4}$ oz.) extended itself over the right side of the brain and dura mater. This was firmly adherent to the dura mater, plugs of which were fixed to the ruptured ends of the meningeal artery. The artery in several places was completely torn across.

Case 6.—Fracture of the Base of the Skull—(1) through the Lesser Wings of the Sphenoid; (2) through the Body of the Sphenoid, extending in a curved line across the Middle of the Right Petrous Bone; (3) vertically along the Median Line of the Occipital Bone from the Foramen Magnum to the Occipital Eminence.

No. 988.—James B., aged 40, a cab-driver, was thrown violently from his seat by his cab coming into collision with another cab. On admission, December 16, 1870, he was insensible, and smelt very strongly of spirits. He died two hours after admission.

Post-mortem Examination.—A fracture extended from near the occipital foramen along the median line to the occipital eminence. A large quantity of black clot was lying in the arachnoid space along the whole length of the base of the cerebrum, and over the upper surface, especially over the anterior half of the upper surface. There was more extravasation on the left than on the right side; much of the clot on this side was resting upon the tentorium cerebelli and between this and the under surface of the large brain. Over the front extremities of the anterior lobes the pia mater and arachnoid were ruptured, and the brain substance was bruised, and a considerable quantity of black clot was lying beneath the arachnoid. A crack in the bone extended across the posterior portion of the anterior fossa. Another fracture with much splintering of the bone extended from the sella turcica through the right temporal bone, extending in a curved manner, with the convexity outwards and forwards.

Case 7.—Fracture of the Base of the Skull extending across the Greater Wing of the Sphenoid Bone on the Right Side, from its Superior and Posterior Angle to the Spheno-Maxillary Fissure—Depression of Bone, and Laceration of the Membranes of the Brain at the Upper End of the Fracture.

No. 990.—Lucy H., aged 55, admitted on December 18 at 10 a.m. It was ascertained that the evening before she was passing by an opening in the pavement into a cellar, when she was suddenly frightened and fell through the opening. She lay where she fell, insensible all night, and died on December 20.

Post-mortem Examination.—On removing the right temporal muscle, a fracture was seen running obliquely across the greater wing of the sphenoid to the spheno-maxillary fissure. The bone immediately in front of the line of fracture was slightly depressed and pressing hard against the brain substance at the upper point of the fracture. Here the membranes were ruptured, and a black coagulum in the arachnoid space was spread over the upper and lateral surfaces of the right hemisphere. The anterior extremity of the under surface of the left middle lobe was bruised, and from this spot a layer of partly coagulated blood was spread out. As the fracture was most marked at the superior and posterior angle of the fracture, it would appear that the chief violence fell directly upon the right temporal fossa, and that the bruising and hæmorrhage of the left side, and left side of the base, were probably due to injury by contrecoup.

Case 8.—Fracture of the Base of the Skull in Orbital Plate of the Frontal Bone of the Right Side.

No. 94 R, 1871.—Wm. G., aged 38, a painter, fourteen days before his admission slipped upon a piece of orange-peel, and wounded his scalp behind and above the angle of the right orbit. On January 31, 1871 (the day of his admission), he was brought to the Hospital by a policeman, as he had fallen again just before, and was picked up in a semi-conscious state. He complained of pain in the head, and was vomiting a good deal. His face and right eyelids were swollen, and discharge was flowing from the wound of the scalp.

February 1.—He was trephined at the seat of the wound; but no abscess was found connected with the membranes or brain itself. He died the next day (February 2), the second day after admission.

Post-mortem Examination.—A triangular-shaped piece of the orbital plate of the right frontal bone was quite detached from the rest. The diploë of the frontal bone was infiltrated with pus, and the edges of the fracture presented the appearance of having been fractured some days. At the anterior extremity of the middle lobe the brain was superficially bruised, and covered with a layer of creamy yellow pus, which reached upwards in front and laterally over the right hemisphere between the layers of the arachnoid. Outside the dura mater, in the sella turcica, and along each carotid artery, was some dirty brown pus. On the right side some pus of similar character extended a little way into the orbit, where a thin streak was seen beneath the superior rectus muscle.

Case 9.—Fracture through the Left Occipital Bone and the Squamous and Petrous Portions of the Temporal Bone.

No. 679.—William L., a drayman, fell off the box-seat of the dray. On admission he answered questions slowly and stupidly. There was hæmorrhage from the left ear. Pupils were equal. No fracture could be detected, but there was swelling over the upper portion of the occipital bone.

Post-mortem Examination.—Fracture of the skull, extending through the side of the horizontal portion of the occipital bone and the root of the petrous portion of the temporal bone. The fracture of the petrous bone was bifid—one fissure passing upon its posterior aspect, curved inwards and backwards to end in the foramen lacerum basis cranii; the other passing forwards allowed of the detachment of a considerable portion of the anterior surface of the bone, and the consequent exposure of the cavity of the internal year. The anterior convolutions of the anterior lobes of the brain were much bruised and lacerated, especially on the left side. A quantity of blood-clot, four ounces and three quarters in weight, occupied the right arachnoid cavity, and flattened the left hemisphere of the brain.

Sir James Paget, Bart.—This distinguished surgeon lately placed a memorial window in the Church of St. Nicholas, Great Yarmouth, of which town he is a native. It is very handsome, representing Isaiah, Elisha, and Elijah, with suitable extracts from the Holy Scriptures; and on a brass plate beneath the following inscription:—"To the glory of God. In loving memory of Samuel Paget, a merchant, and Sarah Elizabeth, his wife. They and many of their forefathers dwelt in this town. They were pious, loyal and gentle lovers of their Church and home, bountiful in prosperity, patient in adversity, honoured by friends, reverenced by their children. They lived and died hoping for deathless life through our Lord Jesus Christ. Samuel Paget died in 1857, aged 83; Sarah Elizabeth Paget in 1843, aged 65. Twelve of their children rest with them in and near this church." A modest "J. P." is all to indicate this filial act on the part of our great surgeon, who it is to be hoped may reach the patriarchal age of his sire.

At the meeting of the Wrexham Sanitary Authority last week, it was reported there had been fever in eighty houses at the Rhos and Ponkey, and 204 persons had been attacked, thirty-seven of whom had died.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, OCTOBER 18, 1873.

FEES.

The Medical Season in London may be said to begin with the opening of the schools on October 1. Most of our brethren are returning or have returned from their holidays, and if patients on their way to southern health-resorts require a final opinion in London before leaving, they can be indulged with consultations at a reasonably short notice. Still, London is comparatively empty, and before the whirl and press of business are fairly upon us we invite our *confrères* to consider with us the very important subject of Fees.

We suppose that it will be admitted on all hands that every item of personal and family expense has largely increased since the reign of William and Mary, that the guinea of that period was at least worth three of our present sovereigns, that it represented at least three sovereigns' worth of food, service, and lodging,—and yet the fee of one guinea was paid to Radcliffe and Mead, whilst only the same nominal sum is now given to our leading physicians and surgeons, or one-third of the physician's fee in Queen Anne's time. It is clear that with such a depreciation in the value of money, rise in the price of most necessaries and many of the luxuries of life, and a general increase in the expenditure of all classes of the community, Medicine cannot long continue to hold its place, but must sooner or later descend in the social scale. We know that in thus writing we are treading on delicate ground, but we think it behoves the leaders in London practice to take this matter into their serious consideration. The fact that a leading Fellow of the College of Physicians or of the College of Surgeons can be consulted for the same coin that would be slipped into a friend's gamekeeper's hand on leaving his country house is at least an incongruity. The truth is that in England the sovereign has taken the place of the crown—a coin which, as eighteenth-century novels show, answered many of the purposes to which the modern sovereign is put.

Not to descend, however, to particulars, we may lay down the broad principle that professional charges ought to be regulated by the value of money, the cost of living, and the social condition of a people. In England the value of money has depreciated, but, instead of medical charges rising, they have depreciated with it. Amongst general practitioners the modern plan of charging for visits alone, instead of for medicine and attendance, is found less lucrative. Amongst the consulting class there is, if current reports be true, an increasing readiness to grant more than one interview for the ordinary fee, and to accept smaller emoluments for extraordinary services. We believe, however, that this state of things, which we cannot but regard with extreme dissatisfaction, is to be remedied only by the foremost practitioners of London. Were the few leading surgeons and physicians steadily to refuse to accept any fee less than three guineas for a consultation, we may rest assured that their example would be in their degree imitated by the whole profession. The leaders would reap pecuniary advantages at least equal to those which they at present enjoy, at the expenditure of two-thirds less of physical and mental force, whilst the less prominent and junior members of the consulting ranks would proportionately benefit. The general practitioner would not then have to complain that the physician or surgeon competed with him by multiplying interviews without a proportionate increase of fees, and the general position of the whole profession would be improved. Medicine no longer gives riches. It has been long outstripped in the race for wealth by brewing, banking, stockbroking, and a hundred trading pursuits. The question is not whether medical men as of old should amass princely fortunes—modern sanitary science will answer that in the negative,—but whether medicine shall continue to hold its social position amongst the liberal professions.

THE MEDICAL USES OF ELECTRICITY.—No. V.

Therapeutical Use of Electricity.

In *traumatic* paralysis faradisation is invaluable. Brown-Séquard has proved that even the spinal cord may be perfectly restored after traumatic lesion, and it has long been known that nerves will perfectly reunite after division, and when even considerable portions of them have been excised. But after reunion of a nerve has taken place, the muscles supplied by it will often remain paralysed, and continue to waste, and contract unless faradisation be resorted to. Its value in this form of paralysis was largely tried and well proved in America in cases of men wounded in the Civil War; and in a report on "Gunshot Wounds and other Injuries of Nerves," (a) the surgeons in charge say:—"The only important means in the treatment of paralysis from default of innervation is faradisation by the method of Dr. Duchenne. Most of our cases were from wounds that were of old standing when they came under our care, and localised faradisation proved of the utmost value. In some cases at a single application it restored the power of movement to parts long deprived of it, and we have seen very few instances in which there has not been improved nutrition and greater sensibility and strength when we were able to continue it sufficiently long." The faradisation will, of course, be of no use till after the injured nerve has regained its power of conduction; but in recent cases of injury the interrupted voltaic current should be localised in the affected muscles, and direct faradisation be employed when farado-contractility begins to return.

In cases of *local* paralysis, dependent on cold or on metallic poisoning, as from lead or mercury, or on diphtheria, the employment of electrisation should not be neglected when the affection has resisted other means of treatment. In these cases the faradic and the interrupted voltaic currents, used alternately and localised in the affected muscles, will generally effect a cure. As a rule the farado-contractility is unaltered

(a) By S. Weir Mitchell, G. R. Morehouse, and W. W. Keen. Philadelphia. 1868. See also "Injuries of Nerves and their Consequences," by S. W. Mitchell, M.D. Philadelphia, 1872.

in muscles paralysed by exposure to cold; but this is not the case in facial paralysis from cold. Here the farado-contractility is diminished or quite lost, while the excitability to the interrupted voltaic current is increased; and faradisation may be employed for weeks without effecting any improvement. In this affection, therefore, the interrupted voltaic current must be used and localised in the muscles till the farado-contractility is restored, and then the two forms may be employed alternately; and in this way cases of even years' standing may be cured or greatly benefited. It will be remembered that in speaking of the diagnostic uses of electricity we mentioned it might be employed to distinguish *lead-palsy* from paralysis caused by cold, for in lead-palsy farado-contractility and sensibility are diminished or lost, while they are normal in paralysis from cold. In lead-palsy the interrupted voltaic current should be applied to the affected muscles. As in other forms of paralysis, where this current acts and the faradic current elicits no response, the sensitiveness to the former is abnormally great, and it is found to lessen as the farado-contractility returns, till each becomes normal. The voltaic current employed must be a slowly interrupted current, and may be gradually abandoned for the faradic current as farado-contractility is restored; and whichever of the two currents is used, it must be localised in the muscles—not indirectly applied.

In *aphonia*, whether emotional (or hysterical) or caused by paralysis of the vocal cords, faradisation will effect a cure. In the latter it is best to apply the current to the larynx internally by the catheter-shaped instrument used by Dr. Morell-Mackenzie. In emotional aphonia, faradisation will sometimes fail, when static or frictional electricity, employed by sparks taken from the skin over the larynx, or by a shock from a charged Leyden jar, will at once produce the desired effect; and this form of electrisation is not only more effectual, but also less disagreeable than faradisation.

Other local palsies may be treated with success by electrisation; but the same principles of treatment will apply to them all, and we shall not speak of them in detail. Nor can we treat here of the use and value of faradisation in the constipation and the difficulty of micturition of paraplegia, or in locomotor ataxy, wasting palsy, and many other disorders; but must be content to refer our readers to the English works we have mentioned, and to Duchenne's treatise on "Localised Electrisation."

We must notice, however, the electrical treatment of cases of over-action of muscles. In cases of torticollis, and in long-standing cases of tonic contraction of muscles, as those which may accompany muscular rheumatism, faradisation of the antagonists of the affected muscles is very successful. And "in all cases in which tremor or spasm is a promiuent symptom," the use of the "positive charge" of electricity, of which we will speak directly, combined with faradisation of the antagonisers of the contracting muscle, gives excellent results. In writers' cramp, also, and the analogous affections, the same system should be followed. Dr. G. V. Poore finds that writers' cramp is most successfully treated by allowing a very mild continuous current to pass through the trunk of the nerve supplying the affected muscles, and, *at the same time*, making the patient exercise the muscles. His papers on writers' cramp in the *Practitioner* for this year are well worthy of careful study.

Franklinisation has been but little employed of late, but at the National Hospital for the Paralysed and Epileptic it has been found very useful. We have already mentioned that electrisation by sparks over the larynx often rapidly cures *emotional aphonia;* so effective is it, indeed, that at the above-named hospital it is used in most of these cases before trying faradisation. And Dr. Tibbits tells us that "*facial neuralgia* which has resisted other modes of treatment may occasionally be relieved with rapidity and permanently by drawing sparks along the track of the affected branch or branches of the trifacial nerve." He has also seen obstinate *sciatica* and *facial spasm* partially or altogether removed by this means.

Dr. Radcliffe has originated a special method of electrisation which Dr. Tibbits thus describes in his work. It is a method "in which the patient and the battery must both be insulated, in which the passage of the current must be quite constant, and in which a wire, which Dr. Radcliffe terms a "ground wire," must be carried from the negative pole of the battery, or from the negative rheophore, to the earth. This wire may be conveniently attached to a chandelier or gaspipe, which always gives a direct metallic conduction to the ground. With careful insulation, the negative electricity passes away by this wire, and while the current circulates, the patient continues "*charged*" with positive electricity. A sheet of guttapercha about four feet square by half an inch thick will answer admirably to insulate the patient and the accessories. In speaking of Dr. Radcliffe's theory on the mode in which this acts on the body, into which we cannot enter here, Dr. Tibbits observes, "When a part of the body is included in the voltaic circuit it may be all charged with positive electricity if an earth wire be put to the negative pole, or with negative if an earth wire be put to the positive pole; and the conditions are favourable to irritability in the former case, unfavourable in the latter. This is the fact insisted upon. It is of no moment whether this charge with which the animal Leyden jars are to be charged is from a friction machine, or whether it be from a voltaic battery by running off the opposite electricity by an earth wire. What is wanted is to charge the outsides of the sheaths positively as they are charged internally. What is aimed at is to put the fibres by this means in the condition most favourable to the preservation or recovery of their irritability,—*not to provoke this irritability into existence by shocking it;* and certainly there is much in theory and much in practice to recommend this view as one which opens out quite a new field in electro-therapeutics." We have mentioned that the "positive charge" alternated with faradisation has been found highly beneficial in cases of tremor or spasm. Dr. Tibbits has also found that in wasting palsy this plan of treatment has been followed by an arrest of the disease and a filling out of the wasting muscles. "Localise faradisation," he says, "in the wasted muscles, and vary the treatment on alternate days by the positive charge." In very long-standing cases of facial palsy, also, when there is fibrillation in the muscles, he has found great advantage from daily treatment by the positive charge.

Drs. Beard and Rockwell, of New York,(b) employ very largely a method of general faradisation. They place the patient with naked feet on a sheet of copper connected with one rheophore, while the other pole is connected by means of a moistened sponge with the left hand of the operator, who uses his right hand as a rheophore, passing it over the muscles or even the whole body of the patient. They say that they have used this method more than ten thousand times, and speak very highly of its effects in states of debility. They believe "that electrisation, besides being merely a local stimulant, also exercises an influence over general and local nutrition, at once unique and unrivalled, and that entitles it to the highest rank among constitutional tonics; and that the system of making the application exclusively local is both illogical and inconsistent: that in the use of electricity, as of every other remedy, constitutional diseases should be treated constitutionally." We requote Dr. Tibbits, not having succeeded in seeing the original work.

Electrisation of the brain has been advised in cerebral disease, and it has been shown that the continuous current

(b) "A Practical Treatise on the Medical and Surgical Uses of Electricity," by Drs. Beard and Rockwell. New York, 1871.

can be passed in any direction through that organ; and some experts have recommended "galvanisation of the sympathetic," one electrode being pressed deeply into the auriculo-maxillary fossa, while the other is applied over the sixth or seventh cervical vertebra, or over the top of the sternum close to the edge of the sterno-mastoid. But very little is yet known about these employments of electrisation, and it is certain that their use calls for very great caution. A paper on the "Electric Treatment of the Insane," by Dr. Clifford Allbutt, will be found in the second volume of the "West Riding Lunatic Asylum Medical Reports"; and one, by Dr. Buzzard, in the *Practitioner*.(c)

We have now said as much as we feel justified in saying in these papers on the medical uses of electricity. The subject is one of very great importance in the treatment of disease, and we might very easily have much extended our notice of it, for it is one of constantly widening importance. But, as we said at the outset, we pretend only to treat of the most clearly ascertained uses of electricity in medicine, and leave almost entirely untouched the many conditions in which it may yet be found of service. We venture to hope, however, that we may help a little in stimulating practitioners to the careful study and employment of it, and we will close our brief notices with Dr. Russell Reynolds's words to his readers —"Electricity is one of the most powerful agents that you can employ in the treatment of disease; but it is useful, useless, or mischievous, according to the manner in which it is applied." The Why, When, and How of its application are, each and all, of great importance. Our knowledge should be as exact and precise as possible of the pathological condition to be relieved or removed, of the kind of electricity to be used and the method of its application, of the time when to administer it, and the kind and amount of benefit to be looked for from its employment.

THE WEEK.

TOPICS OF THE DAY.

The General Medical Council cannot remain in Soho-square. The apartments modestly shared with the Dental Hospital will soon no longer be at their disposal, for we understand that the house is let to a "Hospital for Diseases of the Heart," to certain advertisements of which our attention has been on various occasions called, and the dentists have obtained a house in the wilderness of Leicester-square. The General Medical Council, therefore, is threatened with being literally turned into the streets—houseless and homeless. Our readers will remember that in the summer we announced in a spirit of faith and gratitude, which the attitude of the Government towards the Council seemed to warrant, that the Medical Council were to be provided with apartments in a Government building which was being erected at the corner of St. Martin's-lane. "Put not your faith in Cabinets" is a modern rendering of an ancient piece of sound advice. It is now understood that Government will only provide the Council with apartments on the Council agreeing to pay the Government a full rent for the same. Considering that the Government has the nomination of six members of the Council, whom they do not pay, we think this is neither generous nor equitable on the part of Messrs. Lowe and Ayrton. However, time is pressing, and it is understood that there must be an early meeting of the Executive Committee of the Council to take the matter into consideration. The term of office of four of the members nominated by the Crown—Dr. Parkes, Dr. Quain, Sir R. Christison, and Dr. Stokes—expires in the middle of next month. It is probable that one at least of these gentlemen will not desire reappointment.

(c) "Cases Illustrating the Employment of Central Galvanisation in various Sensory Disturbances," by T. Buzzard, M.D. (*Practitioner*, vol. i. 1873, p. 81 *et seq.*).

The visitation of examinations continues. The reports from Ireland are said to be good. Scotland is now receiving the attention of the visitors. From all we hear we believe that the visitation of these examinations is likely to produce most valuable fruit.

The report of the Hospital Sunday Fund Committee has been made public, and shows that the total amount received to September 4 last was £27,700 8s. 1d. This sum was principally made up as follows:—Collections at nearly 1100 places of worship, £25,743; collections at 88 schools, £112 11s. 8d.; from workmen, £244 7s. 6d.; sundry donations, £1489. The expenses included many items which the Committee state are not likely to occur again, and amounted to £750 8s. 10d., being rather more than 2½ per cent. on the sum collected. There is no doubt that some unavoidable outlays were incurred in the inauguration of this undertaking, and it is to be hoped that on future occasions the expenditure will be smaller for the collection of a much larger sum of money. A further report of the Committee of Distribution shows that of the sum collected £24,571 was awarded to general and special hospitals, and £2185 to fifty-three dispensaries and other medical charities. A great deal of care and attention were bestowed by the Committee in adjusting the various donations and selecting the most necessitous and the most deserving charities for the benefits to be conferred, and the public may be very satisfied that the money contributed by them has been equitably and usefully distributed. The Committee recommend the establishment of what they term "provident dispensaries," to be made as near as possible self-supporting, by a monthly payment from a large number of members, thus constituting the medical attendance which they require a right rather than a favour. They imagine that there are many persons in London who now obtain gratuitous medical assistance who would be willing to pay something for their medicine and attendance, but who cannot afford to incur a doctor's bill, and who yet feel much reluctance in accepting charity. This class of persons use the hospital or dispensary solely from their inability to discover any system of medical relief within their means, and in these days of co-operation should be encouraged to extend a feeling of independence which helps them to be provident, and tends to relieve the pressure which at present exists upon the resources of many of our large charities. There is, of course, nothing new in this proposal. The only difficulty is how to prevent the provident dispensary being abused.

GYMNASTICS AND THE ARMY.

Amongst many modern institutions and improvements for the well-being of the British soldier the gymnasia which have been added to most of the large barracks and stations are worthy of special mention. As a means of amusing the men, whilst adding greatly to their muscular development and physique, they are unrivalled; and, wisely recognising the importance of fostering in the ranks a popularity for this species of recreation, the Duke of Cambridge gave his consent to a grand field-day of military athletic sports being carried out at the Crystal Palace on Monday last. In France and Germany so much importance is attached to this branch of a soldier's education, that gymnastics form a part of the regular drill. In this country the advantage of rendering men agile and active has only lately dawned upon the authorities at the War Office. However, upon the occasion in question a very creditable display of stamina and agility was provided, and it is to be hoped that this public encouragement and recognition will be continued. With battalions considerably beneath their proper strength, and a paucity of recruits presenting themselves—to say nothing of the enormous drain brought about by desertions consequent upon the unpopularity of the army

service as it now stands (with its short term of service and want of pensions)—it becomes incumbent upon us not only to show the soldier that even in his amusements the country takes an interest, but also to lead his recreation into such channels that those whom we really do possess may at any rate be made thoroughly effective.

THE MEDICAL SCHOOLS.

The annual registration of gentlemen pursuing their professional studies at the eleven recognised metropolitan hospitals was brought to a close at the Royal College of Surgeons on Wednesday, the 15th inst. It is understood there will be a small addition to the undermentioned, by permission of the President, of gentlemen unable to reach their respective schools from illness and other unavoidable circumstances:—

	Total number registered.		Fresh entries.	
	1873.	1872.	1873.	1872.
Guy's Hospital . . .	304	319	89	83
St. Bartholomew's Hospital .	273	254	100	79
University College ,, .	270	273	63	83
St. Thomas's ,, .	184	156	53	51
King's College ,, .	139	120	45	35
London ,, .	114	91	36	31
St. George's ,, .	114	108	35	47
Middlesex ,, .	80	47	38	22
St. Mary's ,, .	65	61	22	21
Charing-cross ,, .	41	48	13	20
Westminster ,, .	24	19	10	4
Totals	1608	1496	504	476

From the above it will be seen that there is an increase of 112 in the total number, and of twenty-eight in the new entries over the number registered last year.

The following table, showing the fluctuations in the registration during the last ten years, will no doubt be read with some interest by metropolitan teachers and others taking an interest in medical education:—

In 1864 the number of students registered was				. .	995
1865	,,	,,	,,	. .	1013
1866	,,	,,	,,	. .	1027
1867	,,	,,	,,	. .	1125
1868	,,	,,	,,	. .	1194
1869	,,	,,	,,	. .	1241
1870	,,	,,	,,	. .	1298
1871	,,	,,	,,	. .	1475
1872	,,	,,	,,	. .	1496
1873	,,	,,	,,	. .	1608

The returns from the provincial schools have not yet been received. In both returns a margin must be left for several gentlemen still continuing their studies for the Fellowship of the College of Surgeons, which necessitates a more extended curriculum. There is, we are informed, an increase in the number of students pursuing their studies for the diploma in dental surgery.

CHOLERA IN NAPLES.

Cholera has not yet disappeared (says the Naples correspondent of the *Times*, writing on the 5th instant), and quarantine at Nisida, and fumigation at every landing-place, are in full force. The cases for the last four days have been 14, 9, 10, 14, while the deaths have been 5, 9, 8, 13. During the week which closed yesterday there were 96 cases and 77 deaths. From this great fatality it is evident that the malady is of a severe type, and if it has not spread so widely and rapidly as might have been expected, it must be attributed to the sanitary measures which have been so promptly adopted, and to the energy and unwearied activity of the authorities. A few cases of cholera have appeared in the province of Caserta, six having been registered up to October 1, and two deaths, but the coast of the bay and the islands are "clean."

WHAT'S A "ROOKERY."

Some complaints were recently made at an inquest by Dr. Lankester on the unsanitary state of Mitre-court, John-street, Smithfield, which the coroner said was "a disgraceful rookery." Dr. Gibbon, the Medical Officer of Health for Holborn, visited the court on the day following the inquest, and has reported the result of his visit to the Vestry. He found that the room in which the deceased child died had been cleansed and limewashed four months previously, and that the closet, water-cistern, and dust-bin were in good order. Dr. Gibbon admits that the court is narrow and rather confined, but is not prepared to recommend the closing of the court, because there never has been any amount of preventable disease which would justify such a course. Dr. Gibbon felt it necessary to write to Dr. Lankester to ask him what meaning he attached to the word "rookery," and to specify the sanitary defects that he observed. In reply, the coroner informed him that the court was "structurally unfit for human habitation in consequence of the narrowness of the passage leading to the houses, and the single rooms had no ventilation. He did not go into the three other houses, but seeing them full of dirty children he thought the court might with great propriety be called a rookery." The court consists of four houses, containing twenty-five adults and twenty-one children. With the exception of the family in which the deaths occurred, Dr. Gibbon thought the children clean and healthy-looking. The rooms, with this one exception, are not dirty or over-crowded. In this room there were 250 cubic feet of space to each adult, reckoning the two children under three years of age as one adult. The Works Committee recommended that in future, where the conduct of the Board was likely to be inpugned, Dr. Gibbon attend the inquiries.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The first meeting of the eighteenth session of the above Society was held at the Royal Kent Dispensary, Greenwich-road, on Friday, October 3rd, at eight p.m.; Dr. Ralph Gooding, President, in the chair. The following gentlemen were elected office-bearers for the ensuing session, 1873-74:—*President:* Frederick Moon, M.B. *Vice-Presidents:* John Anderson, M.D.; John Prior Purvis, M.R.C.S. *Council:* John Moulden Burton, F.R.C.S.; William Carr, M.D., F.R.C.S.; William Lockhart, F.R.C.S.; J. W. Walker, M.D.; Charles Nind, M.R.C.S.; Ralph Gooding, B.A., M.D.; J. N. Miller, M.D. *Treasurer:* Prior Purvis, M.D. *Secretary:* Harry Knight Hitchcock, M.R.C.S. *Librarian:* J. B. Saundry, M.R.C.S., L.R.C.P. Dr. Moon then took the chair as President, and proceeded to deliver an inaugural address. The next meeting will be held on Friday, November 7, at the Royal Kent Dispensary, Greenwich-road, at eight p.m. precisely. Mr. William F. Teevan, B.A., F.R.C.S., will read a paper on "Retention of Urine, Causes and Treatment."

MANCHESTER ROYAL SCHOOL OF MEDICINE, INCORPORATED WITH THE OWENS COLLEGE.

After the address, introductory to the medical session, by Professor Arthur Gamgee, M.D., F.R.S., on Wednesday, the 8th inst., the following scholarships and prizes were distributed by George Southam, F.R.C.S., Director of Medical Studies. The School award of Scholarships and Prizes, session 1872-73.—Third Year's Scholarship, value £20—H. M. Lightoller, Chorley; First Prize, value £5 5s.—W. Smith, Ashton-under-Lyne; Second Prize, value £3 3s.—F. Newsham, Great Eccleston; Third Prize, value £2 2s.—C. E. Smith, Preston. Second Year's Scholarship, value £15—T. Anningson, Burnley; First Prize, value £5 5s.—J. J. K. Fairclough, Northenden; Second Prize, value £4 4s.—F. H. Grosholz, Altrincham; Third Prize, value £3 3s.—H. Burton, Manchester; Fourth

Prize, value £2 2s.—No award: Certificate of Merit—T. Gallimore, Rusholme. First Year's Scholarship, value £10—S. Harris, Higher Ardwick; First Prize, value £5 5s.—H. Tomkins, West Gorton; Second Prize, value £4 4s.—J. H. Wylde, Stretford-road; Third Prize, value £3 3s.—E. Jackson, B.A., Whalley Range; Fourth Prize, value £2 2s.—J. Newton, Heaton Chapel; Certificate of Merit—A. K. Ludlam, Salford. Dumville Prize in Surgery, value £20—F. W. Jordan, Manchester. Platt Exhibition in Physiology, value £25—C. E. Richmond, Manchester. Certificates of Honour, 1872-73.—J. Buxton, W. H. Clarke, G. F. Coles, J. J. K. Fairclough, G. Fitton, F. H. Grosholz, J. Hampson, J. W. P. Hosking, G. Kisby, G. L. Lennon, J. E. Looker, W. S. Merriman, J. Priestley, G. T. Schofield, W. W. Settle, J. B. Stelfox, H. Tomkins, W. H. Vickerstaff, W. Walker, V. A. Wartenburg, J. T. Watts, W. Whittaker, W. Wood, F. H. Worswick.

LIVERPOOL MEDICAL INSTITUTE.

On Thursday, October 9, the President of the Liverpool Medical Institute, Dr. John Cameron, gave a *conversazione* to the members and other gentlemen, the guests numbering about two hundred. The entire suite of rooms was thrown open, and the walls hung with a choice collection of pictures that were lent by their owners for the occasion. In the library there were exhibited a great number of most elegant specimens of porcelain and other ware, mostly of English manufacture, and of various dates, so as to illustrate the development of the art in England. Ancient books, microscopes, modern physiological instruments, and a series of the rarer and more recent pharmaceutical preparations, forwarded by Messrs. Abraham, Delf, and Syme, were also present for examination. A short address of welcome and introductory to the work of the session was given, at nine o'clock, by the President, in the large theatre.

VERBA NON FACTA.

The *Oswestry Advertiser* observes, on the appointment of the Medical Officer of Health for Newton, that "£20 a year cannot be regarded as much more than a nominal salary for a professional man, but we may hope that Mr. Cockburn Smith, who has been appointed Medical Officer of Health, will discharge the duties *eon amore*, and win something better than money. The medical profession has earned an honourable distinction by the readiness with which many of its members labour for the welfare of mankind with slender hopes of reward, and the delight which they take in a pursuit that has for its object the alleviation of human sorrow." Whatever disadvantages the members of our profession labour under, they cannot complain of the want of eulogy and a wordy appreciation of their services. Whether in Parliament, in the pulpit, in the press, or in society in general, compliments are showered upon them to any extent. It would be well for the profession if the adulation were accompanied with something like substantial reward for their self-sacrifice and their disinterested labours in the cause of the public welfare.

PROSECUTION OF ADULTERATORS.

We agree with the remarks of Mr. S. A. Brooks, made at the Clerkenwell Vestry last week on a matter brought before them connected with the office of analyst, that if they left it to the Vestry to prosecute parties who adulterated their goods, he was afraid the thing would go by favour, for no vestryman would be prosecuted on the recommendation of a committee. It should be left to the analyst to prosecute before the police magistrate, independently of the authority of the Vestry. The analyst should be unshackled, and have absolute control and discretion over these prosecutions against offenders under the Act.

CAN IT BE TRUE?

Owing to the practice of sending (says the *Gloucester Journal*) the washing from the infirmary to be done by the prisoners at the gaol, a female warder died there a few days since from typhoid fever. Inquests, it is stated, have been held upon prisoners who were alleged to have contracted fatal diseases by contact with the infirmary clothes, and in more than one case juries have added to their verdicts recommendations that the practice alluded to should be discontinued, but it has been persisted in. We should hope the above statement cannot be correct. That the recommendations from the coroner's court should not have received proper consideration from the governing bodies of the infirmary, and the practice complained of still continued, is almost incredible. This is a case which demands the immediate attention of the authorities. We trust they are able to exculpate themselves from, apparently, great neglect and a grave responsibility.

PUBLICITY *versus* ADULTERATION.

The South London Grocers' Association has addressed a letter to the Bermondsey Vestry, complaining that the names and addresses of shopkeepers whose articles had been analysed were published in the newspapers. The Association was of opinion that the names being given in cases where the articles were pure gave those interested an undue advantage over the tradesmen whose articles had not been tested. The Vestry decided that they had no right to interfere with the press, to whom the letter should have been addressed. As the whole object of the Adulteration Act is the prevention and punishment of fraud on the part of the purveyors of articles of food and drink, we think the publication of the names of the defaulters is absolutely necessary for carrying out the purposes of the Act.

DISCRETION THE BETTER PART OF VALOUR.

The Local Government Board, after having investigated the circumstances which led the St. Pancras Guardians to suspend Dr. Purcell, one of the medical officers of the parish, has superseded the decision of the guardians. After some high words of protestation and threats of defiance at the rebuff thus administered, the guardians ultimately and wisely, although reluctantly, decided "to let the matter drop." Consequently Dr. Purcell has resumed his duties. We have always contended that a medical officer's position and reputation are safer in the hands of a Government board than of a board of guardians. This is a case in point.

POOR-LAW MEDICAL RELIEF.

From a return prepared by order of the Poplar Board of Guardians, it appears that the number of persons supplied with medicines from the several dispensaries in the Union had greatly diminished during the past five years. The numbers of cases dealt with in 1869 at these establishments were as follows:—Poplar, 8624; Bow and Bromley, 5327; South District, 2231; whilst during the twelve months ended at Michaelmas last the respective numbers were 4933, 2198, and 932. We believe this satisfactory diminution of the number of applications for medical relief is due to a more stringent inquiry into the real necessities of the applicants.

SURELY A QUIBBLE!

A firm of grocers of extensive business in Liverpool have been fined £5 and costs for selling tea which was found to be adulterated with 6 per cent. of metallic substance. For the defence it was argued that tea as sold in the leaf was neither food nor drink within the meaning of the Act of Parliament. The magistrate over-ruled the objection. Notice of appeal was given by the defendants.

ALLEGED CURE OF LEPROSY.

THE *Friend of India* reports that the Madras surgeon in medical charge of the penal settlement at Port Blair believes he has made a valuable discovery in the cure of leprosy. He is of opinion that leprosy can be cured by the oil of the gurjun tree. Every leper in the settlement is, it is stated, being cured fast of this loathsome disease. In no case has there been the slightest failure, and the disease has been arrested at every stage.

FROM ABROAD.—TRANSFUSION IN CHOLERA—THE SULPHATES AS A CAUSE OF EPIDEMIC GOÎTRE—VACCINATION OF ERECTILE TUMOURS—SMALL-POX AT BICÊTRE DURING THE SIEGE.

DR. STADTHAGEN, Physician to the Shed Hospital at Moabit, Berlin, communicates (*Berlin. Woch.*, September 22) a case of cholera in which he performed transfusion with success. The patient, a woman 29 years of age, was brought to the hospital on August 26 with her two children, her husband having died shortly before of cholera. Prodromic diarrhœa had set in the day before, and during the night had become excessive and watery, and was soon accompanied by vomiting. On her admission at 10 a.m. she exhibited all the signs of a commencing collapse. Her skin was flaccid and cold to the touch, and the face and extremities were covered with cold sweat. The thermometer stood at 36° Cent. in the axilla, and 38° in the anus. Folds of the skin only slowly recovered themselves. Pulse 90, and small. The abdomen was flattened and fluctuating to pressure, but nowise tender. The abundant stools had the characteristic rice-water appearance, as had the matters which were vomited. Great thirst. From time to time there were cramps, and the patient complained of a sense of constriction of the chest and of painful pressure at the epigastrium. In spite of all means employed, the collapse continued to increase, and when seen at 8 p.m. the change in her countenance told plainly of the extremity which she had reached. The extremities and lips were cyanotic, and the pulse and second sound of the heart could no longer be perceived; the temperature, too, had sunk to 35·4° in the axilla, and 37° in the anus. No urine had been passed for fifteen hours, and the stools came away unconsciously. In consequence of this condition of the patient, and of the great mortality that had attended the commencement of this epidemic, a very bad prognosis was delivered, and it was determined to have recourse to transfusion. About 180 grammes of defibrinated blood were injected into the median basilic vein by means of Uterhart's syringe. The operation was performed without any obstacle, the patient being scarcely sensible of it. While the blood was being propelled, the pulse, which had almost disappeared, could again be plainly perceived. An equable diffusion of bodily heat was also sensible to the hand, the peripheric parts therefore having had their temperature much raised. One hour afterwards the temperature was 36° in the axilla and 37° in the anus; the appearance and general feeling of the patient undergoing corresponding improvement. At first several stools and vomiting of colourless matters still continued, but gradually diminished in number, and then assumed a bilious colour. The reaction, though slow and delayed during several days, yet met with no disturbance, the diarrhœa and nausea continuing for some time. The temperature during the three following days varied from 36·2° to 36·8°, and only on the evening of the fourth day reached more than 37°. Some highly albuminous urine was first passed after three days of anuria, and the first solid stool took place on the tenth day. The woman was discharged well on September 7.

In a second case the operation was tried without a good result. The patient, thirty-four years of age, had been passing rice-water stools for fifteen hours, and all the cholera symptoms were developed in a high degree. Neither the pulse nor the second sound of the heart could be perceived. During and immediately after the injection of blood the pulse could again be felt, and there was a temporary amelioration in other symptoms. The patient, however, died twenty-four hours after the transfusion.

In reference to the epidemic of goître which has broken out among the young soldiers at St. Etienne (*Medical Times and Gazette*, Sept. 27, p. 372), Dr. Bergeret has just made a communication to the Académie des Sciences, pointing out the influence of the sulphates in the production of this disease. He states that before the year 1835 all the inhabitants of Saxon in the Valais were either goîtrous or cretins. They then drank water derived from a bank of gypsum, which on analysis was found to furnish one gramme of sulphate of lime per litre, beside some sulphate of magnesia. In 1835 the potable water was derived from a spot situated far above the bank of plaster; and since then goître has much diminished. The children are no longer subject to it, and before long the disease will probably have disappeared.

But how does this fact go to explain the occurrence of goître at St. Etienne, where the water is of such excessive purity that photographers use it in place of distilled water? It is, in fact, rain-water which falls on the primary rocks of Mount Pilate. The cause is to be sought for in the excess of sulphates which gain access to the circulation through an exaggerated muscular "detrophia" induced by forced exercise. In fact, as long since observed by M. Chevreul, in order for the health of an adult to be maintained good he should weigh the same at the same hour every day—that is to say, that the anatomical elements, the tissues and organs, should receive assimilable principles of an equal weight to that of those which are destroyed, in order to maintain the animal heat and to execute the mechanical work imposed upon them. If what is received does not equal what is expended, consumption or anæmia takes place. This is what is observed in the goîtrous soldiers in barracks who are subjected to excessive work and who are not fed proportionally to the amount of force they are called on to expend. It is a phenomenon which presents some analogy to what was observed among the French labourers engaged during the construction of the Du Nord Railway, and later in certain factories. On the other hand, we know that when a muscle is employed with force and continuity, or when it is submitted for a certain time to the action of a continuous electrical current, such muscle, burning its own substance, becomes acid, and that the acids produced are the sulphuric and phosphoric, at the expense of the sulphur and the phosphorus contained in albuminoid principles. Under the conditions of excessive work, then, a man has circulating in his blood an abnormal amount of sulphates, absolutely the same as if he had drank water loaded with gypsum. This is what has occurred to the soldiers in the barracks suffering from goître. In support of this theory, M. Bergeret cites analyses of urine showing that the sulphates precipitated are three or four times more abundant during the existence of goître than in the normal state.

M. Larrey, in relation to goître in young soldiers, observed that it as well as enlargement of the cervical glands were formerly of much more frequent occurrence than at present, the cravat having been substituted for the stiff military stock formerly in use.

M. Blot brought the subject of vaccinating erectile tumours before a recent meeting of the Société de Chirurgie. He observed that since he had undertaken the vaccinations performed at the Académie de Médecine, a week did not pass without the parents or medical attendants of infants bringing them to have vaccination of erectile tumours performed. To

pretend to cure an erectile tumour in this way is to commit an error. Blood flows away, and the vaccine does not take, or, if it does take, a small cicatrix and nothing else is the result. Erectile spots (*taches*) may be thus cured, but for erectile tumours vaccination is insufficient, and may give rise to serious hæmorrhage. M. Tillaux stated that he had cured a true erectile tumour the size of a nut by vaccination, traversing the tumour in the direction of its long axis by a fine needle, followed by a thread imbued with the virus. Another thread was then passed in a direction perpendicular to this. M. Sée had cured an erectile *tache* by surrounding it with a circle of vaccinal punctures made in the sound skin. M. Marjolin was of opinion that vaccination should always be first attempted, whatever may be the seat, extent, or depth of the erectile tumour. In a tumour of two centimètres in diameter he makes from thirty to forty vaccine punctures with an excessively fine needle, sliding the skin over the tumour before puncturing. M. Desprès related the case of his own child, who was born with an erectile tumour at the end of the little finger. At the end of six months, as it was increasing rapidly, a simple vaccinal puncture was made at its most projecting part, and this sufficed to effect a cure. M. Chassaignac agreed with M. Blot, for to vaccinate in these cases is only to lose time and expose the patient to the danger of erysipelas. When a cure is accomplished, this is not brought about by the vaccine virus, but by the consecutive inflammation. M. Blot, however, did not wish to speak so absolutely as this, for superficial slight *taches* may be cured by vaccination. But it is not suited for voluminous, deep-seated tumours. If out of fifteen punctures only three or four take, some other means must be resorted to; and M. Blot much dreads erysipelas in new-born infants. M. Marjolin, when he stated that he applied vaccination in all cases, did not mean that it always succeeded. But the inflammation which accompanied the vaccinal evolution ought to be utilised; and when but partial success was obtained, there would be a better chance for any other procedure, or a spontaneous cure may result. M. Guéniot has frequently met with a slight vascularisation of the dermis of the eyelids or lips in new-born children. A large proportion of these *taches*, however, disappear spontaneously within the first six months. M. Tarnier has also observed this vascular development disappearing spontaneously, and which is not of the nature of an erectile tumour. Many of these infants present no *tache* during the first few days after birth; then a red elevation appears, which increases, especially in breadth, the vessels being very minute. In the process of spontaneous cure a whitish tissue appears on the centre of the *tache*, and gradually replaces the red tissue. These cases should be watched for some months, and if the *tache* increases, in place of disappearing, vaccination should be tried.

Professor Colin, of the Val-de-Grâce, communicates an interesting paper to the *Révue Scientifique* (October 4) on the utility of wooden hospitals for the reception of patients in epidemic variola. He founds his suggestions upon the experience he has derived from the treatment of 8000 soldiers the subjects of variola during the siege of Paris, and who were accommodated at the Bicêtre Hospital. He examines into what are the results of so large an agglomeration, first on the patients themselves, and then on those in attendance upon them and on the surrounding population.

1. When one considers the immense amount of purulent discharges that are produced in variolous patients distributed over sixty wards, each containing from twenty-five to thirty beds, it is obvious that if anywhere the atmosphere ever becomes saturated with contagious germs it must have been so at Bicêtre. And yet this assemblage of so large a number of cases does not seem to have aggravated the affection; and the mortality did not exceed that observed in the Val-de-Grâce and other ambulances. This is but a new proof that in diseases of a distinctly specific virulent nature, having, so to say, their evolution determined beforehand, the fate of the patient depends much more on the energy with which the contagious germ has impressed itself upon him than upon the circumstances of the medium amidst which he undergoes the disease. Would the same innocuity have been observed if, in place of small-pox, typhus, dysentery, or wounds had been the affections to be treated? One accident of the disease, ophthalmia, seemed to have been aggravated by this concentration of cases, and consequent emanation of pathological products.

2. The *personnel* of Bicêtre, nearly two hundred in number, suffered little from variola—one alone dying from it. Of forty medical attendants, none took the disease, in spite of the negligence of most of them in respect to vaccination. Still more remarkable was the complete exemption of forty *religieuses* who lived in the centre of the hospital, and tended the patients day and night. It would seem, therefore, that a mass of variolous patients, shut up in an establishment, does not render the transmission of the disease much more certain. On the contrary, there is probably a certain degree of immunity produced by the very fact of a long sojourn in the midst of these variolous patients, and that there is more danger of contagion for persons merely visiting these patients than for those living close to them.

3. The vicinity of Bicêtre was incontestably noxious to the garrisons quartered near it, and which were in communication with the military staff quartered in the centre of the hospital. The same may be said of soldiers billeted in some adjoining houses, near which the patients had to pass on entering and leaving the hospital. But the germs of the disease seem to be incapable of being transported far; and a fort about a hundred mètres distant from Bicêtre, with which it had no personal communication, remained free from the disease. This shows that there is no necessity for such establishments for the reception of variolous patients being placed at a great and inconvenient distance from inhabited parts of a town. These facts are confirmed by analogous observations made by the leading physicians of Paris.

In M. Colin's opinion, there is no disease so suitable for the application of the hutting system of construction of hospitals; and if during the siege of Paris a sufficiency of huts had been erected in advance, or the dearness of wood had not afterwards prevented their construction, he would gladly have availed himself of them. It is true that such constructions protect less from the vicissitudes of weather than do ordinary hospitals; but of all serious diseases variola is that which, within certain limits, best withstands such vicissitudes. And while the temperature of sheds cannot be raised in winter sufficiently to allow of our placing the wounded in them during this season, this consideration does not apply to cases of variola. Not only would this mode of construction enable us, in imitation of the Americans, to destroy by fire hospitals that had become contaminated, but it would easily admit of change of site when this for economical or sanitary reasons had become desirable. The speed with which such erections can be raised during an epidemic, and removed after its cessation, is an additional advantage.

Prevention of Tormenting of Horses, etc., by Flies.—M. Rochard, a veterinary surgeon, describes a simple and economical means of preventing the suffering which is induced in horses and other animals by the persecution of flies; and which our provincial readers will probably be induced to try. It consists in painting with a pencil the insides of the ears, or other parts liable to be bitten, with a few drops of empyreumatic juniper oil (*huile de cade*). Insects will not approach the parts so painted, and the cost of the oil is trifling. —*Journal de Connaissances Méd.*

CLINICAL REMINISCENCES.—No. III.

By PEYTON BLAKISTON, M.A., M.D., F.R.C.P., F.R.S.

Hysteria.

Those who have passed the greater part of a long life in medical practice must have seen numerous cases of hysteria in which almost every form of disease to which the human frame is heir was simulated.

An endeavour to lay down a code of laws by which a young practitioner would be enabled to distinguish between an attack of inflammation and its hysterical shadow would be attended with about as much success as the efforts of Sisyphus. I shall, however, touch on a few cases presenting peculiar features, and carrying with them a moral.

One of the commonest forms is that in which disease of the spine is simulated, of which the following case furnishes an instance:—About thirty years ago I was summoned to a single lady, twenty-nine years old, who was on a visit in the neighbourhood. I found her suffering from what was supposed to be disease of the spinal column. She could not put her feet to the ground. She had been nine years under the care of a medical man at Bath of some notoriety, and had been treated by him for disease of the spine. She had been repeatedly leeched, cupped, and blistered, and on each side of the spine were marks left by the use of moxas, actual cautery, etc. On careful examination not a trace of disease was to be discovered in any one of the vertebræ—no thickening, no absorption, no anchylosis,—and perfectly normal motion existed throughout the column. Mr. Hodgson, having met me in consultation, came to the same conclusion. Yet this poor lady had been kept in a recumbent position till she had lost the use of her legs, had from time to time been tortured by most painful remedies, for the cure of a disease which never existed; whilst her slender means had been reduced by the sum of 700 guineas, which she had at different times paid to her medical adviser. And the man who had thus acted escaped scot-free! whilst a poor man, whose family was starving, would be severely punished for stealing a loaf of bread. Some mild tonic medicine was given, and she was ordered to endeavour to regain the use of her legs by the aid of crutches. Some months afterwards, having a consultation at Clifton, I went over to Bath, and saw her with the late Mr. John Soden. She was then getting on very well with her crutches. I heard of her about two years since as being seen regularly at church; but I could not learn whether she had regained complete use of her legs.

About the same time I was sent for to see the wife of a collier butty, near Dudley. She had been attended by a medical man in the neighbourhood for sixteen years, during which time she had never left her bedroom. He had been treating her for "disease of the back," and made some excuse for not meeting me in consultation. On more than one occasion he had salivated her, and had received from her husband sums of money which had caused a serious drain on his resources. I could not find a trace of disease about this woman, although she seemed enfeebled both in mind and body. Had I told her this, of course she would have disbelieved me, and probably have gone on in the same manner she had been doing for these sixteen years. So I told her I knew perfectly well the nature of her complaint, and how to cure it; that she would never get well so long as she remained confined to her bedroom; and that medicine would be ordered for her which would give her power to leave it, and that in three or four days' time she must do so. She protested that it would be impossible, but was told that unless she promised faithfully to make the effort she should not be prescribed for. She promised; some quinine pills were ordered for her; she went downstairs in three days, and made a rapid and complete recovery. A few months afterwards I found this person playing the same trick, and I then exposed him.

Cases in which the medical attendant is himself deceived are far from uncommon; occurring occasionally when he is a man of some age and experience. Some years ago I attended a young lady, aged 18, living in the neighbourhood of Birmingham, in a well-marked attack of hysteria, from which she recovered. Three years afterwards she had inflammation of one knee, and her medical attendant had come to the conclusion that the leg must be amputated; but before this was fully determined on it was decided that a consultation should be held on her case, and Mr. Hodgson was asked to see her. But as his engagements would not allow of his doing so at that time, her friends preferred my seeing her to calling in a fresh surgeon who was a perfect stranger to her. I found her knee excessively painful, particularly to the touch; much swollen, with some fluctuation, but not, as it appeared to me, caused by fluid in the joint. I at once recognised the inflammation as being of an hysterical character, such as I had seen two or three times in the Birmingham Hospital. The medical man in attendance was past middle age, of sound judgment, and in large country practice, but he had never seen an hysterically inflamed knee. The friends were told that possibly amputation might not be necessary, and that an effort would be made to save the leg, although a stiff joint might remain. Some cold lotion was applied, and some medicine given, the exact nature of which I do not remember. In a week's time Mr. Hodgson accompanied me, when we found the inflammation much reduced, and he agreed with me as to the nature of the affection. Curiously enough, owing to her obstinacy, she had a stiff joint for about eighteen months. Eventually, however, she recovered the perfect use of her leg, was soon after married, and has now a grown-up family.

There is another class of cases in which the hysterical simulation of disease after a certain time is succeeded by the real disease. A single lady, aged 26, had for four or five years exhibited symptoms of hysteria in various forms, but there was almost always some cough, and she became very thin, which, however, might in some degree be accounted for by the existence of a pernicious habit which she had doubtless contracted and had practised some years, as there was reason to believe. The chest was repeatedly examined, but no physical signs of disease were detected, although she had every appearance of being consumptive. After an absence of six or seven months she applied for advice, suffering from cough and expectoration, which appeared for the first time. It was then ascertained that a tubercular cavity existed in one lung. The disease spread rapidly, and she sank.

A lady, separated from her husband on account of her eccentric but not immoral conduct, the mother of three children, was placed under my care in preference to being sent to an asylum, to which a strong objection existed on the part of her friends, although it would have been more suitable to her case. In addition to her eccentricity of manner and conversation, it was supposed that her lungs were delicate, and that a residence on the south coast might be beneficial to her health. With the exception, however, of a dry cough—which is very common in cases of hysteria—I never could detect any physical sign of disease in the lung. One marked feature in her case was a habit of feigning diseases. On one occasion she complained of pain in the abdomen, and violent retching and vomiting came on. The pulse was quiet, and there was no other disturbance of the system. On inquiries being made amongst the druggists, it was ascertained that she had purchased antimonial wine, so at my next visit she was informed that the vomiting and other symptoms she had recently had were caused by antimony, at which she feigned great surprise, as "she had never taken any medicine other than had been prescribed for her." She was told that the druggist had possibly made a mistake, and that the medicine must be discontinued. The vomiting forthwith ceased. On another occasion an eruption was produced by means of some irritating drug she had procured, and she was treated in a similar manner. She was thus led to understand that, although her practices were known and would be thwarted, she would not be exposed or treated harshly, and she ceased to practise them. But she took every opportunity of conversing with a neighbouring clergyman, and whoever else she could get to listen to her, telling them the most extraordinary tales about her ailments and her friends, which had not the slightest foundation in truth. One or two persons were told of her peculiar state of mind, but as everyone could not be told, and it was not thought desirable to shut her up, I advised her removal to a smaller place at some distance off, where she was placed in the family of a trusty and judicious medical man. She had not been there long when she had an attack of hæmoptysis, which was followed by another in a few months, when undoubted signs of pulmonary phthisis developed themselves, and she died from the effects of a bloodvessel bursting into a tubercular cavity. It may be supposed by some persons that in this case phthisis had commenced before the appearances of the symptoms of hysteria, but as I myself carefully and fre-

quently examined the lungs, and as there was not the slightest acceleration of the circulation, I feel satisfied that such was not the case.

In another case—that of a young lady aged 21—I was for a long time doubtful whether phthisis and hysteria were not co-existent, for I detected from the first some dulness on percussion and prolonged expiratory sound and vocal resonance in a small spot under the right clavicle; but as month after month, and year after year, these physical signs never altered, I came to the conclusion that they resulted from an attack of congestion or inflammation during childhood, and that hysteria was the sole complaint under which the patient laboured. She is now about forty-seven years old, is in good health, has the care of a widowed brother's children, and rejoices in her work.

I now come to a class of cases in which hysterical mania was joined with exaltation of the sexual passion; and I enter on it because such cases sometimes furnish a valuable lesson to the younger members of our profession.

A young lady, aged 18, came under my notice, having occasional attacks in which her reason was affected and her conduct was very strange. I found that these attacks were of an hysterical character, that they occurred at the menstrual period, and were attended with more or less of nymphomania. After a time the attacks became more prolonged, till they ran into each other, so that it was found necessary to place her under constant observation and control. In about two years' time they gradually shortened, but it was always necessary to keep a strict watch upon her during the menstrual period. About ten years afterwards a younger sister was attacked in a similar manner, but in her case the duration of the attack never exceeded three or four days, and between times she was sensible and in every way well conducted. I need hardly remark that in this and similar cases I never remained one moment in the room unless another female, if possible a married woman, was present. In the two following cases more painful results took place:—

About thirty years ago I was sent for to a distance to see a young lady, who was eighteen years of age, and was said to be in a strange state which caused her friends much anxiety. I found her not merely in a state of hysterical mania, but affected with nymphomania in a marked degree. It was clear that she was not in a fit state to be left where she was, and therefore I at once removed her and her maid in my carriage, and placed them in a lodging with a trustworthy person on whom I could depend. A surgeon of eminence was joined with me in attendance, and the patient was removed to a farmhouse, the occupiers of which were known to him. An old female relative came to reside with her, and the strictest orders were given that she should never be left one moment alone. Matters progressed much as usual for some months, when, on one of my visits, I observed symptoms which caused me some uneasiness. I immediately conferred with my colleague, and in a few days we visited her together, and came to the conclusion that there were strong grounds for supposing her to be pregnant, and yet at first we could find no evidence of her ever having been left unwatched. It appeared, however, that her relative had left her for a fortnight, during which time she sent for the maid for three or four days, the patient being left under the care of the farmer's wife, the mother of a large family, and well acquainted with the nature of the case. After a certain time it proved that our suspicion was well grounded, and that she actually was pregnant. She was immediately sent off to a first-rate asylum. Neither I nor my colleague, however, felt ourselves to be in a very comfortable position, as the friends knew of no other man ever having been in her company. Still, it was known that she had never been seen by either of us except in the presence of her relative, her maid, or the farmer's wife. The whole affair was mysterious. Luckily, after a short time, the wife of the medical gentleman who kept the asylum elicited the truth from her. It appeared that the farmer's wife was in the habit of rising before her husband to look after her household work, and that on one or two occasions, during the absence of the maid, our patient had got into his bed, and so become pregnant. Our annoyance and distress, as well as that of her family, was not diminished by knowing that we could not punish the scoundrel without publishing the disgrace of one of the highest families in the country. There was no improvement in her state after her confinement, and she remained for years and died a confirmed maniac.

Another case was that of a widow lady, aged 32, the mother of a small family. In her case, however, the symptoms of nymphomania predominated over those of hysterical mania. She was at once removed to an asylum, a step the necessity for which had been imposed upon me by the remembrance of the last-mentioned case. Here she was occasionally visited by a brother and sister, when her conduct and conversation appeared quite rational, so that after a time they entreated me to consent to her removal, and on my declining to do so, their language became violent and offensive. On her being removed, therefore, I washed my hands of the case, and pointed out to them what they might expect, for which I received little thanks. She had not been removed many months before she was found to be pregnant, and circumstances of a most painful nature came to light. She was sent back to the asylum, where she remained and died a few years afterwards. As much that occurred could not be concealed from observation, the misery produced in her family can be better imagined than described.

These cases disprove the correctness of the supposition, not uncommonly entertained, that the state of a patient in such instances is improved by gestation and parturition. Somewhat allied to the last class of cases are those in which there is a morbid craving for examinations, injections, etc., and which it has been thought has in some cases led to the too frequent use of the speculum; but no object would be gained by detailing such cases.

In my work on "Diseases of the Heart" I have recorded two remarkable cases in which hysteria simulated heart disease, so I will not refer to them here.

When in Paris, in 1832, I sometimes heard discussions respecting mesmerism as employed in cases of hysteria; and in 1835 M. Jules Cloquet told me he had removed a breast from a female who had been placed in a state of mesmeric trance, and who, on recovering from it, was not aware of any operation having been performed. In 1839, Mr. Hodgson mentioned his having seen some persons put under the influence of mesmerism by Dr. Elliotson, at the North London Hospital. He told me how the effect was produced, and by what means the subjects of it were restored to their natural state. At that time a large number of patients were in the habit of coming to my house twice weekly for gratuitons advice; and amongst them were some young women whom I thought, from Mr. Hodgson's description of those he had seen in London, were the sort of persons likely to be successfully acted on by mesmerism. Accordingly, on the entrance of a young woman suffering from hysteria, I commenced making some passes as I had been instructed to do, and in a short time, to my utter surprise, she suddenly fell down and remained in a perfectly unconscious state until she was restored to her senses, by my placing my thumbs on the inner edge of her eyebrows, and quickly drawing them across the eyebrows two or three times.

On another occasion I requested a friend to engage the attention of a young woman, and whilst this was being done, I made a few passes behind her, which she could not possibly see, and she too dropped as if she had been shot. I may mention that none of those who were operated on knew what was going to be done, nor had they ever heard of mesmerism. My astonishment was great, but it had not reached its height. Amongst my patients was a girl seventeen years old, who lived in a state of double consciousness, or, in other words, was subject to fits of a kind of hysterical mania. Her natural and hysterical state each had their separate memory, and were never confounded in her mind the one with the other; so that when she was questioned in either state about something that had occurred in the other state, she was frequently not only puzzled but annoyed, and burst out crying. She was naturally a quiet and rather reserved girl, but in her hysterical state she was the reverse—full of fun and mischief, restless and active,—but there was no impropriety in her conduct. She was more than once kept upwards of twenty-four hours under mesmeric influence, when her nose was actually burnt by the strength of ammonia which did not produce the slightest effect on her, and pins were introduced into her arms and legs with a like result. Bits of silver paper were also placed on different parts of the body, but none ever stirred from the spot whereon they had been placed. And now comes the most extraordinary part of the story. Whenever, after having been mesmerised, she was aroused out of the trance in a short time, she invariably was found to be in the maniacal state; but when left half an hour or upwards, and then aroused, she was always found to be in her natural state,—so that it was possible in this manner to restore her to her natural state. Something of the nature of mesmeric influence was thus revealed to us,

and shown to resemble that of opium—being first exciting and then sedative.

Now, whatever inferences may be drawn, here are the facts, and they were witnessed by all the leading medical practitioners of that day in Birmingham, and by some non-professional gentlemen, none of whom previously knew anything at all about mesmerism. It was decreed, however, that it should not, in my hands at least, become a therapeutic agent, for on employing it on a girl subject to epileptic fits I found their frequency and severity increased rather than diminished. On another occasion, a medical man residing on the opposite side of the street in which I lived having related what he had seen at my house to his wife, who was a highly hysterical subject, she asked him to send her to sleep, and he did so. In a short time he sent me a hurried message, begging me to come over as he could not awaken his wife out of a mesmeric trance into which he had thrown her. On my endeavouring to arouse her in the usual manner, a nervous and convulsive twitching of the muscles of one side of the face took place, and it was some time before she came quite round. For some months her hysterical symptoms were much exaggerated. Thus, finding mesmerism an uncertain and somewhat dangerous agent, I ceased making experiments with it, and never resumed them. Whilst I was making them I saw nothing of clairvoyance, as it is called,—of persons under mesmeric influence seeing objects through opaque substances or blindfold, or answering questions addressed to them; I simply learned that persons of a certain constitution, or in a peculiar state of health, could, by the motions of the hand of a second party, whether seen or not, be thrown into a kind of coma in which they were totally insensible to pain, and in one particular instance could by this means be restored from an hysterical to a natural state.

I wish it were in my power to throw any additional light on the treatment of hysteria, which would seem to be involved in as much obscurity as its nature and causes. In many cases the most successful treatment has seemed to be more moral than medical. Drugs that have seemed useful in some cases, have not produced the slightest effect in others, apparently similar. When, however, there has been reason to suspect the existence of congestion of the ovaries or neighbouring parts, a leech applied to the vulva, and the use of cold enemata and hip-baths, have certainly had very beneficial results. But change of scene and of occupation, when practicable, have done more good in my experience than any medical treatment whatever.

A GENERAL HOSPITAL FOR THE BRIGADE OF GUARDS.

[COMMUNICATED.]

We hear from a very good source that, in connexion with the inquiry into the position of the officers of the Guards with regard to the Line, that of the Medical Department is also to be investigated. Some time ago we drew attention to a suggestion made by Surgeon-Major Logie of the Blues, senior Surgeon of the Household Cavalry, for establishing a general hospital for the whole brigade of Guards. During this inquiry we trust this excellent idea will not be forgotten. Mr. Logie does not wish to change the present system of hospital management *in toto*, nor does he suggest any interference with either the appointment of medical officers or removal from their regiments; but he throws out this idea, that in the event of war it be thoroughly understood that the very instant regiments of the Guards are ordered to the field, then the medical officers of those regiments shall be entirely at the disposal of the principal medical officer in the field; for, as he justly says, what can it matter whether the signature is Surgeon of the 100th, Irregular Horse, or Guards? Neither does he suggest the expense of a change of uniform, stating that the red cross is quite sufficient for all field purposes. We rather think that this idea—of making it known to the whole Medical Department that those engaged in campaigns should consider themselves a general staff for the time being—would have answered all requirements, instead of doing away with the regimental system, which has always worked so well and so happily.

NÉLATON AS A SURGEON.

By Professor A. DESPRÈS.

We extract the following appreciation of M. Nélaton's characteristics as a surgeon, by M. Desprès, from a recent number of the *Révue Scientifique*:—

"Nélaton, one of the illustrations of French surgery, has just succumbed to a long and painful malady, attacks of which he suffered from during three years. Like Mirabeau and Dupuytren, he died of an affection of the heart. By the unanimous agreement of the surgeons of all countries, he was a model clinical teacher, and the Faculty of Medicine has rarely possessed a more lucid professor or one more apt to make good pupils.

"Auguste Nélaton, born in Paris in 1807, after years of solid work as *interne* of hospitals, where he was a pupil of Dupuytren, received his doctor's degree in 1836. After being appointed a hospital surgeon and *agrégé* of the Faculty, he encountered the *concours* once so brilliant, and was in 1851 one of the last professors chosen by its agency. His 'Traité de Pathologie Externe,' which he had then begun, and the brilliant commencement of his professorial career, obtained for him honours, practice, and reputation. The Academy of Medicine opened its doors to him in 1856, and in 1867 the Academy of Sciences summoned him to fill the place of Jobert de Lamballe. In 1868 the dignity of Grand Officer of the Legion of Honour and also that of Senator were accorded to him in recompense for his attendance on the son of Napoleon.

"Beyond the first volume of the 'Traité de Pathologie Externe,' Nélaton has written but little, so that he leaves very few works; but what he has done of these himself bears the impress of precision and good sense, that are scarcely to be found elsewhere than in Boyer's 'Traité de Chirurgie,' which Nélaton declared an imperishable monument. The chapters on phlegmons, amputations, fractures of the forearm, senile gangrene, together with the general observations on dislocations, contained in the second volume, are pages that have never yet been surpassed. Surgery, indeed, owes much to Nélaton. He it was who taught us that a ligature placed on a wound, even when suppurating, was preferable to any distant ligature in secondary hæmorrhage. The investigation of naso-pharyngeal polypi and their treatment, whether by the palatine button-hole or by electrolysis; the application of the preliminary suture before opening the intestine in enterotomy; the regularisation of lithotrity and pre-rectal lithotomy; the diagnosis of retro-uterine hæmatocele, of abscess and tubercle of bone, together with a crowd of other points, such as cricoidean laryngotomy—*i.e.*, opening the larynx through the cricoid, and excising a segment of this,—these are some of the different surgical procedures to which Nélaton's name has become attached. All these modifications have proved successful. They were first published in their theses by the pupils of Nélaton, and were at once accepted, possessing as they did that practical character which is always requisite to secure the durability of new procedures.

"All this, it is obvious, does not constitute any great discovery. It is rather, if we may so term it, perfected surgery. Nélaton, in fact, had the great merit—possessing much good sense and a reflecting mind—of being able to amend, correct, and complete anterior surgical conceptions. He knew how to disengage parasitic precautions or formalities from good procedures faultily presented, and to render these practicable. Caring little for theories, the spirit of which he, however, analysed with wonderful clearness, it was only the attempt which attracted him; but when he had made this, he rapidly seized any defective point of an operation, and at once rendered it applicable by means of a modification which everyone present declared it was easy to make, while forced to admit that until then it had never been discovered. This class of surgical conceptions explains the enormous success which Nélaton met with in practice—a success which, 'like all durable vogues in our country,' has always been legitimised by a real talent. Those who were pupils of Nélaton have learnt of him two things—the precious art of diagnosis in which he excelled, and the therapeutical indication. Here the surgical qualifications of Nélaton were quite remarkable. Never would he operate on his patients during his visits, always leaving time for reflection. If he felt in any doubt, he practised on the dead body the operation he was about to perform, and frequently

then conceived a modification (always a happy one) in his original plan of procedure. It may be said that Nélaton always operated at the proper time, and just as he should operate, never exceeding the limit he had proposed to himself. And thus in the eyes of his assistants he was often looked upon as fortunate in his operations; but when his pupils had become practitioners they easily recognised the fact that success in surgery oftenest waits on those who neglect no precaution and abandon nothing to chance. Possessed of these faculties, Nélaton was enabled to captivate that European surgical practice which, while it wore him out, imparted its glory."

GERMAN ASSOCIATION FOR THE ADVANCEMENT OF NATURAL SCIENCE AND MEDICINE.

(*From our Special Correspondent.*)

WIESBADEN MEETING, SEPTEMBER, 1873.

(*Continued from page* 423.)

ADDRESS BY PROFESSOR VIRCHOW.

On the Natural Sciences: their Relation to the Moral Edueation of Mankind.

PROFESSOR VIRCHOW commenced his address by reminding his audience that he had already handled a similar subject at their Hanover meeting before the Austrian war, and again in Rostock a second time and from another point of view before the war with France. He was proud to be able to say that after both these occasions history had speedily confirmed the views which he had expressed. It was not more than a year after their war with Prussia before the Austrians began to comprehend that even Romanism, the foundation of the old Austrian constitution, had become the cause also of its downfall. His Rostock address was not everywhere agreeably received, yet only a year afterwards Germany was in possession of the ecclesiastical laws. In renewing the theme to-day he had a kind of recognition of the correctness of his choice in the esteemed address of the delegate of the Government, who had publicly acknowledged in the previous sitting how much value the Government attached to the natural sciences on account of their practical utility. This fact was certainly already known to scientific men; but what they wished, and what the Government had not yet granted, was a greater amount of influence—and that all the more at the present moment when the old supports of the State were being cleared away.

Hitherto, said Virchow, the moral education of man has been universally in the hands of the Church; she was recognised as the guardian of the conscience, and accordingly it seemed as if she must be the peculiarly-called teacher of mankind. The conscience has been considered as something innate, as an inward divine voice—the judge of good and evil. Modern science, however, holds that the conscience is not an innate possession, but something acquired. The former view of conscience has led to the recognition of the Church as its guardian. The Church early adopted the commandments of the outward or prescribed morality, which have reached us from former periods of culture in distinctly formulated laws, and so far have become the best foundations for the later traditions. These were, however, only outward commandments. The Ten Commandments, for example, of the Jewish and Christian religions correspond more or less to outward morality only, and furnish a useful treatise for human society and a certain security of their relations. But these outward commandments do not found that inward morality which endows the individual with the power of setting himself right even in the most difficult cases of the "conflict," for they supply no standard by which it may be decided. Now, an increase in the number of conflicts is a necessary consequence in the States of the present day with their great complexity. The more simple the political and social relations, the less cause there is for conflicts, as may be seen by studying the uncivilised nations of the present day. Virchow here referred to Wallace's description of the Indian Archipelago. When this observer declares that the morality among these savages is as high as that of the great mass of the English population, or even higher, he forgets (said Virchow) that the morality of which he speaks is only external, transmitted in the form of settled laws, and so forming the basis of education in the simple circumstances of the people. If one sets oneself the problem of the moral education of a population moving on so complex a basis as the Europeans do, one must avail oneself of other means than the vulgar signification of a simple race or village, which might apply even in South America.

The Church has not taken the trouble to do this: she has applied the principle of education to individuals who are truly morally free. This is indeed the great reproach which we must lay against the Church. Virchow would not refuse to grant that in perfectly simple, primitive political conditions the outward moral code, as it had established itself in the various laws, might be sufficient. If, however, with the advancing development of these political conditions the complexity of the social conditions was more and more developed, then there arose the conflict—that primeval opposition which in more recent times has been abundantly expressed in the phrase, "knowledge opposed to belief." Twice have we had this contest already in the history of our own religious development. It first took place as the result of the dogma of the Tree of Knowledge which should remain forbidden to man, and which, when it became accessible to him, brought after it the fall. The second occasion was when Pope Innocent III., in 1215, interdicted the study of the scientific writings of Aristotle, which until that time formed a regular constituent of theological education. And the heretical study still continuing even among the monkish orders formed for its extirpation, the Pope widened the breach with science still more by still more strict prohibitions. The Church remained stable, and science continued to advance.

We are now living to see the State compelled to retake from the hands of the Church what she has improperly administered. For the State has begun to observe that with this simple outward morality a man is not able to advance. Nevertheless, there is no State that can substitute the political code for the ecclesiastical. Legislation cannot advance so rapidly that, exactly as culture is developed, it can express the steps of this development in definite legal paragraphs. On the contrary, the modern State, which developes the idea of a State most completely, is compelled, in order to compass this development, to give way simultaneously to the individual. "As the individual freedom (which we ought to claim for ourselves as a genuine German right) spreads, we must of course also demand that the individual development amongst our people be founded upon moral principles which are ever becoming broader and more profound."

The speaker now passed on to the proof of the law which he had laid down in the beginning of his address: that conscience is to be considered as a product of development—as an organic production. The opponents contend that the conscience is an internal voice which indicates to a man whether something is good or evil. Now, there is nothing either absolutely good or absolutely bad, but only something relatively good or relatively bad. The good and the bad as such (as absolute) cannot, therefore, be an object of science. A poison may be a valuable drug; the fishes which we represent as the ideal of innocence are such beasts of prey that we might represent them as the very expression of evil. This preying in the whole of nature—this necessity of living at the expense of other lives—is *the evil*. Nor can any man divest himself of this wicked necessity which lies in his nature—of living at the cost of other beings. All human culture is accomplished over corpses; every advance in society is bought with abundant sacrifices—sacrifices not only of those who voluntarily, but much more frequently of those who involuntarily, succumb to the new culture.

To the question, How has man become further developed with this original badness—this diabolical part of his nature—according to which he must purchase his existence at the expense of other organic beings?—there cannot yet be returned any unanimous reply. Here the speaker introduced two subjects by way of illustration—first, the practice of cannibalism as a stage in human development; and second, the occurrence of war between civilised nations in the present day. Under the second head, and in reference to the late Franco-German war, Virchow declared that in France, in spite of all ecclesiastical influence, no moral code had been created which embraced the principle of general love among men—this first and greatest principle of Christianity.

Only by better application of the sciences in the schools can an advance be made here. Two kinds of things have to be distinguished—first, the recognition of things themselves, including a much better acquaintance with human nature; and, secondly, what must be attained by the people of all

grades, and by all classes of the schools—unity of method. By this has the tradition of 2000 years in the field of medicine been broken; and by the admission of scientific method into medicine an enormous change has been wrought in it since the first decennium of this century.

This striving after truth is to be taken as the peculiar object of the moral education of mankind. There are (continued Virchow) two kinds of truth as far as most men are concerned—an objective and a subjective truth. The speaker here discussed at considerable length the question of objective and subjective impressions—optical and auditory,—of delusions, illusions, and visions; and pointed out, in reference to the last mentioned, that they may occasion the greatest political excitement, as they are doing at this very moment in France—stirring European society to its very foundations, and threatening to bring the most terrible of all wars in its rear. Our duty in this state of matters is very manifest: we must strive with every means in our power that a really large number of men may take a great step, and be able to separate a subjective from an objective truth. Such false interpretations of the impressions of the senses have in many other directions caused the most extreme confusion in the moral principles on which the education of mankind should have been founded. For example, there was the false representation that the earth stands still and the sun moves round it,—a delusion which has led to the greatest moral errors, inasmuch as the earth was made the centre of the universe, and man the highest product of the world—the first peculiar object of creation. The idea of the peculiar design of the world was thus entirely misrepresented. The same has to be said of the idea of superiority of race, which was so conspicuous among the Jews and ancient Greeks, and persists to the present day, even in England, as Virchow discovered when he paid his visit to London.

Returning to the consideration of the growth of true morality, Virchow would explain it by evolution. All systematically advancing development of the forms of organic nature, and its philosophical contemplation speak in favour of the theory of evolution; and in moral relations also all the development which we see in the world is in favour of the growth and increase of inward morality—the strengthening of instinct into inward morality. What a man brings with him into the world is very little—the ability of receiving mental impressions, and the ability of setting these in mutual relation. This estimation of the mental impressions with each other is innate, because the organism on which this ability depends is present in the newly born child. Now begins the development. New impressions are being continually received, from month to month new experiences are added; presently the instincts become developed, and from these come the passions as years advance. Now, as common sensation is related to the several sensual instincts, so is conscience to the several moral instincts. As long as the moral instincts move in the direction of the pleasant and agreeable, so long will it be easy for the simplest man to hit upon the right. It is different, however, when in certain circumstances instinct must be opposed—when, in a word, it is important to rule oneself. This self-government is possible only by exercise; the moral instincts are developed only by practice. Their practice must be made more prominent in the education of man; thus only can man become more and more fitted to understand the processes without and within him, and then, when the conflict comes, to make the right moral choice with quickness and certainty. The bare outward morality is not sufficient for this. This effect can never be produced without exercise; moral practice alone can promote it. It is therefore necessary that the scientific man should declare that the experience furnished by advances of science is to lie at the foundation of moral theory and of moral practice too.

In conclusion, Virchow said: Most of our churches answer the question, "Wherefore is man created?" by saying that it is a matter of a return to God, to the source of light—a return which, according to the ecclesiastical interpretation, constitutes the final end of all knowledge in the peaceful contemplation of the highest truth. Men of science have also a creed—that mankind is destined ever to press nearer to the light of truth; to behold truth and to advance in truth is also our highest happiness. That the Church calls the contemplation of the final end of all knowledge, the most perfect happiness, can assuredly not satisfy us. We repudiate this doctrine; it is in absolute conflict with every view of the scientific man and with human nature itself: it is perfectly inhuman. It is in work that consolation lies. "And as we—I repeat it expressly—as we have a creed, so we have a sign also by which the true man of science shall always be recognised and must; and the sign is this, that he will never be weary in that striving after truth. Thus only does he earn the name which Linné has given to his sex—the name of *Homo sapiens*,—otherwise must he be called *Homo credulus*."

MANCHESTER ROYAL SCHOOL OF MEDICINE.

ABSTRACT OF THE INTRODUCTORY ADDRESS.

The Introductory Lecture was delivered in the Chemical Theatre on October 8 by Professor Arthur Gamgee; Mr. T. Ashton presided. There was a large attendance of professors of the College and the general public. The gallery was appropriated to the students, who conducted themselves in the usual boisterous manner previous to and for some time after the entrance of the lecturer and the chairman, and it was not until the latter had expressed his intention of clearing the gallery that order was restored.

The Chairman, in introducing Professor Gamgee, said he had no doubt that the reputation which the Professor had gained in Edinburgh would be greatly increased by the work which he was about to do in that College. He came to devote the whole of his time and talent to the interests of that school; and he (the Chairman) hoped to see the time when it would be as celebrated for its results in investigation as in teaching. There was no doubt that to that end they must have not only one professor but many, who would be able to devote their time and energies to the interests of the profession.

Professor Gamgee said, in looking forward with hopefulness to the future of the Medical School in its connexion with Owens College, he would be the last to refrain from offering a tribute of praise to the founders and promoters of what might now be called the old medical school of Manchester. It was to the honour of the teachers of medicine in this city that they succeeded in establishing in Manchester the first of the numerous provincial schools of medicine; that in the face of obstacles of all descriptions, often at great personal sacrifices of time and money, they laboured with very considerable success to further the spread of medical education. Now that the older was being merged into the newer and larger institution, it would be ungraceful and unjust on his part were he not to refer to a few of the men whose names were most honourably associated with the past teaching of medicine in Manchester. First to be named was the late Mr. Jordan, who very early in the century became a teacher of anatomy and physiology in this city, and whose lectures were first delivered in the provinces, and were recognised by the medical corporations as qualifying for examination the students who attended them. In 1825 Mr. Turner organised the Pine-street school, and gathered around him teachers, amongst whom were the illustrious Dalton, Sir J. Bardsley, and many others of distinction. In 1850 the Cheetham-street school, among whose teachers were the late Mr. Dumville, Dr. Watts, and Mr. George Southam, was established; and in 1858 the two schools were amalgamated. To the energy and devotion of one of the teachers in particular (Mr. Southam) the success of the Manchester School had for many years past been greatly indebted, and but for him the union of the Medical School with Owens College might not have been effected. Professor Gamgee proceeded with a review of the progress of medicine from the time of Hippocrates, in order to show that the study of medicine had at all times been influenced by the study of science. Glancing, towards the conclusion of his paper, at the present and past history of the famous medical schools of modern Europe, he said the system of centralisation which had been pursued in France since the days of the First Empire had produced as marked an effect in stifling the scientific ardour as in enervating the political energies of the nation. Enforced dependence had been fatal to progress, and the attempt to centralise the intellectual power of France in Paris, for the glory of the capital, had proved as fatal as would be an attempt to concentrate in one focus the commercial enterprise of this or any other country. The Germans had perceived the mistake of centralisation, and in many departments of science had clearly asserted for themselves the right to hold the first place. The first cause of their progress was to be found in the very perfect system of education pursued in the gymnasia of Germany, which as a consequence led to the average medical student possessing a

greater amount of both literary and scientific knowledge than was the case with us. The second and most potent cause lay in the fact that in the numerous universities of Germany learning met with opportunities of development which did not exist elsewhere. The most ardent enthusiasts of the German unity must admit that the intellectual success of this country was greatly owing to the jealous fidelity with which the elements of German greatness had been developed in the separate centres of the fatherland, and pre-eminently in its universities. In them the greatest encouragement had always been given to the most intellectual men to devote themselves to the acquisition of learning; not merely to become acquainted with what was already known, but to lead in the path of scientific discovery. It was the scientific knowledge acquired in the physiological laboratories of Germany which had chiefly led to the pre-eminence which we were obliged to acknowledge. German physicians had, in these laboratories, learned the methods of inquiry which, when applied to medicine proper, tended every day more and more to raise it from the condition of an art to that of a science. If facts had compelled the cheerful admission that we had much to learn from abroad, it was none the less true that contemporary British physicians had good reason to reflect with pride on the success with which they had sustained the heritage of fame transmitted by Linacre, Harvey, and Sydenham. With the instinctive sense of the useful and industrial acquisitiveness which characterised our countrymen, the best fruits of foreign investigators had been gathered up and assimilated by British physicians, who, science and practice combined, were, he was inclined to think, still not second to the physicians of any other country. What we did want, and what we were happily growing day by day more alive to, was a wider development of schools of science wherein competent men should have the opportunities essential for research, and young men might be trained in those tastes and habits of mind which were of the very essence of successful intellectual pursuit. Now that the wealth of such great industrial centres as this city was being utilised for the highest educational purposes, it was not too much to hope that on the scene of the labours of Dalton and Joule that school might grow to exemplify once more that happy combination and adaptation of resources which had so often placed Englishmen in the van of literary and scientific progress as of manufacturing and commercial enterprise.

REVIEWS.

Lectures on Practical Pharmacy. By Barnard S. Proctor, Lecturer on Pharmacy at the College of Medicine, Newcastle-upon-Tyne. London: J. and A. Churchill. Pp. 399.

There were few books, perhaps, more wanted in this country than a good one on practical pharmacy,—and this not only to the chemist, but also to the practitioner; for since the old system of apprenticeship has been abandoned, men whose life-long business it is to prescribe drugs have few opportunities of practically handling them or of compounding them, and so learning by experience which is the form in which a medicine is best exhibited. Even among otherwise well-skilled physicians there is often a lack of this particular kind of knowledge, chiefly arising from the universal use of hospital pharmacopœias; and the power of writing a neat prescription in good Latin seems to have gone with that old-fashioned polished learning we are nowadays taught to despise. Since the institution of examinations among pharmaceutical chemists, the want of such a book as this must have been severely felt, for no book of the kind was readily available save the excellent American work by Parrish, and that was not very easily come at. That there was wanted some such book as the present will therefore, we suppose, be readily conceded. The question is, Does the present volume meet the necessities of the case? To us it seems that it does so very well, while it has a freshness about it which is very pleasing. The earliest chapters deal with such subjects as drying, comminution, solution, crystallisation, precipitation, diffusion, evaporation, distillation and sublimation, filtration, and percolation. After such preliminary matters are disposed of, Mr. Proctor proceeds to give a critical account of the pharmacopœial preparations, commencing with the powders. Here some very good critical remarks are made on the various officinal products. After the powders come the pills. These, as is well known, are nowadays often kept in the form of powder, instead of the old-fashioned pill-mass, the powder only requiring the addition of some water to make it coherent enough for use; but so many order their pills wholesale from a pill-maker, supplying him with their own formulæ, that the former plan is mainly to be recommended only because you can be more certain of the purity of the drugs used. The liquors or officinal solutions are next considered, and so in due order are the other pharmacopœial preparations, with sound and judicious comment; after which the more complex processes of dispensing are considered. And this leads us to a matter of equal importance to prescribers and dispensers—viz., doubtful prescriptions. Mr. Proctor gives us some interesting examples, as when a mixture is ordered containing sixteen drops of almond mixture and eight ounces of prussic acid. This, on the face of it, is a transposition. Again, we have an example of the excipient, and so actually of the quantity of medicine ordered, being omitted. We have instances of contractions or old names used in a doubtful kind of way, as "mur. hydrarg.," which may mean either calomel or corrosive sublimate. Here is a somewhat doubtful substance—"tinct. mel. vesicatoriæ"—"mel." being almost invariably honey, and no vesicating honey being in existence; it really is, however, a contraction of the old name—meloe vesicatoria—given to the Spanish fly. "Acid. hydroc." may mean either prussic or hydrochloric acid; "inf. sen.," infusion of senna or senega; "potass. sulph.," the sulphate or sulphuret; and so on. These are examples of culpable carelessness. Such, too, are instances where powerful remedies are given and then some substances added which would be sure to precipitate them. One of the most important of these errors, and one perhaps more frequently committed than any other, is prescribing the double chloride and iodide of mercury (made by mixing corrosive sublimate with iodide of potassium) along with a vegetable preparation containing an alkaloid; for the alkaloid is immediately thrown down, and the mixture rendered valueless.

An exceedingly interesting lecture on reading prescriptions, with examples as nearly as possible *fac-similes* of the original, next follows. These prescriptions are of all shades of difficulty and sometimes of ambiguity, but not very many are examples of good penmanship. Four lectures on the pharmacy of certain special drugs conclude the volume. The drugs so considered are cinchona, opium, aloes, and iron, and the remarks are often very interesting. Some of our readers may remember an article on aloes which appeared in these columns some years ago. It was then esteemed—and we have no reason to alter our opinion of it—one of the most valuable contributions to our knowledge of that drug which had ever appeared. This furnishes a text for some remarks by Mr. Proctor; for the pharmacy of aloes is a very difficult subject, and anything of value as regards it would be only too gladly received. But meantime we must take leave of Mr. Proctor, heartily commending his book as being both interesting and valuable.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, October 13.

Cholera at the Academy of Medicine—Fauvel on Cholera—Dr. Ball on the Etiology and Pathology of the Disease—Dr. Liouville on the Propagation of Cholera—Decline of the Epidemic—Discussion on Septicæmia at the Academy of Medicine—Death of Count de Flavigny and of M. A. F. Passy—Professors at the School of Medicine.

The subject of cholera, so far as the discussion of the matter is concerned, is closed at the Academy of Medicine, but the whole affair has been made over to a commission of academicians, whose report has not yet been published. Dr. Fauvel, who, it will be remembered, was to respond to Jules Guérin's arguments, did so last Tuesday week, and I must say the latter was treated rather cavalierly by the *ex-conférencier*, as he is maliciously designated by his adversaries (referring to the part he took in the international conference that took place some few years ago at Constantinople, in order that measures might be taken to prevent the incursion of cholera into Europe). Dr. Fauvel, as if to form an exception to the rule that the French are generally given to more talk than work when any grave question is laid before them, opened his discourse with the

suggestion that the time was inopportune for discussion, and added that when an enemy is in a place we should not discuss, but act. But, if he entered into the field of arguments, it was to protest against the theory enunciated by Dr. Lecadre, of Havre, and supported by Dr. Guérin, that Asiatic or malignant cholera may be developed spontaneously at any time and at any place, and that the disease is not necessarily generated by importation. This, M. Fauvel said, he could not pass over in silence, and opposed to it the conclusions of the Constantinople conference, which were formulated as follows: —"That the cholera is an exotic disease, contagious, and of Indian origin, having at different periods invaded Europe; that it is importable from one place to another, solely by human peregrinations, and producing epidemics of greater or less duration, and more or less fatal, and which, once extinguished in our clime is not reproduced unless by fresh importation." 2. "Cholera thus propagated was never engendered in any part of Europe that had no communication with another part where the disease had not reigned." 3. "An epidemic of cholera never took less time to spread than that materially necessary for the removal of human beings from one place to another." This form of cholera, M. Fauvel continued, should not be confounded with what is termed "cholera nostras," which is a benign disease, which is engendered by certain circumstances, is confined to the locality where it breaks out, and disappears with the local circumstances which produced the disease. M. Fauvel then dwelt upon the advantages of quarantines, to which, he said, for reasons best known to themselves, the English were not very favourable; and when it was objected that quarantines were far from sufficient to prevent the ingress of the disease, as there were other inlets by which it may find its way, the worthy doctor replied that by closing even one entrance the chances of the invasion of the disease are diminished. The discussion having been here closed, M. Guérin was precluded from giving in his rejoinder, but, with reference to certain gratuitous assertions made by his adversary, to the effect that his (M. Guérin's) observations were concocted in his study, and were not the result of clinical experience, M. Guérin of course retorted that his observations were taken at the bedside of patients in private and hospital practice, and that during the epidemic of 1832 he scarcely passed a single night in bed. Thus ended this discussion at the Academy of Medicine, but the other learned bodies have taken it up, and the question is still being ventilated, but not to much purpose from a practical point of view.

Dr. Ball, who is acting for Professor Béhier at the Hôtel-Dieu, has occupied three long lectures on the etiology and pathology of cholera, and, after having traced the disease to its origin in the delta of the Ganges, went through its geographical distribution, which he said always coincided with the peregrinations of man. Dr. Bal llooks upon cholera as a zymotic disease, and as each virus has its own habitat or vehicle (the pus in small-pox and the lymph in vaccinia), the intestinal dejections seem to be the media in which the cholera germs are developed and multiplied. Hence the importance of totally destroying everything that was once in contact with these germs, either by chemical reagents or by fire itself; and this would, perhaps, explain the *rationale* of Dr. Blanc's treatment of cholera by the administration of the chloride of aluminium and of chloralum (both powerful disinfectants and antiseptics) by the stomach and rectum, the former of which he also adds to the excrements so as to destroy the germs in their habitat. Dr. Ball is a confirmed believer in the contagiousness of cholera, and says that its propagation or transmissibility cannot be explained in any other way. Here I may observe that in the French school the terms infection and contagion are employed synonymously, and consequently in using the word "contagiousness" both the terms are included. Dr. Ball thinks that although the digestive tube is the habitat as it were of the choleraic poison, yet the lungs are the principal *viæ* of infection, as it is well known that of all mucous membranes the capacity of that of the air-passages for absorption is very great. He thinks also that drinking-water as a means of propagating the disease has been greatly exaggerated, as it has been proved that choleraic matter containing the poison when introduced into the stomach is almost inert, as its virulence is destroyed by the gastric juice, unless the dose ingested be excessive, but, if the smallest quantity be injected subcutaneously, death is almost instantaneous. This has been amply confirmed by experiments on man and animals. In the former case a French physician swallowed a certain quantity of the dejections of a choleraic patient without suffering any other inconvenience than slight nausea—more, he thought, from the nastiness of the idea than from the effects of the poison itself; and, only very recently, a German physician, Dr. Obermeier, of Berlin, so well known for his works on typhus, fell a victim to his audacious courage, by inoculating himself with the blood of a patient suffering from cholera, from which he died in seven hours, most deeply regretted by his colleagues and a large circle of friends. This is certainly carrying the love of science to an unwarrantable extent, as I do not think it necessary to sacrifice human life for experimental research, while there are animals which are, as it were, predestined for such purposes. M. Charles Robin, the eminent histologist of Paris, performed some years ago a series of experiments with choleraic dejections on dogs and rabbits, which produced the same results as those obtained by the above experimenters; and it may be remembered that the experiments tried by Dr. Shortt, the great ophiologist of India, with the venom of serpents, produced similar results—that is, negative by the stomach, and certain death by inoculation.

Dr. Liouville, Chef de Laboratoire at the Hôtel-Dieu, has just begun a series of researches on the mode of propagation of malignant cholera, which may prove interesting to your readers. On September 23 he examined with a microscope of the greatest power some filtered water contained in a well-stoppered glass jar of the capacity of a litre (20,000 drops), and found no appreciable living organisms in it. He then added to this water one drop of the intestinal evacuations of a patient affected with cholera. With the same microscope he had examined the choleraic liquid, and discovered in it the presence of a great quantity of vibriones—some very active—of a round form (microzymata), while others were long and eel-like. He then added this "pathological dross," as he termed it, to the 20,000 drops of filtered water which was altogether uninhabited, and, having well corked the bottle, he let it rest for six days. On September 29 he found, with the aid of the microscope, that one drop of this solution contained a great number of vibriones (of the same appearance) of various sizes, moving about like eels. These little corpuscles were also very active. The colour of the water was slightly changed, which seemed saturated with the same animated elements as those found in the choleraic evacuations. This would show the extraordinarily prolific nature of these microscopic animals; for, be it observed, it was only one drop of the choleraic liquid that was added to the 20,000 drops of filtered water. But these infusoria or animalcules are also found in other pathological conditions, such as simple diarrhœa, enteritis, continued fever, etc., and, wonderful to relate, the vibriones that have been looked upon as being the specific agents in the pathogeny of cholera, have been found in the intestines of healthy individuals, but who had come by their death by accidents. This, I am sure, will not discourage Dr. Liouville, who, with his usual zeal and energy, intends performing a series of experiments with this infected fluid on animals, the result of which he hopes ere long to be able to submit to one of the academies of Paris. It is to be desired that he will make haste, for the edification of the anti-germ theorists of cholera and other zymotic diseases.

With reference to the isolated cases that occurred in the hospitals, which it was attempted to show originated spontaneously, and were not the result of importation or contagion, I endeavoured, in my last, to prove to the contrary; but how the disease reached the patients I was then unable to answer. I have, however, since had a clue as to the manner in which the infection took place—which seems to put the question beyond all doubt. Hospital patients in Paris are allowed to receive the visits of their friends only twice a week—viz., Sundays and Thursdays. The first hospital case of cholera, I may here remark, occurred on Friday, September 5, the day following the visiting day, when it is likely the germs of the disease, which were clearly traced to the family which had arrived in Paris some days previously from Hamburg *viâ* Havre, were in all probability conveyed by the visitors to the hospital.

If we may judge from the casualties in the past week, the present epidemic of cholera is evidently on the decline—at least, as far as Paris is concerned,—and, it is reported, the same may be said of Havre, where in France the disease first broke out about a month and a half ago. The last weekly return ending October 6 gives a mortality of 51 in hospital and town practice, whereas the week preceding it was 66. But notwithstanding this diminution in the mortality, great fears are entertained that the epidemic is not stamped out; that the disease is merely lurking about ready to break out afresh

when the conditions necessary for its development present themselves.

At the last meeting of the Academy of Medicine the subject for discussion has been changed from that of cholera to that of septicæmia, or more correctly speaking the latter has been resumed. The champion this time is M. Colin, Professor of Pathology at the Veterinary School of Alfort, near Paris. The discussion promises to be a most interesting one, but whether the subject will be satisfactorily solved is another question. M. Colin has not yet fully entered into the subject-matter of his thesis, but he has said sufficient to show that he is not in favour of the doctrine of Dr. Davaine, whose opinion may be thus stated:—All putrid matter, the blood putrified outside the economy, or modified in the vessels under the influence septic diseases, may produce the pathological condition termed "septicæmia" in man and animals. To which M. Colin replied in a few words by way of preface, intending at the next meeting to resume the subject. According to experiments performed by M. Colin on certain domestic animals, he has come to the conclusion that the pathological condition known under the name of septicæmia is not the constant and invariable effect of blood putrified in the air or altered in the organism. He considers it due to a morbid reaction furnished by certain animals, but which the greater number do not furnish in experimental conditions. Thus, as regards the rabbit, it is a matter of pure idiosyncracy, and the error of M. Davaine consist in having too much abused a reagent which is far from offering the guarantee desired. In other words, Mr. Davaine has drawn his conclusions in proceeding from the particular to the general, and his theory is defective from its very foundation.

The death of the Count de Flavigny and that of M. Antoine Frederic Passy is announced. The former was well known for the service he rendered since the war to the Society of Help to the Wounded, of which he was president. M. Passy, member of the Institute, was one of the founders of the Society lately formed in Paris for the Suppression of Intemperance, and a member of the Society for the Protection of Children, of which he was one of the committee of management.

The School of Medicine is to be reopened on the 15th inst., but the lectures will not begin before November 4. The following is a list of the professors who are to lecture for the winter session, with the subjects to be treated of annexed to their names:—MM. Gavarret, Medical Physiology; Damaschino (acting for M. Axenfeld), Medical Pathology; Sappey, Anatomy; Chauffard, Pathology and General Therapeutics; Wurtz, Medical Chemistry; Dolbeau, Surgical Pathology; Lefort, Operative Surgery; Robin, Histology; Lorain, History of Medicine and Surgery; Brouardel (acting for M. Bouilland), Clinical Medicine at La Charité; G. Sée, Clinical Medicine at La Charité; Bchier, Clinical Medicine at the Hôtel-Dieu; Laségue, Clinical Medicine at La Pitié; Richet, Clinical Surgery at the Hôtel-Dieu; Gosselin, Clinical Surgery at La Charité; Vernouil, Clinical Surgery at La Pitié; Broca, Clinical Surgery at La Clinique; Depaul, Accouchements at La Clinique; Roger, Diseases of Children.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, October 7.

Changes in the Staff of the Hospitals and Schools—Dublin Industrial Exhibition—Lectures on Sanitary Science—Assault upon a Medical Man.

There is no doubt that the opening of the approaching medical session in this city will be signalised by the occurrence of a number of changes in the staff of many of our schools and hospitals. In the school of the Royal College of Surgeons the Professorship of Chemistry has been vacant since the lamented death of Dr. William Barker, who for several years most ably filled this important chair. Three favourites may be mentioned among the candidates for this appointment—namely, Drs. Emerson Reynolds, Charles A. Cameron, and Edmund Davy, the present Professor of Medical Jurisprudence in the College. The election is fixed for the 24th inst., but it would be difficult to forecast the result, owing to the peculiar method of conducting the election which holds good at the College. Seven members of Council are chosen by lot, and on them alone devolves the responsibility of making the appointment by a majority of votes. In the Ledwich School, the lectureship on the Theory and Practice of Medicine, vacant since the death of Dr. Henry Eames last March, has been filled by the appointment of Dr. A. Wynne Foot, Physician to the Meath Hospital and County of Dublin Infirmary. No more admirable selection could have been made, as Dr. Foot has given abundant proofs of ability as a scientific, practical, and clinical teacher since his appointment to the Meath Hospital.

Within the past few days two of the first hospital surgeoncies in Dublin have been declared vacant by the resignation of Dr. Robert Adams, Surgeon to the Queen in Ireland, and of Professor Robert W. Smith. In losing the services of these gentlemen the Richmond Hospital has indeed sustained a double loss, but in each case this was unavoidable; you have already noticed the sad illness which has fallen upon Professor Smith. Happily Dr. Adams still enjoys good health, but the weight of more than fourscore years has urged him to place his resignation in the hands of the Board of Governors. The services of both distinguished gentlemen are secured as honorary surgeons. Among the candidates for these highly-prized appointments may be mentioned Drs. Corley, Surgeon to Jervis-street Hospital; James Stannus Hughes; Yeo, Assistant-Physician to the Whitworth and Hardwicke Hospitals; R. J. Harvey, Lecturer on Comparative Anatomy in the Carmichael School of Medicine; W. Thomson, Assistant-Surgeon to the Richmond Hospital; and Mr. Gogarty. The election is to take place on Thursday, the 16th inst., and the result is looked for with much interest by the profession. In the School of Physic in Ireland two chairs are likely to be vacated shortly, owing to the continued illness of the present Professors, Dr. R. W. Smith and Dr. Robert Law. The former, as Professor of Surgery in Trinity College, is also Surgeon to Sir Patrick's Dun's Hospital, and the latter is Physician to the same Hospital by virtue of holding the post of King's Professor of Institutes of Medicine. Lastly, Mr. T. P. Walshe has resigned the Surgeoncy to Jervis-street Hospital, and has been succeeded by Mr. Kane, son of Sir Robert Kane, the well-known chemist.

The executive of the Dublin Industrial Exhibition have published a syllabus of a course of twelve lectures on Sanitary Science, to be delivered in the theatre of the exhibition on every Tuesday and Friday (commencing with to-day) until completed. The lecturer's name is well known to your readers—Charles A. Cameron, M.D., Professor of Hygiene to the Royal College of Science, and Analyst to the City of Dublin. The subject-matter of the lectures is very well arranged, and there is but little doubt that the course will be as largely attended by ladies and gentlemen as was a similar one this time last year. I give a list of the subjects to be dealt with:—The atmosphere, ventilation, the heating and lighting of dwellings, atmospheric dust, contagion and disinfection, water, the skin and hair, clothing and exercise, food, digestion, stimulants (alcohol, tobacco, etc.), unsound and adulterated food. Indeed, the institution of this course of lectures is only one way in which the great and increasing interest in the science of sanitation now displayed by the public is being expressed. Lately one of our leading and most influential daily papers—the *Freeman's Journal*—issued a sanitary commission to inquire into the existing state of Dublin. Thirteen reports were sent in, the character of all of them being essentially practical. The existence of evils was proved by a recital of facts, and the means of preventing or of checking these evils were indicated. Meanwhile, the Dublin Sanitary Association continues its most useful labours, which have already begun to bear really good and permanent fruit; witness the increased activity of the Public Health Committee of the Corporation. We are even to have a floating hospital for imported cases of cholera ready on November 6, and the old powers of the Corporation *in re* the widening of streets, etc., are sought to be revived. At the same time, we must believe that it has been, under Providence, due much more to the cold and wet summer which we have experienced here than to any action taken by our health authorities to abate the atrocious nuisances which crop up in every part of Dublin, that we have so far escaped a visitation of cholera.

October 13.

Last Friday a most unwarranted assault was committed upon Dr. George Johnston, the Master of the Rotunda Lying-in Hospital, under the following circumstances. At 5 p.m. on that day a Mr. Mulvany, a dentist, of 4, Christchurch-place, Dublin, commonly known as "Dr. Mulvany," called upon Dr. Johnston, and complained that his wife (then a puerperal patient in one of the private wards of the Rotunda Hospital)

was being neglected. Dr. Johnston at once accompanied Mr. Mulvany to the ward, where they found two nurses in attendance. It appeared that Mrs. Mulvany had been attacked by pain some short time before, and the nurses were engaged in applying warm fomentations and other remedies. Notwithstanding, her husband repeated that she was being neglected, and, on Dr. Johnston asserting that he had himself visited her that day, became noisy and violent. It was pointed out that such conduct was calculated to harm the patient, and a request was made that he should leave the ward. On refusing to do so, Dr. Johnston caught him by the arm and turned him towards the door. Mulvany not only resisted, but proceeded to assault Dr. Johnston violently, cutting his temples with a poker and dislocating one of his fingers. He subsequently had his wife removed from the Hospital. On Saturday the case was brought before Mr. C. J. McDonel, the magistrate presiding in the Northern Divisional (Police) Court. After going fully into the circumstances, Mr. McDonel committed Mulvany for trial at the approaching Commission, accepting bail for his appearance—himself in £25, and one surety in an equal amount.

GENERAL CORRESPONDENCE.

PHYSIOLOGICAL LABORATORIES.

Letter from Mr. Arthur Gamgee.

[To the Editor of the Medical Times and Gazette.]

Sir,—On the occasion of the opening of the new buildings of Owens College, Sir James Kay-Shuttleworth, Bart., referred "to the establishment in the College of the first laboratory in England for physiological research." Although I regretted exceedingly the error into which the speaker had fallen, and wished to have it in my power to correct it, I felt that on an occasion of so formal a character, when no speeches were made except by those called upon for the purpose by the President of the College, the Duke of Devonshire, it would have been scarcely becoming had I, unasked, risen to vindicate the honour of the physiological laboratories of Edinburgh, Cambridge, and London. To the part which these laboratories have taken in what I may term the revival of the study of experimental physiology in England, I hope to direct very marked attention in the introductory address to my class of practical physiology, which I shall deliver in this College on Thursday, the 23rd inst.

I am induced to address you this letter in order to explain what has, I believe, by some been considered unaccountable negligence in failing to correct a statement prejudicial to the position of British physiology.

I am, &c., Arthur Gamgee.

The Owens College, Manchester, October 14.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 1.

E. J. Tilt, M.D., President, in the Chair.

John Goldsmith, M.D., Worthing, was elected a fellow of the Society.

Mr. T. Eyton Jones read a paper on a case of Vesico-Vaginal and Recto-Vaginal Fistula. The patient was seized with labour pains on Saturday night, and remained in labour until 5 p.m. on Tuesday afternoon, when a medical gentleman was called in, who delivered her by forceps. Ten weeks after her confinement she came under Mr. Jones's care, who discovered great swelling and redness of the labia. At the vaginal entrance were two apertures—the anterior small, barely admitting the little finger, apparently entering the bladder; the posterior covered by a red, velvety-looking mucous swelling, through which the forefinger entered with ease, and apparently consisting of the vagina and rectum dilated into one cavity, and containing in it the closed mouth of the uterus. She could retain neither her fæces nor urine, and the catamenia have never since reappeared. Two years and a half after this disastrous confinement she suffered excruciating pain for a fortnight, at the end of which she parted with the phosphatic calculus, one inch in circumference, and two inches in length, which had formed in the bladder or urinary passage. Venesection has to be performed every two months to relieve the severe headache caused by catamenial suppression.

Dr. Heywood Smith thought that the paper, to be of any use to the Society, should state accurately the exact present state of the parts. It did not appear, from the case as then read, that it was hopeless as regards any operative interference, and it seemed to him that an attempt should be made to remedy a state of things so deplorable.

Dr. Aveling considered that at all events some effort should be made to restore the patency of the cervical canal of the uterus.

A note by Dr. J. Braxton Hicks was read, "On the Muscular Subsurrus in relation to the Fœtal Heart-Sounds." The author wished to call the attention of the Society to a point with regard to the diagnosis of pregnancy and the life of the fœtus by means of the existence of the fœtal heart-sounds which he had not unfrequently observed in the course of his practice, but which he did not remember to have seen in print, and summed up his observations as follows:—First, that the number of vibrations of the abdominal muscles in a state of half-suspension can be distinctly counted, watch in hand. Secondly, that their number and sound are so like those of a very rapid fœtal heart that they may be mistaken for them.

A paper by Dr. J. Matthews Duncan was read, "On the Spontaneous Separation of the Placenta when it is Prævia." The author did not in this paper enter on the subject of hæmorrhage, desiring to keep in view only the mechanism of separation of the placenta when prævia. He pointed out that during labour every portion of the surface of the body of the uterus underwent contraction, and that it was probably to the same extent over the whole of it. But the lower part of the body of the uterus was greatly expanded during labour, and contraction could there be only in the meridianal or longitudinal direction. The contraction of the uterus in early labour did not separate the placenta, wherever it might be inserted, whether prævia or not. A small amount of the whole expansion of the cervix, or an early stage of it, when there could be very litte contraction, was sufficient to detach partially the placenta. He arrived at the conclusion that the placenta when prævia was separated by expansion, not by shrinking or contraction, of the uterus. At present it was universally held to be separated by uterine contraction. The paramount errors of authors such as Simpson and Barnes were in supposing that the placenta might be attached to the cervix even near the external os, which it never was; and in not rightly apprehending the behaviour of the cervix during labour. The process of detachment by expansion will go on till the internal os is dilated to a diameter of about four inches, and this may occupy a great part of the whole duration of the labour. Study of the shape of the lower uterine hemispheroid showed that a meridian leaves the vertex or centre of the internal os uteri in a direction nearly at right angles to the uterine axis; and that, after it has described an arc of one and a half or two inches, it becomes nearly parallel to it. At about two inches and a half from the vertex the diameter of the uterine cavity is four inches. There is no need for any considerable expansion beyond a diameter of four inches, which is reached at a meridianal distance of two inches and a half from the centre of the internal os uteri. Expansion beyond this would produce very slight extension of uterine surface, and consequently slight detaching power, which would probably be counterbalanced by placental expansibility. Dr. Matthews Duncan pointed out that this was the measure of the spontaneously-detaching area, and criticised the various other measurements that authors had made. He showed that Barnes's estimate of three to four inches from the os uteri must be far too great. The circle of latitude two inches and a half from the vertex marking this limit was the line, insertion of placenta within which constituted placenta prævia. Complete detachment of the placenta was to be explained by a study of the production of a caul and of those cases in which the placenta was perforated by the advancing fœtus. Finally, Dr. Duncan called attention to the analogous detachment of the decidua around the internal os, which had been described by Dr. Haussmann, of Berlin.

Dr. Barnes expressly denied that he was open to the charge of committing the error imputed to him by Dr. Duncan of stating that the placenta was ever attached to the os uteri externum. He had taken special pains to insist that

the cervical canal had nothing to do with gestation. He had even sent to Dr. Duncan years ago a tracing of a drawing made by himself from a pregnant uterus showing the separate cavity of the cervix. With regard to the remaining statements of Dr. Duncan, they would be found to be simply repetitions in other words of Dr. Barnes's published account.

Dr. Aveling believed the Society was much indebted to Dr. Matthews Duncan for his accurate and scientific description of the spontaneous separation of the placenta when prævia. We could not be too minutely particular on a subject of such importance; and he believed with the author, that there were many illustrations to be found in our midwifery works which gave the student an erroneous view of the relative conditions of the body and cervix of the uterus during pregnancy and parturition.

Dr. Edward John Tilt read a paper, "On the Diagnosis of Subacute Ovaritis." The author suggested that the undervaluing of the part played by subacute ovaritis as a source of disease in women partly depended on the lamentable facility with which many practitioners, wherever there was pain in the ovarian region, inferred the existence of ovaritis, partly on account of the real difficulties of diagnosis, of which he gave some remarkable instances. He intimated that another reason might, however, be found in the difficulty of making examinations in young unmarried women. He had found that the most frequent sexual diseases during this period of life (between fifteen and twenty-five) were subacute ovaritis and inflammation of the neck of the womb. When the disorders of menstruation resisted good hygienic and medical treatment, he believed they were generally due to subacute ovaritis and cervicitis. The symptoms of cervicitis he described to be the habitual painless passing of a moderate amount of muco-purulent vaginal discharge, with habitual pain in the back; those of subacute ovaritis were constant dull pain deep in the ovarian region, much increased by firm pressure, and extending to the thigh and leg; mammary symptoms, disturbed menstruation, and hysterical phenomena. The positive sign of subacute ovaritis was the finding of an ovoid, smooth, or slightly indented lump beside the womb or in Douglas's pouch, pressure upon which, caused by the practitioner's finger or during coitus, caused an overpowering and sickening sensation of pain and debility. It might be necessary to confirm this diagnosis by a rectal or recto-vaginal examination. The author expressly stated that it would sometimes occur to a practitioner making a first vaginal examination, that, instead of finding any ovarian disease as he expected, he would detect cervical disease; and in other cases subacute ovaritis would be found when the symptoms would lead him to expect cervical inflammation. He concluded by describing the line of conduct to be adopted by the surgeon for the management of each of the three classes, and sketched the treatment most likely to cure them.

Dr. Barnes thought that many ovarian symptoms had their origin in uterine displacement.

Dr. Wynn Williams concurred in Dr. Barnes's opinion. He had rarely met with a case of ovaritis without some uterine complication, unless caused by direct violence. He believed the uterine mischief preceded the ovarian, and his experience taught him that on the removal of the uterine ailment the ovarian soon subsided. The same remarks applied to the ovary as to the testicle. Orchitis was seldom met with without previous inflammation of the urethra. He had frequently relieved ovarian symptoms by introducing a stem into the uterus, and he had under his care several unmarried females wearing stems and shields who could not be persuaded to have them removed, dreading a return of their sufferings.

Dr. Heywood Smith believed the best way of using the double touch was to use the forefinger of the right hand for the vagina and the middle finger of the same hand for the rectum; the left hand was thus left free to make pressure on the hypogastric region. With regard to what had been stated as to ovaritis being associated with or consequent upon flexions or other morbid states of the uterus, he must say that he frequently found patients suffering from ovaritis in various stages unconnected at all with any flexions or misplacements of the uterus or with any metritis.

Dr. J. J. Phillips said that his experience was that so-called subacute ovaritis was a very frequent cause of dysmenorrhœa, and he believed that this ovaritis frequently existed independently of any uterine flexion or peculiar conformation of the cervix uteri. It was very common to find a swollen, hyperæmic, probably inflamed ovary as the only evidence of disease in cases of dysmenorrhœa. The fact stated by Dr. Barnes, however, could not be controverted, that in a large class of cases dysmenorrhœa was due to uterine flexion or some uterine abnormality; and by appropriate treatment not only was the pain relieved, but also the congested state of the uterine appendages. A suitable selection of cases was, however, important, for some of the most troublesome cases of ovaritis and perio-ophoritis had their origin in mechanical interference with the neck of the uterus by incision or dilatation.

Dr. Gervis remarked that the truth might be between the two views which had been expressed, and that while primary subovaritis was probably rare, yet it might certainly continue to exist as a result of various uterine affections—such as chronic endometritis and mechanical dysmenorrhœa—after these affections had been cured.

Dr. Tilt, in reply, stated he had always taught that mechanical obstructions to the menstrual flow and uterine malpositions required special treatment, but he intentionally omitted to treat of them in the present instance because they were not of very frequent occurrence between the ages of fifteen and twenty-five, whereas he had come to the conclusion that subovaritis and cervicitis were then common and were often treated as diseases of menstruation. He did not think that the analogy between the testicle and the ovary should be pushed too far, because the testicle was not subject to any monthly process similar to ovulation.

OBITUARY.

JOHN MURRAY, M.D.,

Has suddenly passed away from among us at an age when everything seemed opening up before him, and before the promise of his early manhood was half fulfilled. No sadder story has it been our lot to tell, and to the many friends of the deceased to whom this will be the first intimation of his illness, our tidings will bring deep and heartfelt sorrow. Though young in years, Dr. Murray had by his happy disposition, his kindness and good-nature, endeared himself to a host of friends, to whom his untimely end will be a real and personal loss.

The story of his life is soon told, for though he had lived long enough to make his mark in many ways, still his deeds were rather of that private or semi-public kind which make little noise though of mighty influence. Dr. Murray was born in Aberdeen, where his father has long practised as a highly esteemed advocate. His education was mainly acquired in the Gymnasium in that city; and when old enough, he passed as a private student into the Arts classes of the Aberdeen University. Having spent one or two years in preparation, he began the study of Medicine, which he subsequently pursued, partly in the University of Aberdeen, partly in that of Edinburgh. He was a steady and industrious student, in no ways remarkable at that time—for he began the study of medicine very early—save for an ardent love of natural science. In this he was perhaps fostered by the fact that his father possessed an unusually good collection of shells, birds, and other objects, all calculated to stimulate a youth in the pursuit of such knowledge. After graduating in medicine in Aberdeen and London, Dr. Murray spent some time abroad in the great schools of Paris and Vienna, becoming afterwards attached to the Middlesex Hospital, first as House-Physician, and afterwards as Pathologist and Medical Registrar, finally becoming Assistant-Physician. Here he had field for work of a thoroughly congenial kind, and, in the series of hospital reports issued in conjunction with Mr. Henry Arnott, he made a most decided impression—their workmanship was of the first order. It was, however, mainly as a Volunteer Surgeon and in his capacity of assistant editor of the *British Medical Journal* that Dr. Murray was best known. His connexion with the London Scottish Rifles brought him into intimate contact with many old friends from the North, and enabled him to make many new ones, for he ever loved to turn to Scottish men and things, and even in the local politics of his native city he took here in London a keen interest. Of his work and doings as assistant editor of the *British Medical Journal* it is not for us to speak, but for years he has sat by us, as we worked side by side, a loyal and honourable rival in journalistic work. A

week ago he began to ail, and he complained of sore throat. This gradually became worse, till he and his friends became alarmed. Signs of œdema set in, and before anything could be done, so suddenly did serious symptoms develope, he was almost dead. But his trachea was opened, and after twenty minutes' artificial respiration he revived. At first he improved rapidly, but signs of a general and deep-seated change in his tissues and organs began to manifest themselves, his lungs became gorged, and he sank to rest—another victim to the horrible struggle of a London life. Dr. Murray was a strong and active man, ever eager for work, often seemingly going out of his way to do the work of others. Latterly, to all the weight of his daily avocations have been superadded the duties of Dean to Middlesex Hospital School; and there can be no question that, though at the time the work did not seem to hurt him, it was more than any man could stand with impunity, and so when disease came it found him unable to bear up against the brunt of its attacks.

Words cannot express the sorrow of his friends, for Dr. Murray had so endeared himself to men of his own time that he seemed more like a brother than a mere ordinary acquaintance. Under any circumstances, one plucked out of their midst in such a way must leave an affecting blank; but to many he was much more—he was the centre of a social circle as kindly as is to be found in the ranks of our profession, and to all such his loss is something we can hardly put in words. His deeds may look small on a sheet of paper, but were each kindly act and word of encouragement to his struggling juniors, each courteous deed to his brethren, professional or otherwise, here recorded, we should have a monument which in the eyes of the right-minded would far outweigh deeds often held up to honour and glory. How inadequate these lines are none know better than do we, and we almost wish we had limited ourselves to the simple statement which will bring sorrow to many—that "John Murray is dead."

(*From a Correspondent.*)

Undoubtedly Dr. Murray's great characteristic was his unbounded kindliness, the feeling and thoroughness with which he could throw himself into the wants and interests of others, and his readiness to take upon himself to do anything which he saw and felt ought to be done, but which, apparently, it was nobody's duty in particular to do. I have seen this frequently in him. This was strongly marked in connexion with any public or semi-public matter—to wit, the enthusiasm and determination he showed in working up an organisation of the medical officers of the rifle corps, in order, first, to get the War Office to properly equip corps with ambulance requisites, etc.; and, secondly, to resist, and ultimately get repealed, the Act requiring medical officers of corps to attend officers and their families at some trivial fixed rate. Again, the regularity with which he worked for the East London Children's Hospital when it was first started and in its early stage was of great service to that institution. Then the determination with which he exposed the want of proper accommodation for fever and other infectious diseases in Aberdeen, and the abuse of sending such cases into a general hospital, resulted in the grant of land and building for a fever hospital. The unselfishness and untiring efforts he showed under Dr. Frank in the ambulance hospital near Sedan were such as to bring him to the notice of Loyd-Lindsay and others, who afterwards rendered him considerable help in his canvass at the Middlesex Hospital. His career at the Middlesex Hospital commenced in 1866 as Physician's Assistant, after giving up which he became Medical Registrar, and was appointed to the *British Medical Journal* staff. Last year he began to share the lectures on Pathology with Dr. Cayley, and this year he became Dean. The energy he has shown in the duties of Dean during the few months of office has been very considerable; it was no doubt due very much to him that there is a larger entry than usual, and his kind and genial manner to the students promised to make him one of the most popular of deans, as he was one of the best friends of the students. At the Hospital he will be missed by all classes and in all the capacities he occupied. Another great point with him was his strong opinions as to women's rights. He considered women were unfairly treated in life, and in this matter, as in every other, he was always willing and anxious to lend a helping hand to redress a grievance. There is no doubt that besides sacrificing much time and labour he has expended much money upon movements he has initiated for the redress of things he thought wrong and unjust.

It may be questioned, I think, whether there is another man in London of any profession, and of his age, who has anything like the number of friends—the large circle of acquaintances—Murray had. This circle was immense, not only in town, but in the country, and in fact abroad too. And few, if any, would have drawn to his sick rooms so many inquiring friends, had his illness been less sudden. As it was, the bad news of his condition soon spread, and a large number of members of the profession were constantly at hand.

I have heard it said in the last few days that he possessed in a remarkable degree the "enthusiasm of humanity," and this is quite true. Always thinking and speaking well of others, others did the same of him; and though he knew so many, still these were not to him indifferent acquaintances, but real friends, who had a downright good feeling for him.

I may mention, too, that only last Monday he went to Petworth for a meeting of the south-eastern branch of the British Medical Association. While at Petworth he went over the county prison, and (as another instance of the fascination which all social and public matters possessed for him) he inquired very closely into the discipline of the place, and the effect of that discipline on the mental and moral characters of the prisoners. He deplored at the time, and once or twice during the day afterwards, the hardening inhuman influence the continued isolation of prisoners must produce.

These few remarks I send in the rough, but much might be written upon the life and character of a man who young was a good clinical physician, a true gentleman, and a frank, warm-hearted, and trusty friend.

At the post-mortem examination were found œdema of the epiglottis and arytæno-epiglottidean folds as low as the upper vocal cords; the pharynx intact; the tonsils not distinctly enlarged; but great congestion of the pillars of the fauces and of the mucous membrane of the trachea below the opening. The incision had divided the cricoid and first ring of the trachea, and by one side of the opening the mucous membrane was sloughing and of ashy-grey colour. The lungs were œdematous, and the upper lobe of right lung collapsed.

ARCHIBALD DYMOCK, M.D., M.R.C.P.

We have to record the death of Archibald Dymock, M.D. Edin., M.R.C.P. Lond. and Edin., which took place at his residence, South-street, Louth, Lincolnshire, on September 17, after a long and painful illness, aged 62, leaving a widow and a large family to mourn their irreparable loss. He was the eighth son of the late William Dymock, writer to the Signet, Edinburgh, and was educated at the High School, and at the age of eighteen entered at the University of Edinburgh, where he studied under Alison, Christison, and other distinguished professors who adorned the Edinburgh School at that period. He was the favourite pupil and clinical clerk of Dr. (now Sir) Robert Christison, and greatly assisted him in the compilation of his work on "Granular Degeneration of the Kidneys." He received his degree as Doctor of Medicine before he was quite twenty-one, and was immediately offered and accepted the post of resident physician to the present Earl of Carlisle, with whom he remained rather more than a year, at Castle Howard, Yorkshire. After that period he returned to his native city and commenced practising as a physician, and was attached as physician to the North-Western Dispensary. During that period he contributed several valuable papers to the *Edinburgh Medical and Surgical Journal*; amongst the number were one on Poisoning by Arsenic, on Puerperal Convulsions, etc. In the summer of 1843 he left his native city, and settled at Louth, Lincolnshire, where he soon obtained a large consulting practice, not only in Louth, but the whole of North Lincolnshire. He was a justice of the peace for the borough of Louth, and a trustee of King Edward's Grammar School in that town. He was Physician to the Louth Dispensary, and Consulting Physician to the Lincolnshire Convalescent Home. He was equally kind and courteous to both rich and poor, and was beloved by a large circle of friends of all denominations for his kind and amiable disposition. His body was interred in the cemetery on the 21st ultimo by the side of his deceased son, Thomas Graham Weir Dymock. The hearse was preceded to the grave by the officiating clergy and the whole of the local medical practitioners, with the mayor, and the magistrates. The pall was borne by the warden and five assistants of King Edward's Grammar School, and followed by his sorrowing and afflicted widow and family.

WILLIAM GARDEN, M.D. Aberdeen,

Died at Alford on the 22nd ult., at the age of 63. Dr. Garden was a son of the late Mr. George Garden, farmer, Bandley, Alford. He studied at Aberdeen, and, after taking the degree of M.D., practised for some time at Bandley. He took to agricultural pursuits, and rented the farm of Mains, at Balfling, at which he resided until some time ago, when he removed to the village of Alford. He furnished evidence to the Assistant Commissioners on the "employment of children, young persons, and women in agriculture, 1867." Dr. Garden, though retired from medical practice for years, took an active part in the public affairs of the district, and held several local public offices.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, Oct. 9:—

Kane, Patrick, Sawley, near Derby.
Matthews, Arthur, Harwich.
Young, George Wm., Mile End-road.

The following gentleman also on the same day passed his Primary Professional Examination:—

Treves, Frederick, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cameron, John, M.B., Edin.—Assistant Medical Officer, Crichton Royal Institution, Dumfries.

Manall, Thos., M.B., C.M. Edin.—Assistant to the Extra-Physicians of the Sick Children's Hospital, Edinburgh, *vice* Dr. Renton, resigned.

BIRTHS.

Campbell.—On October 9, at 16, Wellesley-terrace, Liverpool, the wife of W. Macfie Campbell, M.D., of a daughter.

Canton.—On October 13, at Camden Villa, Southsea, the wife of G. Anderson Canton, M.R.C.S., of twins.

Clapton.—On October 14, at 6, Lansdowne-villas, Lee, the wife of Edward Clapton, M.D., of a son, stillborn.

Maunsell.—On October 7, at Newland Villa, Victoria-road, Aldershot, the wife of T. Maunsell, M.D., Royal Horse Artillery, of a son.

MARRIAGES.

Cartwright—Hudleston.—On October 13, Mark Cartwright, eldest son of T. Cartwright, Esq., of Poppleton, York, to Rosa Elizabeth, youngest daughter of the late John Hudleston, M.D., of 21, Gloucester-place, Portman-square.

Chancellor—Downs.—On October 7, at the parish Church, Stockport, Herbert Chancellor, Esq., of Old Broad-street, London, second surviving son of George Chancellor, Esq., Chessington Hall, Surrey, to Fanny Maria, elder daughter of George Downs, M.D., of Stockport.

Dean—Caswall.—On October 8, at the Church of St. Nicholas, Leeds, Kent, Harry Stewart, younger son of Benjamin Dean, of Acton, to Helena Mary, third daughter of the late Charles Caswall, M.R.C.S., of Tunbridge, Kent.

Finch—Mitchison.—On October 7, at St. Saviour's, Paddington, Charles, son of the late Charles Denver Finch, M.D., of Tulse-hill, to Maria Amelia, eldest daughter of the late G. B. Mitchison, Esq., and granddaughter of Mrs. Mitchison, of 23, Warwick-road, Maida-hill.

Grace—Day.—On October 9, at the church of St. Matthias, West Brompton, William Gilbert Grace, fourth son of the late Henry Mills Grace, M.R.C.S. Eng., of Downend, Gloucestershire, to Agnes Nicholls, daughter of W. Day, Esq., 19, Coleherne-road, S.W.

Jackson—Whytehead.—On October 9, at Lastingham, Yorkshire, Thomas Boyes, youngest son of Hugh William Jackson, Esq., of Riston Grange, to Jane Elizabeth, second daughter of Henry Yates Whytehead, M.D., of Crayke.

Prior—Whitaker.—On October 9, at Dalston Wesleyan Chapel, Edward Thomas, youngest son of Samuel Prior, Esq., of Greenwood-road, to Marianne, eldest daughter of the late J. Summs Whitaker, F.R.C.S., L.S.A., of Betah Cottage, Kingsland.

Wooncock—McO'Connor.—On September 23, at Haysville, Ontario, Canada West, Francis Dealtry, second son of the late Edward Woodcock, Esq., of Springfield, Wigan, to Matilda Louisa, eldest surviving daughter of Maurice McO'Connor, M.D., of Haysville.

DEATHS.

Betts, Agnes Mary, daughter of G. Harvey Betts, M.D., at Shanklin, Isle of Wight, on October 10, aged 19.

Borrett, James, M.D., M.R.C.S. Eng., at Clifton, on October 10.

Howitt, W.. F.R.C.S. Eng., L.S.A., J.P. for county of Lancaster, at his residence, Fishergate-hill, Preston, on October 7, aged 63.

Murray, John, M.D., M.B., C.M., M.R.C.P. Lond., M.R.C.S. Eng., at 42, Harley-street, on October 15, aged 30.

Nichol, Robert, M.D., M.R.C.S. Eng., L.S.A., at Denmark-hill, after a few hours' illness, on October 13, in his 49th year.

Woodhouse, Louisa, wife of R. T. Woodhouse, M.D., at Reading, on October 7, aged 76.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

Bideford Union.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Charles W. Hole, Clerk to the Guardians, on or before October 20.

Carlisle Dispensary.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

Guest Hospital, Dudley.—Honorary Surgeon. Applications, with testimonials, to Mr. E. Poole, Secretary, on or before October 31.

Kent and Canterbury Hospital.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Board of Management, before October 28.

Liverpool Dispensaries.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 29.

Queen's College, Galway.—Professor of Materia Medica. Applications, with testimonials, to the Under-Secretary, Dublin Castle, on or before October 27.

Royal Free Hospital.—Senior House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 29.

St. Peter's Hospital.—House-Surgeon. Candidates must attend personally, with their testimonials, on Monday, October 20, at 4 p.m.

Unst, Shetland.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

West London Hospital, Hammersmith.—House-Surgeon. Candidates must be duly qualified, and attend at the Hospital on Monday, October 20, at 10.30 a.m.

Wilts Pauper Lunatic Asymum.—Medical Superintendent. Candidates must be duly qualified and registered. Applications, with testimonials, to Mr. A. G. Meck, Clerk to Committee of Visitors, Devizes, on or before October 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Bridgwater Union.—Mr. G. F. V. Bent has resigned the Second District; area 8504; population 5040; salary £70 per annum.

Castle Ward Union.—Mr. James Marr has resigned the Ponteland District and the Workhouse; area of District 17,677; population 2002; salary £15 per annum; Workhouse salary £30 per annum.

APPOINTMENTS.

Brentford Union.—Robt. G. Burton, M.D. Edin., L.R.C.S. Edin., to the Seventh District.

Epping Union.—Trevor Fowler, L.K.Q.C.P. Ire., L.R.C.S.I., to the Epping District.

Henstead Union.—John B. Pitt, L.R.C.P. Edin., F.R.C.S. Eng., L.S.A., to the Workhouse.

Langport Union.—Thos. L. Tims, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., to the Workhouse.

Neath Union.—John H. Davies, M.R.C.S., L.S.A., to the First Eastern District.

Saffron Walden Union.—Robert Clement Pritchard, L.F.P.S.G., L.S.A., to the Fourth District.

Shiffnall Union.—James Sherwin Greene, M.R.C.S.E., L.S.A., to the Prior's Lee District; John Emilius Mayer, F.R.C.S., L.S.A., to the Sheriffhales District.

Wantage Union.—Robert Murdoch, M.B., L.R.C.P. Edin., L.R.C.S. Edin., to the Ilsley District.

Weymouth Union.—Hauteville Flown John Sterling, M.R.C.S.E., L.S.A., to the Overmoigne District.

Royal College of Surgeons.—At a meeting of the Council, on Thursday, the 16th inst., Mr. Thomas Rivington Wheeler, L.S.A., a member of the Court of Examiners of the Society of Apothecaries, of the Ferns, Sundridge, Sevenoaks, was admitted a Fellow of the College, his diploma of Membership bearing date May 10, 1843; and at the same meeting of the Court, Mr. George Annger Michell, L.S.A., of Redruth, J.P. for the county of Cornwall, was elected a Fellow, his diploma of Membership bearing date April 14, 1835.

We regret to hear that Dr. Lyle has had an attack of paralysis, caused by blood-poisoning contracted in the discharge of his duty as one of the medical officers of the parish of Paddington.

News from Hawaii (late Sandwich Islands) states that leprosy is making fearful ravages not only among the Chinamen and natives, but also the Europeans of the most respectable classes. From New York we hear that the yellow fever is abating at Shreveport; 600 persons have died of the epidemic.

The Medical Society of London will meet for the first time at their new premises, Chandos-street, Cavendish-square, on Monday, October 20, when Dr. Richardson will read a paper "On Organic Stricture of the Æsophagus: a recast of Clinical Observation."

Naval Medical Supplemental Fund.—At the quarterly meeting of the Directors of the Naval Medical Compassionate Fund, held on the 14th inst. (Sir Edward Hilditch, Inspector-General, in the chair), the sum of £86 was distributed among the various claimants.

Liverpool Royal Infirmary School of Medicine.—The new buildings which have recently been added to the School of Medicine in Dover-street, Liverpool, have been formally opened by Mr. John Torr, M.P. The principal additions and alterations are—a pathological and anatomical museum, a chemical laboratory with a private laboratory and class-room attached, and a physiological laboratory. The old building has to a great extent been remodelled; the dissecting-room has been considerably enlarged, and adjoining it a room has been fitted up with osteological preparations, skeletons, plates, and preparations illustrative of elementary anatomy. A demonstrator's room opens into the dissecting-room, and every convenience in the way of lavatory and dressing-rooms is provided. The old museum has been converted into a library and reading-room for the use of the students. These extensions and improvements, including the amount of existing contracts for work not completed, have involved an expenditure of £5326—a sum which, in consequence of the advance in the cost of labour and of almost everything used by builders, is largely in excess of the amount which the lecturers at the commencement of their undertaking were led to believe would be required. The committee have entered into a contract for fitting up the parts of the museum required immediately, but the fitting up of the gallery has been postponed.—*Builder*.

Absence of Cholera-Panic in Paris.—"The old proverb is right—'We get accustomed to everything'—even to the cholera. Look at what has been going on in Paris during the month since when the Indian scourge has passed its walls. Not the slightest particle of fear; not a single desertion; no habit discontinued; the same receipts at the *Fille de Madame Angot*; numbers sent away when M. Faure sings at the opera; and a brilliant assembly to welcome back the Italian singers. When we compare the effect produced on the Parisian population by this fifth cholera invasion with that of those preceding it, we cannot help exclaiming, 'How things are changed!' Have we become more courageous or less impressionable? I incline to the latter opinion, for I cannot prevent myself from believing that a population which has been spectators of the disasters of war and the horrors of the Commune, and whose very existence has been menaced by famine, bombardment, and civil war—such a population, I say, must have become singularly inured, or rather remains indifferent, to all calamities of a minor importance. It is true that up to the present time the epidemic has not been very bad. May this frightful monster, this pathological sphinx, which defies alike the investigations of science and the resources of art, speedily leave us, to return no more! May France, already so unfortunate, be spared the ravages which the cholera has produced in other parts of Europe, especially Hungary, where in some months it sacrificed 120,000 victims out of a population of 14,000,000. This is about double the mortality which each cholera epidemic has ever produced in France, with a population about twice as numerous."—*Union Méd.*, October 11.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The obituary notice of Dr. John Miller, which appeared in the number of September 6, is an obituary notice of Dr. John R. Miller, Inspector-General of Hospitals, etc., and not of Dr. John W. Moore Miller, of Southsea, author of articles on "Public Health," "Drainage," etc. The latter gentleman is, we are happy to state, alive and well.

A Metropolitan Teacher.—The return is published in another column. The additional numbers in both classes will appear next week.

Mr. A. M. Bawtry, York.—Osteo-plastic fillings are most of them chiefly composed of oxide of zinc and chloride of zinc, specially prepared and subjected to powerful hydraulic pressure.

Alpha.—We know none such.

A Third-Year Student.—Write at once to the President, enclosing a certificate of ill-health, when no doubt he will allow you to register next week.

Godolphin.—The Oxford examinations for the first or scientific part, and for the second or practical part of the examination for the degree of Bachelor of Medicine will be held early in December. Candidates names should be sent to the professor before November 15.

Lorton.—The statistics of 1870 show that the percentage of suicides in the United States was 3·06 per 100,000. In 1860 it was 3·02, and in 1850, 2·01.

S. P. W.—The suggestion is a good one, and shall have attention.

A Medical Jurist has called our attention to the fact that it is due to the honour of medical coroners that they were foremost—indeed, the first—to insist upon the necessity of having an accused person present at an inquiry at which his reputation and possibly his life might be concerned. We cheerfully admit the truth of our correspondent's statement. The late Mr. Wakley, the Coroner for Middlesex, was the first to insist upon the importance and justice of this proceeding. He contested the point with his usual ability and perseverance. His successor, Dr. Lankester, has invariably acted on the same principle. It seems surprising that lawyer-coroners have never attempted to carry out a principle of law and justice, which is equally consistent with common sense. The late decision in Dublin, by Mr. Justice Fitzgerald, is a high compliment to Medicine *versus* Law in the election of coroners. We hope this fact may be taken advantage of in future elections of judges who exercise so important an influence upon the safety and welfare of society.

A Doctor's Log.—No. V.

(*Continued from page* 373.)

The first day in the Indian Ocean very unsatisfactory. No abatement of blazing sun; steamy, dirty feeling; nausea; languid torpor, disinclination to move—indeed, to do anything but drink and sleep during the day, varied by tossing, depression, and misery at night. The thermometer only 88° in cabin, 85° in hospital, 90° in the lower troop deck when the ports are closed. The men very healthy; still about fourteen in Hospital, but no fever, ophthalmia, or sunstroke. Several women rather ill—relapses of sea-sickness; and the children incline to bilious remittent fever, possibly contracted in Malta harbour, encouraged off Suez, developed in the Red Sea. Remission in the morning, exacerbation at night; offensive excretions; tendency to vomiting, jaundice, and abdominal distension, dirty tongue, rigours, chills, burning skin, incessant thirst, occasional diarrhœa, sometimes lienteric. Indian diet, lime-juice, dilute nitro-hydrochloric acid, quinine in the morning, aconite when the fever is about to commence, friction and inunction over various parts of the body, swabbing out the throat included in the treatment. If this is wrong, it should be remembered that books are not accessible, that these patients and diseases are treated in the tropics every day on the move, and that doctors feeling heat much the same as other people, our brains are addled by the sun. One night a soldier's wife taken ill; the messenger brings no light; difficult work groping in the dark for clothes; next tumbling over soldiers lying between decks or bumping against others sweltering in hammocks. Eventually reach the women's quarters, where about 100 are arranged in dinner-waggon bunks. The lower of the two shelves better adapted for mothers with children; no chance of tumbling out. The upper more airy, suitable for women without incumbrances. One woman with six children has three bunks. Several have three, four, and even five children wonderfully comfortably put up under the circumstances—the husbands, of course, sleeping with the bachelors. The atmosphere was far purer than any married quarter barrack or hospital ever visited on an oppressive summer night. The patient, suffering from hæmorrhage, received medicine, was tended by another woman (a qualified midwife), and the necessary beef-tea and brandy provided without delay. Next morning she is moved into hospital, and the soiled bedding thrown overboard and replaced, the expense (about £2) falling on the troops generally.

One suggestion here: when soldiers embark, one woman of experience should be told off to superintend, or at all events to nurse, in the women's hospital, the expense (possibly not exceeding three guineas at the utmost) divided amongst the married men. One unrecognised woman engaged herself as nurse to a lady, concealing the fact of advanced pregnancy. When the mistress was ill and sea-sick, and the children required every attention, the maid gives birth to a child, and for days cannot be moved out of the cabin. *En passant*, there are twenty-one ladies on board, the wives of colonels and field officers, with their husbands. The others doubled up, three, four, and seven in cabins, according to situation. How they dress and do not lose valuable jewellery, with servants, stewards, and others prowling about, is a great mystery.

Beyond sea-sickness and dyspepsia induced by overdoses of chlorodyne, by all accounts very little to complain of. One young officer has a terribly swollen face. Several cases of rheumatism—more of neuralgia—caused by sleeping on deck. From information received, the ladies, all things being considered, are wonderfully quiet, instead of fighting about a squalling baby introduced into a cabin, or the thousand-and-one red rags of contention incidental to the coopiug up of strangers. According to statistics, about this period of the voyage everybody would be delighted by a tread on the tail of their coat. The Red Sea would spoil the most amiable temper. Even theatricals have their objections in the excitement, hurry-scurry, not to say scrimmaging, about parts, creating bones of contention, specially in a hot climate.

It may not be out of place to say a few words of financial importance. We pay 3s. 6d. a day for messing, including breakfast, lunch, dinner, and tea, the Government paying the rest. Sometimes the total may be ten or even fourteen shillings a head, according to weather or appetite of passengers. The allowance of beer and port at starting, and of claret after, very liberal—sherry also; but of course there are extras—the amount reduced to a minimum by those economical. The water is extremely palatable and apparently innocuous, obtained by condensation and filtration. Daily thirty-eight tons of sea-water can be condensed by Normaudy's process, then twice passed through animal charcoal on Captain Creasy's principle. And I believe before this patent was adopted a bucketful of grease, oxide of iron, and refuse would be found in the tanks during a month's cruise. In the Suez Canal, where the Red Sea mixes with the Bitter Lakes in the current towards the Mediterranean, the amount of salt, the extreme density, involves increased expenditure in condensation. As a rule, seven tons of distilled water are produced by one ton of coal.

February 13.—Unfortunately in a medical publication serial matter reluctantly must be kept in the background, otherwise more might be said descriptive of the theatricals; the daily life; the curious anecdotes; the excitement about the conversion of one of the nigger stokers, to the delight of the chaplain, who feels hurt at incredulity, and the locking of cabin doors when the enlightened stoker is about; of the Christy minstrels, who, hired at an enormous expense, perform for the first time out of London—Mr. Johnson, Bones, and the rest of the troupe quite at home in the Indian Ocean. But to the text: Admire to-day Benham's cooking range, capable of providing for 2000. Visit Mr. Knibbs, who, in his cheerful manner, states that the engine-room to-day is 112°, the stoke-hole 110°, the

Sea-water 76. Find that in the men's hospital, when returning with invalids, there are sometimes 34 in-patients, 117 attending, and that the mortality commences in the Mediterranean. Look in to Mr. Souter at the paymaster's office, who, ever courteous and obliging, lends a printed description of the ventilation on Dr. Edmunds' system, difficult to explain in a few lines. There are five ordinary tube and cowl ventilators, to act by the wind in a general way, but at other times steam-jets are introduced, forcing out the foul air, and to close the vacuum cold fresh air rushes in—to the best of comprehension,—care being taken to prevent condensed water being included. Dr. Edmunds adds double-acting ventilating shafts and gunwale ventilation; but I must get some man to explain it *in toto*, then try again to simplify details on paper. Anyhow, the system answers very well. And before the matter is forgotten it should be noted that the condensed and filtered water is very palatable and refreshing—so good and pure that at present I rely upon it as the chief weapon in the treatment of infantile fevers. Came across a case of hyperlactation to-day—three years and two months,—yet the mother wonders she is ill, and thinks that plenty of brandy, wine, and stout would set her up; also a primipara suffering from obstipatio about twelve days, and far advanced in pregnancy. The condition must be relieved, yet for her to be confined at the last on board ship, at Bombay, or on the journey up country, will be extremely inconvenient, not to say hazardous. If conscription and no marriage, what a cheap effective army probably we should have! To the best of recollection, Frederick the Great violently objected to the marriage of soldiers, refusing the privilege even to field officers, unless the lady came up to a certain standard, yet conferred a certain *brevet* of respectability on certain camp followers.

(*To be continued.*)

COMMUNICATIONS have been received from—

Dr. Burman; Dr. J. Cameron; Dr. George Scott; Dr. Stevenson; Mr. H. K. Hitchcock; Dr. Philip Foster; Dr. W. M. Campbell; Dr. Vinen; Mr. J. H. Jackman; Dr. Webster; Dr. Peddie; Mr. C. J. Fox; Mr. H. Morris; Mr. J. Chatto; Dr. Foster; Dr. Aveling; Mr. T. M. Stone; Dr. C. Handfield Jones.

BOOKS RECEIVED—

Roberts's Handbook of the Theory and Practice of Medicine—Erichsen on Modern Surgery—Jordan's Surgical Inquiries—Sympson's Letters concerning the Lincoln County Hospital—Broken Gleams, by C. Miller—On the Education of the Imbecile, by Dora Greenwell—Proceedings of the Twentieth Annual Meeting of the Medical Society of North Carolina—Whitmore's Monthly Report on the Health and Meteorology of the Parish of St. Marylebone—Transactions of the Medical Society of the State of Pennsylvania. vol. ix., part 2.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Gazette des Hôpitaux—Allgemeine Wiener Medizinische Zeitung—Pharmaceutical Journal—Manchester Evening News—Gazette Hebdomadaire—Lincoln Gazette—Medical Press and Circular—Birmingham Morning News—Bulletin Général de Thérapeutique—Lancester Guardian—Journal de Médecine—New York Medical Journal, August and September—O Correio Medico—Le Mouvement Médical—La Tribune Médicale—Le Progrès Médical—La France Médicale—New York Druggist—Philadelphia Medical Times, September 20 and 27—Monthly Review of Dental Surgery.

APPOINTMENTS FOR THE WEEK.

October 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Association of Medical Officers of Health, 7½ p.m. Dr. Letheby, "On the Right Use of Disinfectants."

20. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Richardson, "On Organic Stricture of the Œsophagus—a Recast of Clinical Observation."

21. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8 p.m. Mr. McCarthy—Traumatic Separation of the Epiphysis of the Great Trochanter; Recent Fracture of the Atlas and Odontoid Process of the Axis. Dr. Dowse—Foreign Body in the Crico-Thyroid Pouch; Traumatic Degeneration of the Spinal Cord. Dr. Peacock—Aneurism of the Aorta forming a Large External Tumour. Dr. Greenhow—Large Hydatid Cyst of the Liver. Dr. Silver—Obstruction of the Common Bile-duct; Two Specimens of Diseased Liver. Mr. Nutt—Photograph of a remarkable Vesical Calculus. Dr. Cayley—Psammoma of the Dura Mater.

22. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. Mr. McCarthy—Specimen of Imperforate Anus and Colles's Fracture.

24. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 11.

BIRTHS.

Births of Boys, 1083; Girls, 1071; Total, 2154.
Average of 10 corresponding years 1863-72, 2091·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	638	609	1247
Average of the ten years 1863-72	659·4	651·8	1311·2
Average corrected to increased population	...	...	1442
Deaths of people aged 80 and upwards	...	...	36

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	5	...	2	...	4	1	8
North	751729	...	15	2	2	8	3	7	1	6
Central ...	334369	...	3	1	2	2	1	2	...	5
East	639111	...	17	12	...	11	...	6	1	10
South	967692	...	10	2	3	6	9	7	3	14
Total	3254260	...	48	22	7	29	13	26	6	43

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·673 in.
Mean temperature	52·0°
Highest point of thermometer	66·1°
Lowest point of thermometer	32·8°
Mean dew-point temperature	48·6°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week	0·52 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 11, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Oct. 11.	Deaths Registered during the week ending Oct. 11.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2154	1247	66·1	32·8	52·0	11·11	0·52	1·32
Portsmouth ...	118280	12·4	68	32	67·4	37·2	55·5	13·05	0·95	2·41
Norwich	81677	10·9	42	27	66·0	31·0	50·4	10·22	0·32	0·81
Bristol	189648	40·4	112	79	61·7	37·0	50·3	10·17	0·65	1·65
Wolverhampton ...	70084	20·7	56	33	65·2	33·8	50·7	10·39	1·05	2·67
Birmingham ...	355540	45·4	257	167	66·3	36·0	51·0	10·56	0·39	0·99
Leicester	102694	32·0	103	36	66·7	31·5	49·7	9·83	0·70	1·78
Nottingham ...	89557	44·9	63	33	67·7	30·9	47·4	8·55	0·39	0·99
Liverpool	505274	98·9	331	214	63·6	38·6	50·2	10·11	1·05	2·67
Manchester ...	354057	78·9	239	164	63·5	32·0	48·8	9·33	1·49	3·78
Salford	130468	25·2	103	55	64·5	31·0	48·5	9·16	1·31	3·33
Oldham	85141	20·4	78	27	59·0	...	...	...	2·06	5·23
Bradford	156609	23·8	142	74	64·0	33·2	48·2	9·00	0·41	1·04
Leeds	272619	12·6	150	147	65·0	35·0	48·9	9·39	0·18	0·46
Sheffield	254352	11·1	193	114	68·0	33·0	49·6	9·78	1·03	2·62
Hull	128125	35·9	86	58	64·0	31·0	48·4	9·11	0·76	1·93
Sunderland ...	102450	31·0	65	46	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	118	85	...	...	...	...	...	...
Edinburgh	208553	47·1	123	64	58·4	30·8	49·0	9·44	0·30	0·76
Glasgow	498462	98·5	321	218	55·0	29·2	46·5	8·05	1·90	4·83
Dublin	314666	31·3	133	100	62·5	33·5	48·8	9·33	0·60	1·52
Total of 21 Towns in United Kingd'm	7507575	34·5	4937	3020	68·0	29·2	49·7	9·83	0·85	2·16

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·67 in. The highest was 29·95 in. on Sunday evening, and the lowest 29·40 in. on Tuesday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON DUST-INHALATION AS A CAUSE OF LUNG DISEASE.(a)

By E. SYMES THOMPSON, M.D., F.R.C.P.,
Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

(*Continued from page* 430.)

Robert G., aged 42, a tall Yorkshireman. Family healthy and long livers, but one brother, a typefounder, died of phthisis at the age of thirty-six. When sixteen years of age he was apprenticed to a baker, and though well at first, exposure to flour-dust, sulphurous fumes from the coal, and sudden changes of temperature gradually developed lung disease. He had cough, night sweats, loss of flesh, purulent expectoration, and hæmoptysis. He improved in the country, and returned to baking, but was soon forced to give it up; and at the age of twenty-three his health was so bad that he was advised to cross the Atlantic. He gained flesh and strength at New Orleans, and then went to St. Louis, where the winters were very severe, and he had several attacks of bronchitis. Went into the interior, among the pine forests on the Jackson River, north of Ohio. For eight years remained well—riding, driving, shooting, and looking after trotting and racing stables. During the second autumn and winter of the war had eight months of camp life as groom and valet to an officer of the 117th Illinois Regiment. Had diarrhœa, ague, fever, jaundice, and other local maladies; and one winter, in Ohio, when the thermometer stood at 18° Fahr. below zero, got a cough. Found the climate, on the whole, good, being very cold in winter and very hot in summer, but spring and autumn delightful, the sky being clear and the air dry. Returned to England in 1867; became groom at the hunting stables of a sporting nobleman, where he had to do much dusty chaff-cutting, and was admitted to the Brompton Hospital, where, after thirteen weeks of treatment, he returned to work as coachman in a private family. Last year had a return of cough, and was again admitted as an in-patient in March. Gradually improved for nine weeks, then caught fresh cold, with severe cough, dyspnœa, and some fever.

The physical signs of the chest have been variable. On admission, on the right side there was crepitation throughout, and on the left the same crepitation sounds were heard over the upper third of the chest in front.

May 9.—Right side: Crepitation extended to the third rib. The left side was free in front, but a little crepitation was heard in the acromial region behind.

June 27.—The resonance throughout perfect. Right side: Crepitation loud, superficial, and diffused, extending nearly to the angle of the scapula, though intermixed with natural vesicular breathing; below this the breathing normal. Left side: Fine distant crepitation in front to the axillary margin.

Millstone dressers and stonemasons occupy an intermediate position between these extremes. The case of James N. which follows illustrates this class well:—

James N., aged 42, when admitted into the Richmond ward three months ago under my care, was threatened with delirium tremens. He had the appearance of a hard drinker, and confessed to a partiality for beer and spirits.

History.—Since twelve years of age, when he had measles, subject to cough. During the last three winters the breath has been specially short, particularly in the morning, when he coughs up half a pint of thick phlegm, sometimes streaked with blood. After leaving school he began life as a silk handkerchief printer. He left this in 1850. Then he took to stoking locomotive engines, but the coal-dust choked him. He then took to the building trade, and was chiefly employed in stonemasonry because his breath was not good enough for carrying bricks up ladders, and he caught cold when exposed in the bricklaying trade. Found stone-facing work very trying to the chest in consequence of the dust inhaled. Three years ago, after working with bath-stone, which is the worst as being the most dusty stone, he was laid up with cough, dyspnœa, and expectoration, and this has continued ever since. Pulse 92; respirations 32.

On examining the chest it is seen to be much expanded, moving *en masse*. Respiration chiefly diaphragmatic. There is a depression at the scrobiculus and a swelling at the left clavicle—a callus following fracture (he says that three trains went over him, smashing his collar-bone and cutting off his finger-top). On percussion the chest is hyper-resonant below the right clavicle and in the axilla (but the area of hepatic dulness is increased); behind the chest is resistant, though hyper-resonant. At the left apex in front percussion is slightly dull. On auscultation—Right side: breathing nearly normal, somewhat harsh, with sibilus and scattered crepitation in the axilla. Left side: Vesicular murmur replaced by superficial crepitation, varying from day to day. Here and there towards the axilla the vesicular murmur unaltered. Heart sounds diffused, impulse heaving. When admitted the heart's action was very tumultuous, and the man was very shaky from drink. He could not sleep until chloral was given him in fifteen-grain doses. Effervescing ammonia with ipecacuanha wine gave no relief, except in easing expectoration; nor did ether and ammonia. When the bronchial surfaces are dry, dyspnœa is urgent; when secretion is free, breathing is easy. Quassia, iron, ether, and strychnia seemed to do good, and cod-liver oil. He has gained ten pounds in weight—from 10 st. 0½ lb. to 10 st. 10¾ lbs.—but has varied lately from a renewed attack of bronchitis, to which he is always very prone.

July 1.—Went out on pass yesterday and returned drunk next day, having prolonged his absence without leave.

The particles of millstone are as hard and irritating, or very nearly so, as those of steel or iron, and it is from the dressing of the millstones, more than from the flour-dust, that millers suffer.

Bakers who have to deal with highly-dried flour—*biscuit*-flour—the men employed at Robinson's and Polson's flour factories, for instance—suffer more than those who work with the common flour used by ordinary bakers. Bakers often complain more of the sulphur fumes from the ovens, and the long hours, than of the flour; and sudden great alternations of temperature serve greatly to increase the unhealthiness of this trade.

It has been observed that the Sheffield grinders and Staffordshire potters are very reckless and careless of consequences. As those who live in an atmosphere of carbonic acid fail to observe a degree of closeness unbearable to those coming from the open air, so workers in dust take no notice of an atmosphere so full of dust as to be perfectly choking to the inexperienced; nor do they, as a rule, apply for treatment until disease is firmly established and dyspnœa urgent.

Bakers, on the other hand, are a poor anæmic set, and often come under treatment at our hospitals—general and special—before any decided bronchial or pulmonary mischief has set in. They look pallid and miserable, although their lungs are sound; whereas the grinders often retain a good digestion and remain fleshy when extensive disease exists. Their chests are generally emphysematous, and the abnormal sounds are loud and extensively diffused. The healthy complexion, skin, and general appearance make one unprepared to find evidence of so much pulmonary disease. The dyspnœa, however, is usually greater than in phthisis, and the cough more constant, ringing, and spasmodic.

Instead of giving a general epitome of the physical signs, the most satisfactory way appears to me to be to bring the case before you first by a brief description, and then give you an opportunity of a personal examination. The cases now under my care in the Hospital afford fair illustrations of the points referred to.

I have to thank Mr. Bartlett, our indefatigable Assistant Medical Officer, for drawing my attention to the following cases:—

Mary H., aged 35, admitted under Dr. Pollock into Montgomery ward. Has been employed at Carter's seed warehouse in Holborn for years. The work given to women is chiefly sifting seed—a very dusty employment. Hours of work from 8 a.m. till 8 p.m., and often till 11 p.m. She and many others are often ill, chiefly, it is thought, from the effects of the inhalation of dust. They rarely place anything over their mouths; the dust induces sneezing and coughing, with expectoration.

Symptoms.—Cough of a loud, tearing, spasmodic character, with expectoration at first frothy, now purulent; considerable dyspnœa. When in St. George's Hospital two months ago was almost confined to bed, but now sits up daily; is gaining strength.

Physical Signs.—Right subclavian region dull and crepitant

(a) Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton.

to the fourth rib; dull, with diffused crepitation to base. Left supraspinous fossa dull, with tubular breathing and scattered crepitatiou.

In this case the disease appears to have begun with bronchitis, arisiug partly at least from dust-inhalation, but has goue on to consolidation and commencing softening on the right, with scattered mischief on the left side. The apices are chiefly affected, and there is now some decided tubercular mischief present.

G., aged 28, a driller, now in Richmond ward under my care, says that when he took to drilling—a work in which metallic particles are dispersed through the workshop—he was ill, and subject to cough and shortness of breath; his previous occupation having been chopping wood for fire-lighting. Was admitted under the care of Dr. Quain three years ago. His shoulders are very round, and the chest is emphysematous, being resonant all over, but crepitant at both apices, with sibilus aud prolonged expiration. Every morning there is much wheeziug, but after expectorating half a piut or a quarter of a pint of frothy sputa the breathiug is less oppressed. He has obtained benefit from counter-irritation, and is gaining in weight.

I regret that I have no opportunity of placing before you specimens of the changes that take place in the lungs, for we have not lately had a post-mortem examination in a case of this kind; and even when patients die of this form of disease, the lung has often passed on to general disorganisation with formation of cavities. It is rare, in fact, to meet with a fatal case until advanced destruction of lung has occurred.

Instead of morbid specimens I have brought down some beautiful drawings in Lebert's work, and also in Carswell's, which illustrate very well the melanotic chauge which takes place in lung and in gland in many of these cases.

It is not easy to show in a drawing the thickened and hypertrophied walls of the bronchial tubes which result from the chronic inflammation set up by the particles of dust lodged in the mucous membranes. The tubes are narrowed, partly from thickening of their mucous linings, and partly by exudation matters which encroach on the adjacent lung substance. This thickening obstructs some of the smaller bronchi, and leads to collapse of the air vesicle iu which they terminate, and it appears probable that particles of fine dust may find their way into the minute air-cells themselves, and set up changes similar to those which occur in the air tubes.

The material which is exuded may also obstruct the vessels, and cut off the supply of blood, so that atrophy of the tissues occurs; local congestions follow, leading often to hæmoptysis. The dyspnœa aud dusky hue of the face may be attributed to the extensive alteration of large tracts of lung by fibroid or exudation matter. Fibroid phthisis in one of its forms may be traceable to inhaled irritants, for the inflammatory products resulting from irritation or subacute inflammation have a property of slow contraction, and hence the expansile power and elasticity of the lung becomes slowly crippled. Nodules, often nigrated, are scattered throughout the lung, and these undergo cretific change or calcification, and give to the lung a mottled appearance. Not unfrequently the nodules are encysted, and fibrous prolongations extend from these cysts into the substance of the lung; the thickening being greatest in the septa, on the pleural surfaces, and along the course of the bronchial tubes. The fibrous depositions about the pleura are the result of unchecked subacute pleurisy. This is apt to escape notice unless the patient is carefully watched and the chest examined; even when there appear no marked signs of increased discomfort, it is not unusual to fiud loud creaking souuds extending over a considerable portion of the side and lasting for days or weeks.

Dilated bronchial tubes are frequently met with. The mucous membrane lining the bronchial tubes is found to be congested and sometimes ulcerated. The bronchial glands are enlarged often to the size of nuts, are perfectly black, gritty on sectiou, and similar black-current-like deposits are often scattered through the lung (*vide* Lebert). Tubercular deposits appear to dry up in the presence of the black matter surrounding them, cicatrices become black, and the walls of cavities are black too. In old age there is a great increase of pigment in the lung. Chronic congestion leads also to the same result (*vide* Carswell's plates), aud auy abiding irritation may be aloue adequate to the production of melanotic change. But besides this, there are in the lungs of coal-miners deposits of carbou, in which silica may be detected. Indigo and tobacco may be also found in the lungs of indigo-makers or snuff manufacturers. The signs of emphysema are constant.

After this account of the pathology, a very hopeful prognosis cannot be anticipated. Eveu when removal from the cause of the malady is possible, the disease is very apt to run its course. Our prognosis may, however, be *favourable* in some seemingly bad cases, and *vice versâ*. In the class in which the chest is large, expanded, and emphysematous, with clear normal or hyper-resonant percussion, spasmodic breathing, and violent tearing cough, the cough and spasm may be relieved, and great, perhaps permanent, amendment take place—the prognosis being favourable in proportiou as the asthmatic element is most marked. The *unfavourable* cases are those in which the chest is flat and contracted, the percussion dull, and the symptoms masked. These are often cases in which there is an hereditary tendency to chest disease, aud the patients would probably have become phthisical in auy indoor occupation. The poor sufferer works on uncomplainingly till the pulmonary degeneration is so advanced that life cannot be maintained.

The *treatment* is in the main that which we employ iu lung disease from other causes. Counter-irritants are certainly of value, the croton-oil liniment (known by the out-patients at this Hospital under the euphemistic name "Brompton itch") being probably the best of these.

Small blisters certainly give relief in the acute stages, and a few leeches when the pleura is affected. But the pleural inflammation is generally subacute, and leads to adhesions and effusion of lymph rather than fluid.

When there is much dyspnœa and blueness of lips and finger-nails, remembering that the oppressiou, with dull, heavy pain is due to pulmonary engorgement, we may relieve the circulation by occasioual emetics. When we bear in mind the pathology of the disease, we are prepared to expect more benefit from tonics than from auy other plan of treatmeut; and experieuce confirms this view.

Much relief may be also giveu by promoting secretion in cases in which the cough is dry and irritative. Antimony, chloric ether, and soda inhalations are serviceable in this way.

The prophylactic treatmeut differs with every trade. To the metal-worker the magnetic gauze respirator is of service; but the injurious particles are frequently portions of the grindstone, and these may escape the magnet. An ordinary gauze respirator or silk handkerchief may be used, or Dr. Marcet's charcoal respirator. Fans should be employed to carry off the dust from the workers, and the stoves should be in buildings distiuct from those in which the potter moulds his clay; for the sudden transition from hot to cold places is an undoubted element in the maintenance, if not in the causation, of lung disease among potters. In the stove-rooms there is not only dust and a hurtfully hot, dry air, but there is also much coal-dust; and this probably accounts for the marked nigration in the lungs of potters.

Let me, in conclusiou, beg you carefully to examine the patients uow introduced.

Medical Names of Streets in Paris.—We who are so much more disposed to blame than to praise the Paris municipal authorities which have succeeded each other during the last half-century, should bear in mind the homage which they have rendered to Medicine during that period by giving to the streets names that are cherished by science and the medical profession. We should indeed be ungrateful to complain on this head; for if our researches are exact there are thirty-seven of the public streets that bear such names, and certainly no other science or art has been so liberally dealt with. Here is an alphabetical list of such streets:—Alibert, Ambroise Paré, Antoine Dubois, Bichat, De Blainville, Broussais, Cabanis, Chomel, Corvisart, Cuvier, Desgenettes, Duméril, Dupuytren, Esquirol, Fagon, Ferrus, Fourcroy, Galvani, Guy de la Brosse, Guy Patin, Hallé, Harvey, Jenner, Larrey, Magendie, Mazet, Papin, Pinel, Quesnay, Rabelais, Richerand, Vauquelin, Velpeau, Vésale, Vicq d'Azyr.—*Union Méd.*, Oct. 18.

Richmond Surgical Hospital, Dublin.—On Thursday, the 16th inst., William Thornley Stoker, M.D., Surgeon to the City of Dublin Hospital, and William Thomson, M.D., House-Surgeon to the Richmond Surgical Hospital, were elected Surgeons to the above institution, in the room of Robert Adams, M.D., Surgeon to the Queen and Regius Professor of Surgery in the University of Dublin, aud Robert W. Smith, M.D., Trinity College, Professor of Surgery, both resigned.

ORIGINAL COMMUNICATIONS.

CASES OF HEART DISEASE AFFORDING EVIDENCE RESPECTING THE ACTION OF DIGITALIS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.

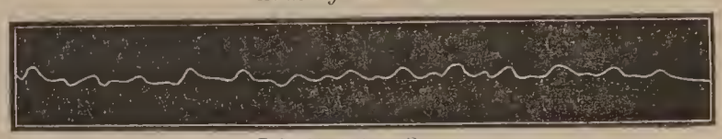
(*Continued from page* 432.)

Case 3.—*Obesity, Dyspepsia, Flatulence, Enteralgia, copious Urie Acid Deposit in Urine, very Feeble Action of Heart—Benefit from Digitalis, and especially from Sea-Air.*

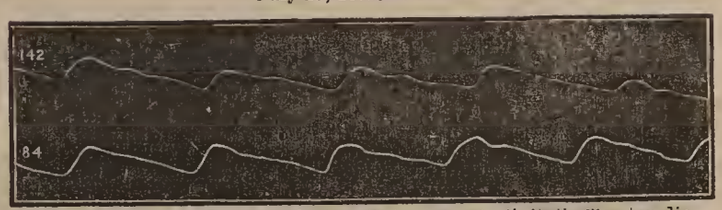
E. Sh., widow, cook, aged 38, admitted July 27, 1872. Had miscarriage and flooding severely eight years ago; had much anxiety five years ago. Has not felt well on and off for four years. She used to be very thin, but has got very stout the last year or two. Now and then her face and legs have swelled. Tongue pretty clean. Has always a nasty taste in her mouth, at times bitter. Bowels very costive. Meat suits her best in the way of food; liquid ingesta blow her out like a bladder; she cannot take sugar, it turns acid immediately. Catamenia regular, but are very pale, and only last about one day; has sickness sometimes for a week before the flow. Lips anæmic. Cardiac impulse scarcely to be felt. First sound of heart extinct, or nearly so; second heard as a rapid pit-pat; every now and then a complete pause occurs. Says her breath is so short that it takes her half an hour to walk up a flight of stairs. Urine of dark colour, red, with brownish sediment; darkens greatly when boiled with nitric acid; is not albuminous. Her weight was 156 lb. Ordered—Spt. ammon. co. ℥xx., pot. bicarb. gr. xx., inf. cascarillæ ℥j. ter die.; ferri redacti. gr. j. in pil ter die. Meat, toast for bread, no sugar or potatoes. By August 12 her breath was much better; the first sound of her heart was much improved in quality. September 2: Suffering from shortness of breath and so-called spasms of the abdomen (pains). The belly, she says, becomes as cold as ice when these attacks come on. She has often had them before during the last two years. Urine, two or three days ago, deposited much uric acid. Heart's action very quick; no first sound audible—only the second; now and then an interval of complete silence occurs. Pt. c. mist. c. tinct. cinchon. ʒj. ad ℥j. September 9: Wakes up from sleep in alarm, and in a dripping perspiration. Urine the other day was acid, and deposited much uric acid; it is to-day pale and neutral. Ferri et quinæ citratis gr. x., tinct. nucis vomicæ ℥x., spt. chlorof. ℥x., aq. ℥j., ter die. She continued this till the 19th, when it was changed for ammon. carb. gr. v., tinct. cinchon. ʒj., dec. cinchon. ℥j., quater die, with ferri carb. sacch. ʒss., ter die. She had been ailing with hysterical disorder, shooting pain at region of heart, and abdominal "spasms," with considerable deposit of uric acid in urine. She continued to take the last-prescribed remedies till October 25; but no ground was gained. She was then ordered tinct. digitalis ℥v., aq. ʒij., ter die, which she took till the 30th, when the dose of digitalis was increased to ℥x. bis die, with ferri et quinæ citratis gr. v. On this treatment more benefit was obtained than on any previous. The report on November 22 is that she has slept better the last three weeks than she has for two years. Instead of lying in bed, as she has hitherto, she is now sitting up, and takes food well. The urine, however, continued almost constantly to deposit much uric acid. Medicine was omitted on December 2, and on the 7th she went to a convalescent home at Dover, where I heard on January 9 that she had improved much, and had not been obliged to keep her bed a day. I saw her again on February 26, three days after her return from Dover. She was looking very well. The pulse was irregular and unequal, but of tolerable size, and pretty distinct. She had been taking a prescription sent her for ammon. carb. gr. iv., tinct. digitalis ℥x., dec. cinchon. ℥j., ter die, and ferri carb. sacch. gr. xx. ter die, but not quite regularly. She was seeking a situation in service. Her urine was examined on September 16 and on November 25, with respect to its acidity—a notable deposit of lithic acid being present on the first occasion, and a copious sediment of lithates on the second. On September 16, 100 cc. of the urine contained an amount of acid equal to 9·264 grains of oxalic acid; on November 25, 100 cc. of urine equal to 15·44 grains of oxalic acid. The latter amount was therefore more than half as much again as the former. Probably the lithates were mingled with numerous minute uric acid crystals, so that there was no material difference between the two deposits. If we assume that the total urine passed during twenty-four hours was equally acid, and adopt Parkes's mean of 1500 cc. for its quantity, we should have a total acidity of 139 grains of oxalic acid on the first occasion, and of 231 grains on the second—a prodigious excess over the figures given by Parkes, which vary from 29 to 61 grains of oxalic acid as representing the total twenty-four hours' acidity.

In this patient some grave change had taken place in the normal vital chemistry, the consequences of which appeared to be a tendency to formation of fat, to an excessive production of acid, and to neuralgic disorder. It is a question whether the heart's muscle had undergone fatty degeneration, or whether its action was only depressed by deranged innervation. I incline to think both states existed and concurred in causing the very remarkable feebleness of the circulation. The uric acid sediment was probably due not so much to excessive production of this constituent as to over-acidity of the urine which determined its precipitation. The icy coldness of the belly occurring in the attacks of enteralgia is noteworthy, as well as the simultaneous existence of profuse perspiration in other parts. The enteralgia seems to have caused a morbid activity—an irritation—of vasal nerves in the district related to the suffering part, while those of the rest of the surface were in a state of paralysis. The non-occurrence of anything like articular rheumatism should also be noted in reference to the habitual over-production of acid in the system. Digitalis was not only well borne, though I gave it at first with much hesitation, but was positively of more benefit than any other medicine administered. It was, however, far excelled by a residence at the seaside, which certainly produced remarkable improvement. Unfortunately I omitted to inquire into its effect upon the production of uric acid sediment.

Tracings in Case 3.



July 29, 1872.—Pr. 58.



October 30, 1872.—Pr. 84 and 142. Taking tinct. digitalis ℥v. ter die.

The tracing taken July 29, with a pressure of only 58 grammes, contrasts strongly with those taken October 30, when small doses of digitalis had been administered about five days, the pressure used for the latter being 84 and 142 grammes. The latter show that the left ventricle was acting more regularly and exerting much more force. I am of course aware that greater degrees of pressure will often produce a better-developed tracing than weaker, but I believe this point was not overlooked in making the observations.

Case 4.—*Dilatation and Hypertrophy of Heart—Extensive Dropsy—Great Distension of Jugulars—Much Benefit from Digitalis with Iron or Blue-pill—Autopsy.*

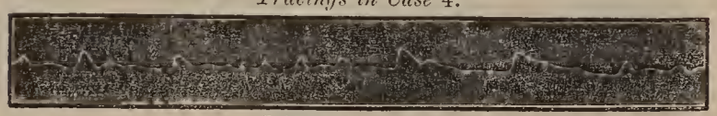
E. B., aged 68, admitted July 1, 1872. Says she enjoyed very good health until three weeks ago, when dropsy set in and soon became very considerable. The pulse was about 80, weak, small, and irregular. The rhythm of the heart was very irregular—every now and then there occurred a number of brief hurried beats; the first sound was weak, the second more distinct; the impulse was tremulous, scarcely perceptible; the dulness area was unduly extended to right and left. Both external jugulars were very greatly distended. There was evidence of œdema in the lower posterior parts of the lungs, much more extensive in the right than in the left; this increased considerably towards the close. The urine was of sp. gr. 1020, sometimes contained a little albumen, but did not deposit renal epithelium or casts to any notable amount. The girth of the abdomen was at one time forty inches; under treatment it was reduced for a time to thirty-two. The anasarca of the lower limbs also lessened very greatly. She left

the hospital much improved on November 11. The remedies employed were chiefly digitalis and iron, the former either in combination with liq. ferri muriat., or liq. ferri peracet., or with pil. hydrarg., and pulv. scill., the iron being given separately. She was readmitted January 31, 1873, having got worse the last three weeks. The pulse was too weak to be counted. The lungs were much engorged at their lower parts. There was much anasarca, and both hands and feet became covered with purpuric spots and patches, extending subsequently to the elbows. Digitalis given by the mouth failed to benefit, nor was a lotion of the same or subcutaneous injection more effectual. The latter caused much prostration and sickness. The urine was tested three different times, was not found albuminous, but was red and scanty. She was tapped March 31, and ninety-six ounces of semi-opaque straw-coloured fluid were drawn off. This fluid deposited nothing when left to stand for several days; all that could be seen in it with the microscope was some droplets of oil. She died some hours after the tapping.

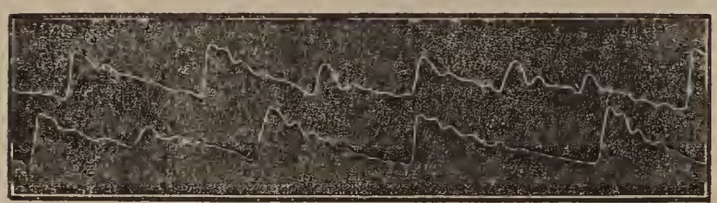
Autopsy.—Heart weighed fifteen ounces, was moderately dilated, valves sound. Lungs were semi-consolidated; highly œdematous throughout. There was old tubercle in the right apex, which was much indurated and blackened. The kidneys weighed together ten ounces; were much fissured and indented at many parts of the surface; the cortical tissue was much wasted in these situations; the cortical tubes were opaque, their epithelium more highly fatty; the Malpighian tufts pretty normal; the matrix thickened, but not condensed—at any rate, in all parts; the straight medullary tubes were normal. The liver was firm, weighed fifty-six ounces; capsule at anterior part thickened, much congested; Glissonian sheaths thickened. Cells plexiformly arranged; some contained yellow pigment, some fat; they seemed wasted.

It is interesting to compare the tracing taken on July 4 with those of September 25, when some material improvement had been obtained. The first, taken with a weak pressure (fifty-six grammes), shows a very low rise, great inequality of beats, and great irregularity of rhythm; the second shows a much higher rise, less inequality and irregularity. The higher rise is the more noteworthy as the pressure employed was double what it was on the first occasion. It cannot be doubted that the left ventricle projected a larger quantity of blood on the second occasion than on the first. The absence of albumen from the urine on four different occasions, when the kidneys were undoubtedly diseased, is very noteworthy. Recent experience to the same effect has made me more suspicious than ever of the existence of latent renal mischief in refractory or obscure cases.

Tracings in Case 4.



July 4, 1872.—Pr. 56.



September 25, 1872.—Pr. 112.

Case 5.—Dilatation and Hypertrophy of Heart, with Mitral Regurgitation—Alarming Asthenia—Speedy Improvement with Digitalis.

E. M., aged 34, married, no children, admitted September 2, 1873. Had rheumatic fever five years ago; was very ill then. Was in-patient here with broncho-pneumonia and mitral mischief two years ago. Ill this time three weeks; had short breath and swelling of legs first. Now (September 10) she has semi-orthopnœa, congestion of liver, nausea, and occasional vomiting; loss of appetite. Left back, fairly good breathing and resonance; right, dulness in lower half, very little breathing, and some moist râle. Heart's impulse extensive, marked in epigastrium, and at fifth left space both inside and outside vertical line; also in second and third left spaces. Dulness area extends up to second left space and to median line, and a little beyond left vertical line. Sounds at mid-sternum are a pit-pat, are louder at epigastrium, and at normal site of apex-beat on left side are marked by breath-sound; no distinct murmur can be heard anywhere, though the breathing often simulates it. Pulse in both wrists so small and weak that it can hardly be felt. Two days ago had no appetite; she was then taking tinct. ferri muriat. ℥x., inf. digitalis ʒij., aq. ℥j., 4tis horis. Hyd. chlor. gr. j. and ext. coloc co. gr. j. has been given each of two last nights, and she is to-day better; has eaten a nice dinner. Since the 9th the iron and digitalis have been left off, and she has had acid. muriat. ℥ij., spt. chloroformi ℥x., aq. ℥j. ter die. Has had simple diet—milk and fish; took to-day boiled mutton and custard; since the 3rd has had brandy ℥iv.

11th.—Seemed better this morning, but has become much worse since about noon. Pulse scarcely to be felt; no tracing can be got. She seems to be in grave danger of dying speedily from asthenia of the heart. Respirations 24. I ordered tinct. digitalis ℥xv. at once in brandy-and-water, and then ℥x. 2dis horis till 8 p.m.; afterwards ℥x. 4tis horis.

12th.—4 p.m.: Looks cheerful and smiling; says she is wonderfully better; passed a very good night; has taken her food well to-day; had no sickness; says that some parts of yesterday she was unconscious. Pulse 63, a little more distinct. Brandy has been given freely to eight or ten ounces a day. Pt.

13th.—Slept well until 5 a.m.; then was very ill for three hours; her heart quite stopped every now and then—once it stopped so long that she tried to call the nurse, but could not. Says that her heart is beating all right now. Pulse pretty distinct, 80, unequal.

15th.—Urine pale, alkaline, not albuminous, much increased in quantity. Pulse 69, quite distinct. Taking food well; had a very good night. Ferri carb. sacch. gr. xx. bis die.

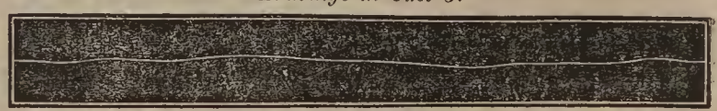
16th.—Slept well until 6 a.m.; then woke faint and distressed; was sick, had ℥xx. of tinct. digitalis, but vomited it. Has rallied again, and her pulse is fuller and gives a more ample tracing than it has yet done. Has not taken food so well to-day. Digitalis omitted, iron continued.

17th.—Better to-day; pulse good and distinct; a well-marked systolic murmur heard at apex both to-day and yesterday.

30th.—Has gone on improving steadily up to this date, taking ferri carb. regularly, and tinct. digitalis some days.

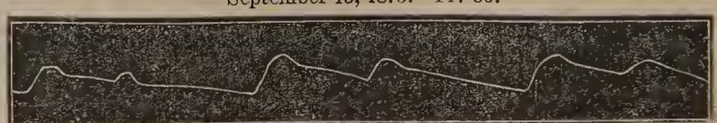
There is no question that the administration of nearly 100 minims of tinct. digitalis in about thirty hours coincided with a vast improvement in this woman's state. It is, however, true that four to six ounces more brandy were given at the same time than she had taken before, and some of the result may have been due to the alcohol. Yet, at the very least, it is plain that the drug did not weaken the heart's action, and I suspect few will admit that the additional dose of brandy made all the difference. The tracings show a most marked improvement in the pulse in the course of two days under the medication, and I cannot but hold the opinion that life was really preserved by this remedy. There occurred, however, after this great rally had taken place two attacks of faintness, the last of which *may* have been due to the digitalis having been too long continued. This, however, seems very doubtful, as both the attacks came on in the early morning after a long sleep, when the nervous forces generally, and that of the heart's centres in particular, were likely to be languid and depressed. The first attack certainly cannot be imputed to the digitalis, as the patient went on improving while still taking it. After the second, however, I thought it right to let her try to do without it, and I admit that no ground was lost by the change. It was interesting to find the murmur become audible as the heart gained strength.

Tracings in Case 5.



September 11, 1873.—Pr. 56 (?).

September 13, 1873.—Pr. 56.



September 16, 1873.—Pr. 56.

To conclude: I hold (1) that digitalis is the remedy for cardiac asthenia, especially of the enlarged and dilated heart; (2) that the existence of fatty degeneration in the heart does not forbid its administration; (3) that its effects should be carefully watched, and that if the patient cannot be frequently seen it is well to make him omit the remedy at intervals, as every third day.

THE TREATMENT OF GONORRHŒA BY LOCAL REMEDIES ONLY;

WITH COMPLICATED CASES SO TREATED.

By PHILIP FOSTER.

Some most eminent authorities having condemned the use of injections in the first stage of gonorrhœa, I feel that I am simply discharging a duty in recording how exceedingly successful, during an extended trial, this mode of treatment has proved in my hands. That cases do occasionally occur, as Case 2, in which the immediate use of injections would not be prudent, I willingly admit, but experience has assured me that the great majority of cases may be thus treated with the most perfect safety and success. Where mischief has followed this mode of treatment,—and I have seen instances of it, although not in my own practice,—I believe it to have arisen from injections of too powerful and irritating a nature having been used. My success in the treatment of this complaint I consider mainly attributable to the use of very mild injections: at first, say one or two grains of sulphate of zinc to the ounce of water, strengthening or changing them in a few days if necessary. And here let me distinctly state that it is not to any particular form of injection,—for one will frequently answer where another has failed,—but to the principle of treatment itself that I wish to direct attention. Three or four days of this treatment usually suffice to effect a cure, but I consider it advisable, and always recommend, that it should be persevered with for a few days after the discharge has entirely ceased. The occurrence of gleet and stricture would, I believe, be exceedingly rare after this mode of treatment.

I beg to observe that the following are not selected cases, but the only complicated ones that have come under my care since I commenced my present mode of treatment. Case 1 is inserted because it illustrates the mischievous effect of strong and irritating injections—the reason, I believe, of local treatment having fallen into disrepute.

Case 1.—Mr. —— called upon me, complaining of great pain and uncasiness in the urethra, especially when passing water. The meatus looked red and irritable, and there was a slight glairy discharge issuing from it. He had the day before consulted a surgeon at Manchester, where he resides, who had prescribed an injection of nitrate of silver, gr. j. ad ℥j., to be used three times a day. He said that this injection, which he has used twice, had made him decidedly worse. I ordered an injection of sulphate of zinc, gr. j. ad ℥j., to be used six or eight times a day. The next day he wrote to inform me that all the symptoms had entirely disappeared, and I have since heard that there has not been any return of them.

Case 2.—In this case the whole penis was exceedingly swollen, and there was great constitutional disturbance. Ordered antimony and saline aperients, sugar of lead lotion, rest, and low diet. A week of this treatment having sufficed to get rid of the swelling and fever, an injection of sulphate of zinc, gr. j. ad ℥j., was directed to be used four times a day. As, however, a week passed by and the discharge still continued, although the zinc had been increased to gr. ij., cupri sulph. gr. j. ad ℥j. was substituted for the zinc. On the fourth day after commencing with the copper the discharge had completely ceased, and the patient has remained quite well.

Case 3.—This commenced as an ordinary case of gonorrhœa. An injection of zinci sulph. gr. ij. ad ℥j., was prescribed four times a day. On the third day the patient was decidedly better, but on the fifth inflammation showed itself in the left testicle. The injection was at once discontinued, and the usual remedies for orchitis were commenced with. On the fourth day, the orchitis having disappeared, the injection gr. j. ad ℥j. was resumed, and in a week the patient was quite well. This patient, whom I have not seen since, informed me that he had suffered from inflammation in the same testicle during a previous attack of gonorrhœa, although he had not then been treated by injection: so that the orchitis cannot be reasonably attributed to the injection.

Leeds.

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,

Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, etc., etc.

(*Continued from page* 324.)

Having stated, as clearly as the difficulties of the subjects will allow, something of the nature of snake-poisou, of its effects upon the blood, and the symptoms it produces, together with the results of injection of ammonia into the veins, I proceed now to detail all the cases of snake-poisoning in the human subject that have been treated in this manner.

Case 1 occurred in the practice of Dr. J. C. Dempster, and was communicated to me as follows:—

"Beechworth, November 15, 1868.

"Sir,—I beg to inform you that on November 11 an adult male came under my care for treatment of the bite of a black snake (Pseudechys porphyriacus). He was bitten at about 8 a.m., and after several minutes had elapsed he sucked and incised the wound. Prior to this, however, he had felt very giddy. I did not see him for more than an hour afterwards, and treated him in the usual way with brandy, ammonia, scarifying the wound and applying ammonia. He, however, fell into the stage of stupor, and when I was called to him at midday we could not rouse him. I therefore injected liq. ammoniæ fort. into the saphena vein, and also hypodermically. This affected him at once, and after the second injection he woke up and became sensible. His pupils—which had before been very sluggish—acted well, and his pulse rose from 56 to 70. After this he progressed well. I certainly attribute his recovery to the injection of the ammonia, of which I injected about twelve minims. Yours truly,

"John C. Dempster, M.D.

"G. B. Halford, Esq., M.D."

This case, occurring in the practice of an accomplished surgeon, excited great hopes of an antidote having been discovered. Knowing that not only the popular mind, but even the professional, is constantly looking in that direction, I felt it my duty to write, November 17, 1868, to the *Melbourne Argus*, explaining that I regarded the injection of ammonia as only a mode of treatment, as the following extract will show:—"Should further experiment encourage the adoption of this treatment in snake-poisoning, it must never be forgotten that ammonia cannot destroy the poison. It may build up as fast as the poison pulls down. Mixing freely with the blood, and being eminently volatile, it does its work speedily, and is as speedily used up; consequently it must be replaced by fresh injections as often as required."

Subsequent events, as will be seen, lead me still to adhere to this opiniou.

Case 2.—The second case which I have to record is valuable principally for the fact that it was closely observed by three medical practitioners — Messrs. Arnold, Wooldridge, and à'Beckett—as well as by myself. Mr. Arnold's account is as follows:—

"At about 11 a.m. on Monday, November 30, 1868, Mr. John Brown, station-master at Elsternwick, was bitten on the third finger of the right hand. Two punctures were clearly visible, from which the blood flowed. Symptoms: Pain in the finger, wild appearance of countenance, stiffness of the legs. Applied a ligature above the bite, employed suction to the wound, and took sixpennyworth of brandy. At 1 p.m. felt drowsy and unable to attend to his duties. As he did not feel alarmed, his friends had great difficulty in persuading him to go to town for advice. Feeling somewhat better at Balaclava (four minutes' journey), he declined to proceed further. Whilst conversing with Mr. McPherson, the latter noticed his manner resembled that of a person labouring under the effect of drink—speech affected, drowsiness. He was then brought, almost against his will, to my residence—five minutes' walk. About half-way he complained of feeling very weak. On his arrival he was completely prostrated, and shortly after paralysis of the lower extremities set in, with indistinct vision, sluggish dilated pupils, weak pulse, cold perspiratiou, and vomiting. The punctures from the bite were still distinct. Treatment:

Excision of the bitten part; firmer ligature. In a short time symptoms of coma commenced; when roused with difficulty he had great trouble in recognising his wife. Considerable swelling was noticed about the upper lip. Treatment: Gave brandy —in all about six ounces—with great difficulty; sal volatile half an ounce, in divided doses; mustard poultices to the chest and feet. Galvanism, which greatly roused the patient; the moment it was suspended the comatose symptoms returned; at the same time it was evident this artificial restorative would ultimately fail, coma becoming deeper and deeper. At 5.30 p.m. Mr. Wooldridge and Professor Halford came to our assistance. Coma has been entirely absent since the time Professor Halford injected ten minims of liq. ammoniæ fortior, mixed with twenty of distilled water, into the superficial radial vein. This was the turning-point, I am fully satisfied, to the saving of the man's life."

Mr. à'Beckett's account is as follows:—

"On the afternoon of Monday, November 30, I was requested by Mr. Arnold to see a patient of his who, some hours before, had been bitten by a snake at Elsternwick. On arriving at the house I found the patient lying on a sofa in a semi-conscious state, and as I entered the room he vomited a small quantity of brandy and water which was being administered to him. On examination I found the surface of the body cold and clammy, the pulse slow and very weak, the face pale, and the pupils sluggish and dilated. Hearing that the bitten part had been excised, liq. ammoniæ fort. applied locally, and also a ligature above the bitten part, besides brandy and spt. ammon. aromat. having been given internally without much benefit, I suggested that Professor Halford should be immediately sent for to employ his injection of ammonia, and in the meantime to use galvanism and continue the administration of brandy and ammonia. The plan was immediately carried into effect with the following results:—On commencing the galvanism the colour returned to the face, the pulse became stronger, and the insensibility diminished; the patient at this time presenting the symptoms of incipient intoxication rather than those of narcotism. When the galvanic current was interrupted he fell into his former state. He continued in his condition for about an hour, at the end of which time the galvanism seemed to lose its good effect, the symptoms of coma slowly but surely coming on. His pulse varied, being sometimes moderately good, at others all but gone; he could with difficulty be roused, and his feet became cold. We then applied a mustard poultice to the epigastrium, and flannels wrung out of hot water and mustard to the feet. About this time Dr. Halford and Mr. Wooldridge arrived, and we determined upon injecting ammonia, as we considered the case to be desperate. I would state that an attempt to walk the patient about the room, so far from being attended with any good results, seemed to prostrate him utterly, complete paralysis of the lower extremities having now succeeded to the previous weakness and impaired sensation in the legs. The effects of the operation performed by Dr. Halford were wonderful, the patient reviving at once, consciousness returning, the pulse becoming full, and the pupils acting readily to the stimulus of light. This relief of the symptoms was persistent, and the patient, though experiencing extreme debility, has gradually advanced to convalescence. I will end the account of this highly interesting case by stating my firm conviction that the injection of ammonia saved the man's life."

Mr. Wooldridge's account is as follows:—

"The symptoms of this case at 5.30 p.m. were—corneæ insensible to the touch; pupils possessed only of the minutest power of contraction, and considerably dilated; limbs paralysed; pulse of large volume, weak, and about 70; countenance rather approaching a livid hue, features swollen; breathing rather slow. In two or three minutes after the injection the patient awoke as from a deep sleep. The countenance was expressive of great surprise. The pupils contracted and dilated again and again, and then settled down into pupils of ordinary size. He answered questions deliberately and coherently; in fact, the coma was replaced by consciousness, and the declining functions of life resumed almost at once their normal activity, leading this poor fellow onwards to the happy termination of his misfortune in complete recovery."

I will only add one or two remarks to these accounts. I ascertained from those who brought the patient from the railway-station to Mr. Arnold's that before he reached that gentleman's house he had become insensible, and, in fact, remembers nothing of what occurred after this time until he became conscious soon after this little operation. This shows how deep must have been the impression produced upon the sensorium by the snake-poison—as great, indeed, as accompanies severe concussion of the brain, and sometimes alcoholic drunkenness. The swollen features are a very frequent result of snake-poisoning, depending partly upon the paralysis of the muscles of expression, distension of the veins, and serous exudation. In the case of adder-bite which I attended in London the punctures on the finger could scarcely be seen, but the man's face, fauces, and tongue became in a few hours so swollen and œdematous as to threaten suffocation. I adopted as treatment free leeching and fomentations to the neck with great relief. The bite was followed by the most extensive ecchymosis of the arm and side of the trunk; no swelling of the glands.

It has been objected to the value of this case that the snake was nearly dead. Against that we have the evidence of the two punctured wounds from which blood was flowing. The species of snake was hoplocephalus superbus (copper-head).

These two cases—those of Dr. Dempster and of Messrs. Arnold and à'Beckett—drew from me at the time the following observations:—The fact of recovery in these cases is of little statistical value; but of great value is the fact that, coinciding with the diffusion of the ammonia throughout the system, force is manifested. Visual consciousness and its result, contraction of the pupil, are presently succeeded by general consciousness and its resulting acts. Animal life is restored; in other words, the bitten man now responds to the forces which surround or are brought to play upon him.

Case 3.—Of this case I have failed to get any authentic account, but it was well spoken of in the New South Wales papers. Dr. Irwin, who treated the case "by injection of ammonia into a vein above the wrist with a syringe," soon after died.

Case 4.—At Moyston a man was bitten by a tiger snake (hoplocephalus curtus) at 4 p.m. Forty minutes afterwards he was attended by Dr. O'Grady, but by this time the patient had swallowed a bottle of brandy. Twenty-five minims of liq. ammon. fort. diluted with water were injected into a vein in the arm, and brandy and ammonia given at intervals of every half-hour till recovery. As the treatment of this case also included galvanism and constant walking about, I wrote to Dr. O'Grady for more information, and the result of his observations was, in his own words, that "but for the injection of ammonia the man would have died."

About this time many violent letters appeared in some of the colonial newspapers denouncing the new treatment—most of them by anonymous authors, and displaying little knowledge of the first elements of physiology and medicine; others were from medical men whose previous readings had taught them the poisonous effects to be expected from injecting ammonia into the veins. One of these gentlemen thus wrote—"For my part, I would rather be bitten by a dozen snakes than have a drachm of strong ammonia injected into my veins." Another—"It was a happy idea, indeed, to think of introducing the antidote at once into the poisoned blood, and so preventing the usual fatal consequences. At the same time it is well known that the injection of fluid into the blood is in itself attended with some danger, especially should air happen to be introduced, or the inner coats of the veins get inflamed and form matter producing pyæmia or purulent poisoning of the blood. It is my decided conviction that the inhalation of ammoniacal gas, largely diluted with common air, into the lungs would be equally successful with its injection into the veins, and not likely to be attended with the same injurious results."

I had previously assured myself that any amount of air included in the small syringes could have no injurious effect on a man. I had frequently injected with these syringes nothing but air two and three times over in the jugular vein of dogs without any harm following. I had also fortified myself on this subject by reference to the writings of the late Dr. John Reid, who quotes Nysten and Magendie on this subject. The first author states that from two to three cubic inches of air rapidly thrown in are necessary to kill a small dog, and from six to seven cubic inches a large dog. Magendie says that he once threw, with all the force and celerity he could, forty to fifty pints of air into the veins of a very old horse without his dying immediately, though he sank at last. The usual quantity necessary to kill a horse was three inflations of the lungs.

As regards the inhalation of ammonia, I had tried it, but,

as I had expected, found it impossible to be borne. In fact, as I have before stated, my endeavour was to avoid in its administration both the stomach and the lungs.

Case 5.—Dr. Bennett, of Smythesdale, states—"Between 10 and 11 a.m., December 25, 1868, a messenger arrived requiring my immediate attendance on a girl named I. M., aged 14 years, who had, when drawing water from a hole, been bitten on the extremity of the last phalanx of the little finger of the right hand by a tiger snake (hoplocephalus curtus) which had coiled itself round the cord of the ascending bucket. On arriving, I found that the mother had excised the bitten part, had put a ligature round the finger, and had given about two ounces of gin. The girl was being walked about between two women. Her countenance was swollen and dusky, cornea glassy and insensible, stupor complete; pulse small, breathing slow. I could only partially and with great difficulty rouse her and obtain incoherent muttering in reply to a question. When the support given by the two women was withdrawn, she sank on to the floor. I injected fifteen drops of liq. ammoniæ into the median vein of the injured arm. In a few minutes she became conscious and violently excited, laughing, crying, singing, biting, and throwing herself about so much as to require two people to restrain her. After this, with occasional small doses of ammonia and brandy in water, she thoroughly recovered. About 4 p.m. of the following day I received a message to go to Black-hill, as the same girl had been bitten by a black snake—most probably a dark specimen of tiger snake (hoplocephalus curtus). At 4.20 p.m. I arrived at the house, and the mother told me that the girl and a younger sister when in or near the garden saw a snake basking; the younger one ran back to the house and informed the mother, who immediately went to the spot, having on the way seized a clothes-prop; she called to her daughter to get out of the way, upon which the girl took a few steps on one side to where a gum-bush grew, took hold of a branch, and when bending it down to break it the mother saw two snakes rise from under the bush, one of which seized the girl's hand. The mother excised the bitten part, put on a ligature, and gave about two ounces of gin with two drachms of spt. ammoniæ aromat. left from the previous day. I found no symptoms of poison present; there was a wound on the last phalanx of the ring-finger of the left hand, which I washed with the solution of ammonia, and as a matter of precaution injected fifteen minims into a vein at the elbow, but, wishing to see the efficacy of the injection, I administered nothing whatever internally. In five minutes I asked her if she felt anything unusual. She replied, 'No; excepting a burning pain on the inside of the arm,' in the course of the basilic vein. In another five minutes the same train of nervous symptoms set in as occurred yesterday, but not so violent." After this only a little quieting medicine was needed for her perfect recovery.

It is certainly very remarkable that in this case a girl should have been bitten on two following days, but, according to Dr. Bennett, there was no doubt about the fact, the mother being a very sensible and firm woman. Tending to the probability of the account is the following from a local paper:—

"The locality in which the M—— family resides appears to be infested in an extraordinary manner with snakes. On the day previous to the girl being bitten, her mother killed one close to the door of their dwelling; and on the same evening, I. M. found another in one of the beds, which escaped into the bark roof of the building. It is reported that shortly before nearly a dozen were seen at one time near an abandoned hole in the vicinity."

In this case there is evidence of a great impression having been made on the mind of the girl, as shown by the hysterical symptoms following; but that which is of special interest in the present inquiry is the fact of her having by the injection of ammonia been brought almost instantaneously from a state of helplessness to one of active muscular exertion, the people who were formerly required to support being now required to restrain her.

Case 6.—A young man was bitten by a snake at Mornington. A great deal of brandy had been given, so that by the time he reached Mr. Lane, the surgeon, he was perfectly insensible, with the pupils dilated and fixed. My friend and colleague, Professor Wilson, happening to be in the neighbourhood, assisted Mr. Lane, and watched carefully for the results of the treatment. Thirty minims of liq. ammoniæ (B.P.) were injected into the basilic vein. In eight seconds the pupils began to contract to the stimulus of light, and he presently became conscious. Then followed some tetanic spasms of the muscles of the neck and arms; but these subsided in a few hours.

This case is valuable, as showing the instantaneous recovery from the coma. I am inclined to think that the spasms of the muscles were not brought on by the injection, nor were they the effects of the snake-poison, but were caused by reflex acts due to his having been made to swallow some of the ammonia almost undiluted. I had previously seen a man exhibiting some very remarkable reflex symptoms, amongst which was perfect fixedness of the eyeballs, from swallowing very strong ammonia.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

ABSCESS OF CHRONIC NATURE IN THE ROOF OF THE PROSTATIC PORTION OF THE URETHRA, GIVING RISE TO THE CLINICAL SYMPTOMS AND PATHOLOGICAL RESULTS OF ORGANIC STRICTURE OF THE URETHRA—PERITONITIS.

(Under the care of Mr. HEATH.)

[For notes we are indebted to Mr. ARTHUR KEMPE.]

THOMAS H., aged 44, was admitted on September 6.

History.—The patient is an actor, lately a lay brother in the Haverstock-hill Priory. Has always been accustomed to drink a great deal—generally whisky. Family history good. Scars of old chancres on the penis, and of buboes on the groin; the prepuce has been slit up. Three years ago he began to feel incontinence at night, which continued for a considerable time before any dribbling took place during the day. He is unable to assign any cause for this, but puts it down to his weak state of health. Three weeks ago he took cold during a journey to Liverpool, and noticed blood in his urine. From the account given of his urine, he has probably had chronic cystitis for years. Has lately been very thirsty, and his stomach has rejected food. Thinks he is thinner than he was a year ago. While at the Priory his habits were necessarily regular, but since that time he has led a dissipated life. When at Liverpool, three weeks ago, he confesses to having drunk a large amount of spirits.

On admission (5 p.m.) urine was dribbling from his penis, and he was altogether in a very low and filthy state. Tongue dry, brown, hard, and cracked. Temperature in axilla 100·4°; pulse 88. Urine slightly acid—sp. gr. 1008; no albumen: no colour on boiling with potash, but with Fehlyn's solution a yellowish precipitate is thrown down. Turbid precipitate consists of pus and amorphous material; no casts. No ascites; no enlargement of the liver. A swelling in the right lumbar region. No cough; hiccough very severe. No diarrhœa; no constipation. Examination per rectum reveals no enlargement of the prostate. Rectum full of fæces.

September 6.—On admission catheter was passed, and bladder emptied; three-quarters of a pint was drawn off; two hours after twenty-six ounces were drawn off. Scrotum was dusted over, and a bed-urinal put between his legs.

7th.—Tongue moist and furred; temperature 98·6°; respiration 48; pulse 80. This morning there is diarrhœa, and some distension of the abdomen, not painful on pressure. Distressing hiccough partially relieved by sucking ice. Water passed into urinal during the night not more than six ounces. Water at 10 a.m. drawn off with catheter, one pint. At 7 p.m. only four ounces of urine could be drawn off, none having passed into the bed-urinal. The urine was followed by drops of unoffensive blood and stained pus-liko matter to the extent of half an ounce. Hiccough worse; diarrhœa continues. On pressing below right ribs a mass is felt lying over the region of the kidney. The pressing does not cause pain. Respiration about 50; temperature 98°.

8th.—Hiccough still continues, but not quite so violent; diarrhœa less. Two ounces of urine were drawn off at 10.30 a.m.

9th.—Urine passed on September 8 gives no precipitate with Fehlyn's solution. On examination of the patient yesterday morning he was in a very stupid condition, answering slowly and irrationally. His sclerotics had a faint icteric

...markably prominent. Liver-dulness begins tint; ... border of sixth rib in nipple line, and ends at two fingers' breadth above margin of the ribs. Abdomen full—nowhere tender. Patient lying on his back has dulness in both loins as far as about the seventh cartilage—resonant in front. Patient lying on either side, the flank which is uppermost becomes resonant, and the dulness increases on the other side. Defæcates and urinates continually in his bed; fæces are of a very light colour; skin cold and clammy. At 11.30 pulse scarcely perceptible; abdomen appears fuller; is not quite conscious, and is very dull when spoken to. Died at 4.30 p.m.

Post-mortem, twenty-four hours after Death.—Rigor mortis slight. On opening the abdomen a considerable amount of turbid yellow fluid was contained, reaching about the level of the seventh cartilage. The apex of the bladder was seen to project above the pubes, adherent (as was afterwards found) by recent lymph to the omentum, which was dragged down beneath the small intestines. Peritonitis was most strongly marked in the pelvis when the fluid was purulent, and there were numerous flakes of yellow lymph. There was also considerable peritonitis over the outer surface of the spleen, for which no cause could be discovered. The liver was first removed, and found apparently healthy, and, though not reaching the margin of the ribs by two fingers' breadth, was about normal size. The right kidney was in normal position, somewhat enlarged; the pelvis, though large (admitting the thumb), was not distended; both ureters were dilated, not excessively so. Kidneys, bladder, and rectum removed together. On slitting up the urethra no stricture was discovered; but immediately behind the bulb, or just at the apex of the prostate, was a small sac in the roof of the urethra, burrowing forwards on the right side for about half an inch, containing perhaps a quarter of a drachm of purulent fluid; walls were thick, and evidently of old standing, and no communication existing between this and the urethra, which must have caused some obstruction to the passage. Bladder immensely hypertrophied, muscular walls being an inch thick; at the apex was a large sacculus, exactly in the position of the adherent omentum; the walls here were as thin as paper, and in a sloughly condition; no actual perforation found. In other parts the lining of the bladder was fasciculated, and of a reddish-black colour. The lining of the ureters and pelves of the kidneys were inflamed. In the pelvis of the right kidney was some phosphatic deposit: both contained stinking urine. Substance of the kidneys pale and swollen; capsule stripped off readily; in it the vessels were prominent. On the surface of the kidney were numerous white spots, size of pin-heads, of doubtful nature. Surface of the kidneys smooth in some parts, of a dark red colour. Both kidneys larger than natural. Spleen tough and fibrous, rather large; old adhesions in both pleuræ. Lower lobe of left lung pneumonic throughout; rest of lung healthy. Lower lobe of right lung congested, œdematous, not pneumonic; rest of lung healthy.

BIRMINGHAM GENERAL HOSPITAL.

CONSTITUTIONAL SYPHILIS—CHRONIC GENERAL MENINGITIS—LATER, FORMATION OF A NODULE COMPRESSING THE LEFT MIDDLE CEREBRAL ARTERY, CAUSING ATAXY AND DEFECTIVE SPEECH, AT FIRST IN FITS, THEN PERMANENTLY—SLIGHT AND TEMPORARY PARALYSIS OF THE FACE—SOFTENING NEAR THE CORPUS STRIATUM.

(Under the care of Dr. RUSSELL.)

THE case which follows affords an interesting example of one of the three ways in which Dr. Hughlings-Jackson has stated that syphilis may produce hemiplegia. The diagnosis of syphilis, as deciding the nature of the disease, was made easily enough from the patient's physical condition and antecedents; and, this part of the diagnosis being effected, distinct significance was given to the early symptoms of the case, which accorded entirely with the post-mortem appearances in indicating the course of that inflammation and thickening of the membranes of the brain which form a frequent element of the intracranial disease occurring in connexion with the introduction of the syphilitic poison. During the chief part of the patient's history there was no evidence of localised disease other than that certain portions of the dura mater became the seat of greater activity of the morbid process, and in some degree coincided with the locality of the chief pain. Symptoms which pointed to localised disease only appeared at a late period, and doubtless marked the formation of the mass which compressed the middle cerebral artery, or at least the period of its active interference. The three ways in which syphilis produces hemiplegia specified by Dr. Hughlings-Jackson are—(1) paralysis following a convulsion, (2) blocking of a syphilitic artery (in hemiplegia the middle cerebral)—it may be without convulsion or loss of consciousness,—and (3) a nodule growing in the motor tract, in which case the hemiplegia may come on gradually. The second of these ways existed in my case, only that the artery was blocked from without, though its coats were thickened. I place the case in the rank of hemiplegias, although the paralysis was of the slightest character, and confined to the face; the obstruction in the artery being partial only, the effect of the obstruction was apparent chiefly in the change effected in speech. It will be observed that at first the defect of speech occurred in separate attacks, but perfectly distinct in their character from the "fit" from which the patient had previously suffered, and in which the intellect was temporarily and repeatedly deranged. It is remarkable that the convulsive (epileptic) fits, which constituted the first symptoms noticed by the patient, ceased during the time when the active changes in the membrane were going on, although the surface of the convolutions was involved in the adhesions which were then formed; the fits which then took place were of vertigo, simply followed by active delirium.

In respect of the gradual formation of the functional defect, the present case rather belongs to Dr. Jackson's third class than to the second, the cause of the defect being of the same kind with that quoted in the third class, not sudden obstruction, as would be likely to occur in the condition belonging to the second class. It is worth noting that ataxy of articulation was the first change in speech; afterwards, as the compression increased and the damage extended more widely, words were lost—confirming Dr. Jackson's hypothesis.

I think it worth while to prefix to my case a few notes of another case, probably very similar in its character, because it affords an interesting illustration of the duration to which the disease may attain. The patient has frequently been under my observation, though not under my care. A medical friend who attended him gave me the report twenty years ago, and from it I can condense the following notes. The patient is still alive:—

Case 1.—The patient had constitutional syphilis in 1837-38. He was then 31 years of age. He was treated by mercury. He had hemicrania in 1838, cured by iodide of potassium, and again in 1842, when the pain was more severe and recurred with greater frequency. All remedies then failed to relieve him. Towards the close of 1842 he had confusion of thought, left ptosis, and numbness of the cheek. He was considerably improved by local bleeding and salivation. In the following January he had three seizures in five days of inability to find words, and then fell into a lethargic condition with general convulsions, ending in complete coma. Again in June the pain returned, with occasional double vision, confusion of thought, and impairment of mental power. Then followed in September continuance of pain seated in the *left*(a) parietal region, and sudden left hemiplegia, with rigid flexure and numbness of the arm. Partial recovery was attained in the course of a fortnight by the aid of mercury, and since that period to the present the arm has remained partially paralysed and nearly useless. But again the pain in the right parietal region returned, again being checked by mercury. During the following three years he had attacks of pain five or six times in the course of each year, relieved always by mercury, each of two or three weeks' duration. The mental faculties continued much impaired. He kept his bed a large part of each day, and was in a mere automatic condition. In 1847 he began to improve in this particular, and became able to walk about, and by degrees to occupy himself. He has never since encountered any return of serious cerebral symptoms, but has remained in a low mental condition, capable of little intellectual effort, and quite excluded from taking part in the business of life, yet retaining much keenness of observation and correctness of judgment. He is now about 68 years of age, having been the subject of this disease for thirty-five years.

Case 2.—T. M., aged 37. His family history was satisfactory. His habits had been very dissolute. He had a venereal

(a) The *right* parietal region is afterwards spoken of; probably the above is an error.

sore at the age of sixteen; he married at twenty-one, and his children presented a very interesting illustration of the manifestations of hereditary syphilis. We found in his throat an extensive cicatrix, the result of destructive ulceration, with perforation of the soft palate. When aged 32 he lost his teeth rapidly without any decay, and at present his upper jaw is edentulous with the exception of one canine tooth, the alveolus having been absorbed. We could gain no evidence of his having been salivated. He had his first fit (a complete epileptic attack) about two years before coming under my care, and was unable to work for several weeks subsequently. Three months after, a second and much milder one occurred. Five weeks before I saw him he was attacked one morning with pain over the occiput; in the afternoon he had another fit, and was confined to bed the next day. The occipital pain recurred, coming on suddenly and lasting an hour; it was accompanied with giddiness. The pain has been so severe that he has kept his wife awake at night with his cries. There was pain also in the region of each frontal eminence, like the other pain occurring in sudden paroxysms. His nights at this time were disturbed by very vivid dreams. Both the pain and the disturbance of sleep were much relieved by iodide of potassium. When he first came under my notice, early in March, 1869, he had the appearance of a healthy man. Mr. Arthur Bracey then examined his eyes by the ophthalmoscope, and found the right optic disc very indistinct, the vessels obscured; in the left eye the disc was grey and anæmic, and the outline also rather indistinct. The man read with the right eye No. 4 Jaeger easily, and No. 1 with difficulty; with the left eye only No. 16. The pupils were normal as to size and contractility; the ocular muscles were intact; taste was good; smell was impaired, probably by the disease in the throat; hearing was perfect. He took iodide of potassium in full doses (up to gr. xv.) from April 5 until September 20, and improved considerably; but on the last-mentioned date it was noted that, although he had been quite free from fits of unconsciousness, he was suffering from paroxysms of vertigo. In these attacks he did not lose consciousness, but became violent; in the intervals his intellect was clear. The pain in the left frontal region continued. After this period slight fits of "mithering" continued to recur, and a note made on December 7 states that during the preceding week he had been attacked repeatedly with loss of articulating power (ataxy), but without any fit: "he tried, but could not bring out his words." He also described independent attacks in which "the right side of the face went," and the entire face became very red and burning, and tears rolled down his cheeks. In a week afterwards he was described as sitting the day round without speaking, complaining of his head, and talking in a disorderly manner, "asking for contrary things to what he desired—*e.g.*, brushes for pocket handkerchief," etc. He was found on one occasion, probably after a fit, with the right side of his face "drawn." He was now taken into the Hospital (December 20, 1869). He was then discovered to have partially lost the function of speech as well as that of articulation; he would go through a great part of a sentence correctly, but almost always came to some word which he miscalled or replaced by gibberish. The defect was manifested still more clearly in reading, many words in a sentence being altogether unintelligible. The defect increased rapidly. "It says things that I shown such different tones," when asked to describe the state of his eyes; but added in correction, "They are chiefly things that there is anything about." —"I feel lost and low the last two years," in reply to "How are you?" He was seldom correct in stating the time, and often miscalled an object. Sometimes he retained the last word spoken, and when he had correctly named "a knife," he applied the same term in succession to a pen and to keys, but to a shilling, shown next, "It is money, sir." In his spoiled sentences the word "fares" was often prominent (he is a cab-driver). He wrote his name rightly, but a sentence written from dictation from a book immediately after began with his residence (therein expressing the residuary and automatic thought), and then declined into nonsense. Some tendency to right ptosis and to convergence of the right eye was observed, but no other defect in the face. His intellect speedily deteriorated: he filled the kettle with coal, and did other automatic acts, and finally became perfectly torpid, not opening his eyes, the lids of which were glued with mucus. He had a fit on January 27 in which the right arm alone was shaken, and died on the 30th.

Post-mortem Examination.—The brain was generally and firmly adherent to the dura mater, so as to be removed with the greatest difficulty. The adhesions were particularly dense in the left temporal and left occipital regions, where the dura mater was of an opaque yellow colour. The adhesions extended to the base, retaining the brain very strongly. The dura mater was greatly thickened, especially around the torcular and in the left regions, as mentioned already. The longitudinal sinus was quite open, but a dense mass of dura mater lay over its termination. The arteries at the base required to be dissected with care from the arachnoid. Especially was this the case in the left Sylvian fissure, where the middle cerebral artery at its origin was identified with the matter constituting the adhesion; its walls also were much thickened. A dense yellow gumma the size of a horsebean lay in the fissure and compressed the left middle cerebral artery by surrounding it. A similar mass lay upon the insula, closely connected with the superficial layer of cerebral tissue. The masses consisted entirely of granular matter and of small irregular nuclei intermixed with larger groups of fat globules. The middle cerebral artery was obstructed by a non-adherent plug of colourless fibrin; its walls were thickened beyond the point of compression; it was quite empty, except that a small quantity of blood existed in one or two of its finer branches. All the other arteries were quite pervious. A small cavity about half an inch in diameter, not lined with membrane, lay just outside the anterior extremity of the left corpus striatum; the surface of that body and the adjacent white matter were soft. The surface of the brain, chiefly on the left side, was probably soft, but it was too much injured during extraction for satisfactory examination of the convolutions. The cerebral nerves were healthy, though they were engaged in the thickened arachnoid. The cord and its membranes were healthy. The other organs were healthy; there were no other evidences of visceral syphilis.

Medical Times and Gazette.

SATURDAY, OCTOBER 25, 1873.

THE CONJOINT EXAMINATION SCHEME.

The reception of the short Act of last session, giving the University of London the power to combine with the two Royal Colleges and the three other English Universities in the formation of a Conjoint Board of Examiners, has brought the well-worn subject of the Conjoint Examination Scheme again prominently before the notice of the Council of the Royal College of Surgeons. We believe we are right in stating that

an effort will be made by the Society of Apothecaries in the ensuing session of Parliament to obtain like powers of co-operation with the University of London. It therefore becomes our duty as medical journalists to re-open the consideration of a topic of which, we believe, a large proportion of the profession, as well as ourselves, are quite weary.

We have always maintained, and do maintain, the principle that an equal examination for all desirous of practising medicine in any part of the United Kingdom is theoretically a desirable thing. It would give all practitioners a broad and common basis of attainments, and would insure the public the possession of at least a minimum of knowledge by those who have legally a right to practise. These are the great arguments for altering the present state of things, and introducing a radical change in the laws which since the passing of the Medical Act have governed admission to the medical profession. On the other hand, the experience of the last five years has shown that there are enormous difficulties in the way of obtaining perfect and unreserved co-operation amongst the existing examining bodies of any one of the three kingdoms, and that it is practically impossible to obtain in the present state of the law any conjoint action between the medical authorities in England, Scotland, and Ireland. Moreover, a closer comparison of the advantages which would be reaped by a one-portal or three-portal system with the advantages of corporate action, scientific standing, and incentives to emulation offered by the present institutions, has led some of the more sagacious and wiser of our leaders to the opinion that even the probable benefits of conjoint examining boards may be purchased too dearly, and that the inevitable result of their establishment will be to injure permanently, and probably ultimately to sweep away, the historical corporate bodies which have during a long period worthily represented medical science and art. No arrangement can be a permanent one which would assign to the Royal Colleges revenues from the fees of candidates for admission into the medical profession whom they no longer examine. To grant the Royal College of Surgeons a large percentage of the money paid by a medical student for his diploma, who is examined for that diploma, not by the College, but by a separate body of examiners, and to make the fee of the candidate a large one, in order to admit of the payment to the College, is an arrangement which in a few years will be held by a profession so taxed an indefensible abuse, and the Government of the day will be besieged by medical and educational associations to sweep away such an impost upon the fruits of knowledge. What better pretext for a Liberal Minister, with a smattering of science, willing to do a popular thing, could be offered to annex the Hunterian to the British Museum than that of relieving an effete corporation at once of the expense, responsibility, and glory of possessing and supporting it?

Those junior members of the Council of the College of Surgeons who are anxious to transfer the duty of examining candidates for its surgical diplomas to a separate and irresponsible Board, and expect to maintain that College and its great collections out of the earnings of the Board, seem to us, to say the least, to be assuming enormous responsibility. Supposing the clumsy mechanism of a committee of reference and an independent examining board were set in motion to-morrow, for how many years would it last, and how long would the College obtain a sinecure income from its product? When the College is no longer the *Alma Mater* of the great bulk of English surgeons, is it likely to maintain its present prestige? When it has once laid aside its functions, will it ever be permitted to assume them again?

There are other views of this question which at least point the necessity for caution. Whatever conjoint board may be formed in England, no conjoint board will be set up in Scotland. Even if the Apothecaries' Society be ultimately one of the co-operating English authorities, there will still be the Scottish Colleges and Universities and the Glasgow Faculty offering the English students access to the profession at a cheaper expenditure—at least of money, and probably of brains. Already the annual exodus of medical students to the North is as established as the exodus of sportsmen. How will the ranks be swollen when all portals in England are shut but one, and that is guarded by a thirty-guinea entrance-fee, a large portion of which will be paid to institutions which have discarded their duties and thrown away their privileges. Again, those who know best the state of the existing law still maintain that the proposed action of the Colleges in this matter is *ultra vires*, and that there must be fresh legislation before any change can be effected. Do the advocates for a conjoint examination scheme hope to obtain the required powers from a weakened Government, already accused by the leader of the growing Opposition of "worrying" every profession? and are they willing to hand over the remodelling of the medical profession to Messrs. Stansfeld, Lowe, and Ayrton?

The General Medical Council is now at least doing its duty. Examinations are visited by competent visitors, and we may expect that the general standard will be improved in every part of the United Kingdom. Would it not be at least wiser to wait and see the effects of these visitations before the old medical institutions of the country are sacrificed at the shrine of a visionary and unattainable uniformity?

ASPIRATION.

I.

Aspiration, as now so generally used both in medicine and surgery, has been a plant of slow growth, though suddenly starting to maturity. The importance of using a small trocar in opening collections of purulent fluid has long been known and insisted on by many, though the opposite has been also generally maintained; but then the difficulty arose of getting a dense fluid through a narrow opening, and so a certain limit was, as it were, imposed on the dimensions of the canula. The application of the syringe to the hypodermic injection of remedies, the consequent possibility of using needles of small size, and the fact that the use of such needles gave rise to (comparatively speaking) little inconvenience, probably aided in maturing the idea embodied in modern aspiration. Nevertheless, the principle of aspiration was acted upon in this country long before the modern appliances were invented. Thus, Dr. W. Roberts, of Manchester, made use of syphon-power in tapping abdominal collections of fluid long before anything like a syringe had been used in a satisfactory manner for the purpose. Probably the first to successfully use a syringe for tapping collections of matter was Dr. Bowditch, of Boston, and he was thereby enabled to convert a very fatal malady—perinephric abscess—into one easy of relief. But undoubtedly it is to Dr. Dieulafoy, of Paris,(a) we are mainly indebted for developing the method, which he has done with a skill and boldness meriting the highest praise; all the more so, inasmuch as he seems to have been ignorant of much that had been done before him. The method, however, has so much to recommend it that we think it well to give a kind of outline sketch of the various uses to which it may be applied, endeavouring as well as we can to indicate those for which it is most suitable from those less adapted for its use.

The great merit of Dr. Dieulafoy's instrument is, that it is capable of being used as an exploratory as well as an evacuating instrument; and, as used by him, it seems to us that the instrument is as good as can be made. Here

(a) "A Treatise on the Pneumatic Aspiration of Morbid Fluids: a Medico-Chirurgical Method of Diagnosis and Treatment of Cysts and Abscesses of the Liver, Strangulated Hernia, Retention of Urine, Pericarditis, Pleurisy, Hydrarthrosis, etc." By Dr. Georges Dieulafoy, Gold Medallist of the Hospitals of Paris. London: Smith, Elder, and Co. Pp. 394.

in this country it has tended to develope too much in one direction, for in the instrument now generally manufactured only one kind of vacuum is used, and certain advantages of the original instrument have been somewhat prematurely abandoned. In Dieulafoy's original instrument we simply had this: a syringe so contrived as to be in some part transparent, which was double-acting, such as most stomach-pumps are made—that is to say, capable of drawing in fluid at one orifice, and expelling it at another; and the piston was so constructed that it could be fixed at any point, whilst by means of stopcocks the interior of the piston could be converted into a vacuum before applying it in any way. The needles were exceedingly fine trocars, with canulæ or needles hollow and pointed like the needles of a hypodermic syringe, these latter being used for exploratory purposes. Suppose, let us say, a patient had an hepatic swelling, the nature of which could not be readily made out; one of these exploring needles would be attached by means of an indiarubber tube to the syringe already exhausted, and, introduced into the side gradually by a screw-kind of motion, thus it would be made to pass inwards until the wall of the abdomen was penetrated and the tumour pierced. That being so, and the suction-power of the exhausted syringe being, by turning the stopcock, rendered active, the moment any collection of fluid is reached that moment it is drawn into the syringe and makes itself perceptible at once—to the eye by its general appearance, and to the hand by its warmth. The appearance would speedily tell what kind of cyst we had reached, and of course the nature of the tumour. After emptying the syringe when full, the vacuum could be renewed either directly or indirectly—that is, either before or after opening the stopcock on the tube leading to the sac to be emptied. Of course if the doubtful tumour were solid no fluid could escape, but the size of the needle is too small to set up any mischief. If, however, we wanted to tap a collection of fluid whose existence was well known—say a purulent collection in the pleura, or an over-distended bladder—we might proceed thus. Selecting a fine trocar and canula, we would push it into the collection of fluid, withdraw the trocar, and, as the first drops of fluid appeared, apply the tube and exhausting syringe to the extremity; after which, by working the piston, we could directly withdraw the fluid, without any previous vacuum being made. Moreover—and this is a matter of importance,—supposing a small plug of lymph obstructed the fine orifice of the canula, we could, by a back-stroke of the syringe, eject it from its position, and so free the opening. Another matter of some importance is this: the extremity of the canula, being blunt, would not injure the expanding lung pressed against it. Now the instruments are generally so made that only the previously exhausted receiver can be employed, and the needles are for the most part those spoken of above as exploring needles, not of the nature of trocar and canula. As only the already formed vacuum can be employed, only the indirect suction-power of this, and not the direct suction-power of the syringe, can be used; and no back-stroke is possible so as to free the canula from any obstruction. Moreover, the trocar and canula, being more rigid, are more easily introduced than the exploring needle, which is also blunter, and so gives rise to more pain. For this reason we imagine that a return to the former model might be considered as in a certain number of instances advisable. In whatever form used, there can be no doubt but that the aspirator is a most valuable engine both for diagnosis and treatment, the more especially as both can be in many cases combined.

The official *Staatscourant* of Holland states that some sporadic cases of cholera occurred in that country last week, but there appears to be no fear of an epidemic.

THE WAR ON THE GOLD COAST.

There are few things more trying than inaction after a period of excitement. Since the time when it became manifest that we had actually commenced a war on the Gold Coast to within a fortnight ago, active preparations and hot discussions kept the circumstance prominently before us; but for the last two or three weeks, whilst waiting for the final demands from Sir Garnet Wolseley—which will once more set all the different departments of the Government in a state of bustle,—there has been positively nothing to chronicle.

The present outbreak has been very generally spoken of as a "doctors' war," from the peculiarly unhealthy nature of the climate in which the hostile operations will have to be carried on; and whilst fully acknowledging the grave responsibilities which are likely to fall to the medical branch of the service in the forthcoming expedition, we still confidently anticipate that, so far as the Medical Department is concerned, the public will not be disappointed. The line-of-battle ship *Victor Emmanuel* is still in the hands of the fitters in Portsmouth Dockyard, and every care is being bestowed upon her to render her the most serviceable and efficient hospital-ship ever despatched from these shores. The large and peculiar boats which have been provided by the authorities to contend with the heavy surf which constantly breaks upon the West Coast of Africa off Cape Coast Castle, should prove an easy and safe means for the transference of the sick and wounded from the shore to the ship; and once on board the floating hospital, under the charge of a strong medical staff, many of the dangers incidental to a hospital building upon the hot and malarious littoral will be avoided. It is further rumoured that none but the very gravest cases will be retained on board the *Victor Emmanuel*, swift and commodious vessels being retained in readiness to bring home the sick and disabled men with the least possible delay.

It will thus be seen, from these few items of intelligence as to one portion of the preparations, that the Medical Department is fully alive to the grave nature of the duties expected of it; and taking into consideration the rapid strides which modern science has made in the treatment of disease, whilst remembering that the present is by no means the first campaign which England has found it necessary to undertake in unhealthy climates, we look hopefully forward to a result anything but in accordance with the gloomy forebodings which ushered in the first announcement of hostilities against the Ashantees.

We believe the other West India Regiment will certainly be despatched from Jamaica to the seat of the war; the number of men-of-war in those waters will also be strengthened to insure a strict blockade of the Coast, and to prevent the landing of muskets and ammunition for the use of our foes, from sharp traders who, so long as there is profit to be made, are perfectly indifferent on the score of national interests.

The next mail, which is now due, will doubtless bring the result of Sir Garnet Wolseley's local inquiries and observations; and until such time as this is made public, we cannot pretend to anticipate the further course of events.

THE WEEK.

TOPICS OF THE DAY.

The Vice-Chancellor of the University of London, in forwarding a copy of the Medical Amendment Act (University of London) passed at the close of the last session of Parliament, to the Council of the Royal College of Surgeons of England, by the provisions of which Act the University is now ready to join in the preparation of a scheme for a conjoint medical examining board for England, has requested to be informed whether the College is disposed to accept the co-operation of the University in the object. The letter and enclosures were discussed at a meeting of the Council of the College on the 16th inst., when a resolution was adopted expressive of the

satisfaction of the Council that the authorities of the University of London were now enabled to join in the preparation of the scheme; that the Council cordially invited the co-operation of the University in carrying out the scheme; and suggesting that the Senate should elect two representatives of the University, one in medicine and one in surgery, as members of the Committee of Reference appointed under the scheme already approved by the Universities of Oxford, Cambridge, and Durham, and the Royal Colleges of Physicians and Surgeons. Copies of the scheme, approved by the above medical authorities, together with copies of the two reports from the Committee of Reference, were ordered to be sent to the Vice-Chancellor, with a view to their consideration by the Senate of the University.

We believe we are correct in stating that it has at length been decided that the medical appointments to the new brigade depôts are to be held for a period of three years. This intelligence will no doubt prove satisfactory to many gentlemen who have been hesitating as to whether it would be to their advantage to apply for or to accept these posts. Since their inauguration, the number of these brigade depôts originally in working order has been slowly increased, and little by little the whole of them, about seventy in all, will be rendered available for the reception of troops. It remains to be seen whether the formation of these military centres in the different counties and districts will have the effect of popularising the service throughout the country. If the number of recruits at present presenting themselves is not shortly increased, and a check placed upon the wholesale desertions daily taking place, it will become imperative upon the authorities to take some stringent measures for increasing the supply of men, or the exigencies of the State will once more raise the question of compulsory service on the model of that system which is adopted in Germany and other foreign countries.

The newspapers have recently reported the death of Dr. Smethurst, of Old Bailey notoriety. Since his two years' imprisonment for bigamy it seems that Smethurst resided with his lawful wife in a house in Onslow-square, where he died. His death was so sudden that an inquest was considered desirable. Disease of the kidneys and other organs was discovered, and the jury returned a verdict of "Death from natural causes."

DR. MURRAY'S FUNERAL.

It having been resolved by his relations to take Dr. Murray's remains to his native Aberdeen for interment, a company assembled at the Euston Station on Monday evening, there to receive the coffin and escort it to the train, as striking as could well be conceived. There were men of all grades and ages in the profession, from grey-haired veterans to young men entering on their medical studies—men and women of all classes—hospital nurses and hospital patients,—all joined together in a desire to do honour to the deceased. And in their sadness it must have been no little comfort to his relatives to see how generally Dr. Murray had been esteemed and valued. A short, simple, but impressive service was held over the remains, and, covered with chaplets of flowers, the funeral waggon went to take its place in the night express, to reach Aberdeen on Tuesday afternoon. Steps have already been taken, and a committee is in process of formation, to collect subscriptions for the purpose of erecting a memorial bust and tablet to his memory in the scene of his too brief labours—the Middlesex Hospital,—but of this more will be said hereafter. Meanwhile it may be of interest to many that some excellent photographs of the ordinary size have recently been taken by Fradelle and Marshall, 230, Regent-street, and may be obtained from them. These gentlemen have also fortunately been able to include Dr. Murray in their admirable series of larger photographs of medical celebrities.

ROYAL COLLEGE OF SURGEONS.

The following is an abstract of the unconfirmed minutes of the meeting of the Council on the 16th inst., with the exception of those portions already published in the *Medical Times and Gazette*:—A letter was read from Mr. John Flint South, resigning his office as a member of the Council. The resignation having been accepted, it was resolved unanimously—"That the Council desire to convey to Mr. South the expression of their regret at the cause of his resignation of the office of member of Council, and their sense of the deep interest he has uniformly taken in the affairs of the College, as evinced by his constant efforts to promote its welfare." The President stated that the vacancy occasioned by the resignation of Mr. South would be filled up at the annual meeting of the Fellows in July next for the election of members of the Council. The President reported that the term of five years, for which period Mr. Hilton was elected a member of the Board of Examiners in Dental Surgery, expired on the 15th inst., and that at the next ordinary meeting of the Council the election would take place of a member of the Court of Examiners in such vacancy. The arrangements for the Dental School and Dental Department of King's College were approved. A letter from Mr. Francis Fowke, the General Secretary of the British Medical Association, was read, enclosing the following resolution, signed by Sir William Fergusson, Bart., as President of the Association;—"Moved by Dr. Sibson, F.R.S. (London), seconded by Dr. Steele (Liverpool), and resolved unanimously, 'That the cordial thanks of the British Medical Association be given to the President and Council of the College of Surgeons for their splendid hospitality in giving a reception at the College of Surgeons on the occasion of the forty-first annual meeting of the Association.'" The consideration of Dr. Humphry's motion was postponed.

MEDICAL SOCIETY OF LONDON.

On Monday last, October 20, the Medical Society of London commenced its second century in the new premises, No. 11, Chandos-street, Cavendish-square. There was a very large attendance of Fellows, and the proceedings were characterised by a freshness and vigour that gave promise of a long-continued life to the old Society. The President, Dr. Habershon, opened with a short address commenting on the prospects and future of the Society, which was warmly received, and at once put the meeting in good spirits. Dr. Richardson followed with a carefully written paper on "Organic Stricture of the Œsophagus," being a recast of his own clinical observation of this disease. A very interesting debate then took place, in which Dr. Semple, Mr. Mason, and Mr. A. E. Durham took part. The new building proves admirably adapted to its designed purpose, and the Society may be congratulated on making so successful and important a change.

FURTHER INFORMATION REQUIRED.

The Medical Officer of the Cardiff Union reported to the Guardians that the effect of the milk supplied to the Workhouse on patients and infants was so deleterious that the officials had been compelled to get a supply of Swiss condensed milk. It does not appear that under these circumstances the Medical Officer or the guardians made any reference to the Adulteration Act or the powers it gave over vendors of adulterated articles of food. This statement is most unsatisfactory, and it is incumbent on the Medical Officer to furnish a report of the actual condition of the milk complained of. Nothing is more likely to bring an Act of Parliament into disrepute than loose and unconfirmed statements. If the milk were really impure and adulterated, it was the bounden duty of the Guardians to prosecute the vendor. It, moreover, would be satisfactory to know what were the "deleterious effects" said to have been produced by the milk.

KLEPTOMANIA.

Dr. Rogers, Medical Officer to the Westminster Infirmary, has made a representation to the Commissioners in Lunacy, and to the Visiting Justices to the Coldbath-fields Prison, as to the treatment of one William Weightman, a mechanic, who has been imprisoned there. It would appear that on the morning of his discharge, the wife applied to the relieving officer of the workhouse for his admission on the grounds of his insanity. Dr. Rogers, on seeing the man, came to the conclusion that from his paralysed condition and mental infirmity he had been deranged for some period. He therefore sent for the wife, who stated that her husband had become much changed since last November, up to which time he had been a respectable, hard-working mechanic; he became moody and melancholy, and neglected his work. One evening last February, between five and six o'clock, he suddenly put his foot upon the board of a poulterer's shop, and at much risk to himself took a hare off the topmost hook, put it under his arm, and walked quietly down the street. He was followed by the shopman, who gave him into custody, and he was taken before Mr. Newton, at Marlborough-street, who sentenced him to a month's imprisonment with hard labour. On his discharge from prison, at the latter end of March, his mental condition became so much worse that his wife was about to apply for his admission to the workhouse, when she learnt that he was again in custody, he having gone into a shop where he was well known, and in the presence of the shopman took down a pair of trousers, which he walked off with. He was followed, given into custody, taken before Mr. Knox, and committed for trial; and although the wife tried to get a hearing as to the state of his mind, she was rudely repulsed from the court. He was sentenced to six months' hard labour, which time he fully served, no one appearing to have recognised his mental condition. The lunatic has been visited by Dr. Blandford, of Grosvenor-street, who has certified that he is paralysed, and that, in his opinion, his mental infirmity has been of some duration.

UNHEALTHY DWELLINGS.

Our contemporary, the *Pall-mall Gazette*, in an article on "Adulterated Houses," observes—

"In no one respect are our sanitary legislation and administration so defective as they are with regard to houses. The medical officers of health never make a report which does not condemn a number of houses, sometimes whole streets, as unfit for human habitation. They have been doing this for years past, and it would be an interesting subject of inquiry, how many of these condemned houses are still inhabited. Occasionally a vestry makes a raid upon some of the worst—or perhaps, to put it more accurately, upon those among the worst which are not the property of vestrymen—and some faint semblance of a clearance is effected. But the aggregate of unwholesomeness is not, we suspect, much reduced by these intermittent displays of sanitary virtue, and about the better class of houses, as to which doctors and sanitary engineers give such discouraging evidence, nobody troubles himself at all. These evils, and all the consequences which flow from them, will go on unchecked until we have the courage to apply to the sellers of houses the same law which has lately been applied, with such good results, to the sellers of milk and groceries. The man who sells or lets a house should be held answerable for that house being free from any additions injurious to health. It is not proposed that every house should be a miracle of sanitary engineering; all that is required is that a few simple and well-understood sanitary appliances, which can never be omitted without great danger to health, should be prescribed as indispensable adjuncts to every inhabited house. The law does not allow grocers to sell poisons under the name of spices, and there is just as much need that it should no longer allow builders and landlords to sell fever-traps under the name of houses. The greater, because more dangerous, adulteration should be forbidden as much as the lesser."

SPURIOUS TEA.

A report from the Sanitary Committee was laid before the Commissioners of Sewers for the City of London at their meeting, held on Tuesday last, in reference to the allegation that a large quantity of spurious tea was at present in bond in the City of London, and intended to be sold for consumption by the public. The report stated that the Committee had ascertained that during the year 1872 the quantity of tea of different sorts imported into this country was 180,000,000 lbs., and they had reason to believe that at the present time there was a quantity of tea in bond amounting to 40,000,000 lbs. so grossly adulterated as to be wholly unfit for human consumption. The Committee had also reason to believe that of the quantity of tea annually imported into this country 70 per cent. was not tea at all, but consisted of leaves of plants of different sorts. The Committee expressed an opinion that the only remedy for this state of things was to appoint inspectors to examine every cargo of tea brought to this country upon the arrival of the ship, and that the "chops" should be examined by a portion being taken indiscriminately from some of the chests. The Committee also recommended that her Majesty's Government should be communicated with, and that it should be asked to introduce a Bill into Parliament upon the subject. The report was agreed to, and ordered to be printed. It is to be hoped that the recommendations of the Committee will be carried out with promptness and vigour. The Committee appear to have conducted their inquiries in a satisfactory and exhaustive manner, and they are entitled to the commendations of the community for having exposed a most gigantic fraud.

VACCINATION IN MADRAS.

A letter in the *Indian Statesman* from Madras says:—"The system pursued by the Vaccine Department in Madras is worthy of a passing note. On specified days the various suburban districts of the town are visited by the perambulatory staff, consisting of the vaccinator and his or her clerk armed with a register and a bundle of tickets. But the chie, attraction of the invading party is its *avant courrier*, who flourishing a sonorous bell with one hand, and exhibiting an attractive bag of coppers in the other, invites all and sundry to bring their children to be inoculated at the premium of one anna a head. At a fee of eight annas per diem a victim is obtained to accompany the procession and disseminate his or her lymph to candidates for the coppers, and on a promising crowd being assembled a suitable spot is selected and the distribution of pice and vaccine virus takes place contemporaneously. Now and then, an urchin upon whose arms a previous operation had been bunglingly performed managed to elude the vigilance of the registrar and to submit himself a second time to the vaccinator for the sake of the anna; and clearly the whole affair is looked upon as a purely business transaction, in which vaccination is regarded as a trifling punishment by means of which to earn a copper. Indeed, out of a tolerably large crowd I had the curiosity to watch the other day under the vaccinator's hands, I was struck with the large proportion of boys and girls who had long passed infancy, who evidently presented themselves of their own accord with the supreme object of acquiring possession of the bellman's coppers."

PROFESSOR FLOWER, F.R.S.

The many friends of the indefatigable Conservator of the Hunterian Museum will regret to learn that his health has been so seriously affected by close application to his duties, that at the last meeting of the Council of the College of Surgeons it was unanimously resolved to relieve him at once from work by giving him leave of absence for six months. Professor Flower will leave in a few days for Egypt, where it is to be hoped he will regain his health.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

The annual stated meeting of the College was held, pursuant to charter, on St. Luke's Day, Saturday, October 18. An election for Fellowship—the first since the memorable visitation of the College, at which voting by ballot was declared to be illegal—took place by open voting. Four Fellows were elected—namely, J. Hawtrey Benson, M.B.; Robert Cryan, L.K.Q.C.P.I.; George F. Duffey, M.D.; and John William Moore, M.D. On the same occasion the following officers for the ensuing year were elected:—*President:* James F. Duncan, M.D. *Vice-President:* Henry Kennedy, M.B. *Censors:* Henry Kennedy, M.B.; Robert D. Lyons, M.D.; W. B. Jennings; Walter G. Smith, M.D. *Registrar:* J. Magee Finny, M.B. *Treasurer:* Aquilla Smith, M.D. *Examiners in Midwifery:* John Kingland, M.D., and Lombe Atthill, M.D. *Professor of Medical Jurisprudence:* Robert Travers, A.M., M.B. *Representative on the General Medical Council:* Aquilla Smith, M.D. *Agent to the Trust Estates:* Charles Uniacke Townshend. *Law Agent:* Charles Woodward, B.A.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

At the annual meeting of the College on the 15th inst. the following office-bearers were elected for the ensuing year:—*President:* James Simson, M.D. *Treasurer:* John Gairdner, M.D. *Secretary:* Robert Omond, M.D. *Librarian:* Archibald Inglis, M.D. *President's Council:* James S. Combe, M.D.; Andrew Wood, M.D.; James Dunsmure, M.D.; William Walker; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; *ex off.*, John Gairdner, M.D. *Examiners:* Archibald Inglis, M.D.; James Dunsmure, M.D.; Peter David Handyside, M.D.; James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; David Wilson, M.D.; John Smith, M.D.; D. M. C. L. Argyll Robertson, M.D.; Joseph Bell, M.D.; Thomas Annandale; William Stephenson, M.D. *Assessors to Examiners:* William Brown; James Spence: John Gairdner, M.D.; William Walker. *Conservator of Museum:* James Bell Pettigrew, M.D. *Clerk:* James Robertson. *Officer:* John Dickie. *Assistant to Conservator:* James Grandison. Dr. Andrew Wood was unanimously re-elected representative in the General Council of Medical Education and Registration of the United Kingdom for the period of three years from the 8th inst.

PHOTOGRAPHS OF SKIN DISEASES.

Some photographs of skin diseases have been forwarded to us under the title of the "Photographic Clinique of the British Hospital for Diseases of the Skin," edited by Balmanno Squire, M.B. It would be unfair not to give these photographs a word of commendation, for they are far superior to anything of the kind heretofore published, and may justly claim to be considered works of art. One we have just received—a picture of rodent ulcer—is really exceedingly good. It has always struck us that in selecting subjects for such illustrations and pictures the wants of the practitioner have not been duly considered; we have, as a rule, either very unusual or very intractable forms of disease, whereas it is the intermediate group which would best repay such consideration. We trust Mr. Squire will take the hint as far as this series is concerned.

INSANITARY STATE OF SANDHURST COLLEGE.

The War Office authorities have acted with praiseworthy promptitude in issuing an order for the appointment of a special committee, under General Napier, Director-General of Military Education, to inquire into the sanitary condition of this College. A visit to the College on Saturday last has led to a recommendation that it should be immediately quitted by the students, which has been acted on. One case of typhoid fever has been reported. Upon whom rests the responsibility of allowing the College to get into an insanitary state?

FEVER IN A "MODEL HOUSE."

In consequence of the continued prevalence of fever in the "Model House" in Mason-street, Millwall, the Board of Guardians drew the attention of the Poplar Board of Works to the fact, and requested the immediate attention of the sanitary authorities. The inspector has since reported that he could discover no nuisance on the premises, and that the Board of Works had no power to interfere in respect to the structural arrangements of houses. Is the undiscovered cause of this fever in this "Model House" to remain a mystery? We should hope not, but that further inquiry will be made.

AN EXAMPLE FOR CORONERS' JURIES.

At the adjourned inquest which took place before Dr. Gill last week in the case of Bernard Burns, charged with the manslaughter of his daughter in Belfast, the prisoner was not produced, and, after a good deal of evidence had been given, the jury refused to return a verdict, because the accused had not been produced. Subsequently the jury passed a resolution strongly condemning the conduct of the authorities. We think the jury acted in a spirit of justice and consistency which should be an example to jurymen placed in a similar difficulty.

BISHOP MCDOUGALL, F.R.C.S.

From the *London Gazette* of Friday last we learn that her Majesty the Queen has been pleased to grant unto the Right Rev. Francis Thomas McDougall, D.C.L. (sometime Bishop of Labuan), the place and dignity of a Canon of the Cathedral Church of Winchester, in the vacancy occasioned by the decease of Dr. William Wilson. The new Canon passed his examination and was admitted a Member of the Royal College of Surgeons of England on June 3, 1839, and was elected a Fellow on July 25, 1854.

REGISTRATION OF STUDENTS.

Since the publication of the annual return of gentlemen pursuing their studies in this metropolis, in the last number of the *Medical Times and Gazette*, the gross number has been increased to 1641, including 39 gentlemen studying for the licence in Dental Surgery of the Royal College of Surgeons.

WESTMINSTER HOSPITAL.

On October 14, Mr. G. Legge Pearse resigned office as Surgeon to the Hospital. Mr. Richard Davy, the senior Assistant-Surgeon, has applied for the post; consequently, a vacancy occurs in the list of Assistant-Surgeons. The nomination is fixed for October 28.

UNWHOLESOME WATER.

Mr. Donkin, the analyst appointed by the county of Oxford under the Adulteration Act, reports that of eleven samples of spring and well water submitted for analysis the greater number were found to be unsafe for drinking purposes.

FROM ABROAD.—TREATMENT OF NÆVUS BY VACCINATION—DR. VACHER ON THE MORTALITY OF PARIS IN 1872.

In continuation of the discussion at the Paris Société de Chirurgie on the treatment of nævus by vaccination, noticed in our last (p. 441), M. Depaul insisted upon the necessity of distinguishing between nævi and the *taches* which are so constantly met with in new-born infants, and which generally disappear spontaneously. These, therefore, require no treatment. Erectile tumours, properly so called, he said, may

almost certainly be cured by vaccination, wherever they may be seated, providing that they are of small dimensions, not exceeding a franc in size. When they are of a more considerable dimension, as that of a two-franc-piece, for example, they cannot be completely cured by vaccination, although they may be ameliorated. M. Depaul makes from ten to twelve punctures in the surface of the little tumour; and he has practised this operation more than 150 times without ever meeting with any more hæmorrhage than could be readily arrested by the application of a compress wetted with cold water. This mode of treatment is especially useful for erectile tumours situated on the upper eyelid. In these cases there supervenes at the time of the vaccinal eruption an enormous swelling of the eyelid, which alarms the friends, but which is dissipated in from ten to twenty days. M. Trélat agreed with M. Depaul as regards the efficacy of vaccination for erectile tumours and the trifling character of the hæmorrhage that results from the punctures, but he is not of the same opinion with him concerning *taches*. These do not always disappear spontaneously, and they may, at the end of several months or even years, become transformed into erectile tumours of a serious character. They should therefore always be attentively watched. M. Trélat is of opinion that the action of vaccination in the cure of these tumours depends much less upon the surgical traumatism which it gives rise to than on a special process set up by the involution of the vaccinal eruption, and by the mode of cicatrisation of the pustules. M. Desprès stated that Nélaton in large erectile tumours traversed their base by a seton soaked in vaccine virus, while he treated the smaller tumours by simple vaccinal punctures.

Dr. Vacher, the well-known medical statistician, has communicated to the *Gazette Médicale* (October 4 and 11) an interesting paper on the "Sanitary Condition and Mortality of Paris during 1872." In this he observes that in normal times, when there is nothing to disturb the regular increase of population, the annual mean number of births is 54,000, and that of deaths 45,000, being an excess of 9000 of the former. The normal immigration of provincials and foreigners introduces a contingent of 18,000 individuals, the two sources together thus leading to an annual increase of about 26,000. This regular increase, deduced from what took place during the period of 1860-70, ought, if the sad events of 1870-71 had not occurred, to have brought the population at the census of 1872 up to very nearly 2,000,000 inhabitants. The official statements, however, fix it at only 1,799,250, or with the addition of the garrison at 1,851,792, showing a considerable deficit, the causes of which it may be of interest to examine.

The *Bulletin de Statistique Municipale* informs us that the deaths in 1870 rose to 73,563, exceeding the annual mean by 28,500. In 1871 the mortality rose to 86,760 (or, according to an account derived from the *pompes funèbres*, to 99,945), or an excess of 41,800—the two years furnishing an excess of 70,300 deaths. The same increase also took place in the rest of France; for the mean annual excess of births of 123,000 was converted in 1870 into an excess of deaths of 103,000, and in 1871 of 419,000. So that besides its other disasters France sustained during these two years a diminution of population of more than 500,000 from excessive mortality. Nor is this all, for there was also a great decrease of births in Paris in 1871, the mean annual natality sinking from 54,000 to 37,410—giving a deficit of 16,500. This deficiency of births occurred especially in August, September, and October, 1871, the corresponding periods of conception being December, 1870, and January and February, 1871—the time when the population of Paris was exposed to the most rigorous privations.

Besides these two chief causes of the diminution of population, other secondary causes have to be taken into account. For example, the German population has diminished from 30,000 to 5000, and an emigation towards the provinces has, at all events temporarily, replaced the immigration hence. This will no doubt be only transitory, for the same fact was observed during the period 1848-51. The population of Paris, which in 1846 had been 1,053,897, had diminished by 1851 to 1,053,262; but it soon recovered itself, so that by 1856 an increase of 120,000 had occurred.

The number of deaths registered in Paris amounted to 40,489, occurring in a population of 1,851,792, being a considerable diminution on the annual mean of 45,000. It is to be remarked, however, that after great epidemics or excessive mortalities there is almost constantly a diminution in the number of deaths; and, as M. Besnier has shown, such diminution applies to all the prevalent diseases, and not as might be supposed to the absence of any one of these in particular. All diseases participate in the diminution just as they participate in the increase in times of excessive mortality; and M. Besnier lays down the rule that the physician in his prognosis and treatment ought never to lose sight of the prevailing level of the general mortality. Comparing the mortality of Paris in 1872 with that of other capitals, it is found that it holds a most satisfactory position. Thus in 1872 that of London was 21·4 per 1000; Paris, 21·9; Brussels, 22·6; Vienna, 31·8; Berlin, 32·3; New York, 34·5; Florence, 34·8; and Rome, 37·7.

Passing to the details of the special causes of death, it is found that 897 deaths resulted from typhoid fever, 2266 from pneumonia, 8104 from phthisis, 1514 from bronchitis, 1348 from croup and laryngitis, 537 from puerperal affections, and 182 from variola. As usual, *phthisis* heads the list by far, sweeping off, as it does, a fifth of the Parisian population. The small number of deaths from *variola* confirms the observation just made as to the diminution of mortality observed in the years following the explosion of epidemics. In 1870-71 small-pox carried off in Paris no less than 15,421 persons, and proved far more murderous than the fire of the enemy or the civil war—the number of deaths from wounds amounting to 4862, 1512 being due to the first siege and 3350 to the period of the Commune. The disease, indeed, ravaged not only Paris but entire Europe, snatching 7876 victims in London in 1871, 958 in Brussels, and more than 8000 in Berlin. For the whole of France it is no exaggeration to place the number of deaths it has caused at 200,000. Of the 537 deaths from *puerperal affections*, 195 took place in the town and 342 in the hospitals. But the number of deliveries which took place in the hospitals amounted only to 6730, while those *à domicile* exceeded 47,000—that is to say, childbed mortality was only 4·1 per 1000 *à domicile*, and was 51 per 1000 in hospital, or thirteen times greater. Moreover, while each delivery *à domicile* costs the municipality 21 fr., the expense at the Maternity varied from 47 fr. to 72 fr. per patient! The same observation applies to most, if not all, the diseases that decimate the population—viz., that the mortality of the Paris hospitals, even those most sumptuously provided for, very much exceeds that observed in the most miserable dwellings of the faubourgs.

In 1872 there occurred 797 *suicides* in Paris, so that the chance is greater for the life of a Parisian being terminated by voluntary death than by typhoid fever or phthisis. Large as the number is, it still indicates improvement in moral conditions, for in 1869 it amounted to 1100. M. Vacher long since made the remark that one effect of political revolutions was to diminish the number of voluntary deaths; and the observation is verified by what occurred in 1830, 1848, and still more in 1870. From September 1, 1870, to September 1, 1871—that is, during one of the most tormenting of periods—the suicides sank to 447, a figure so exceptionally small that it is only to be met with by going back half a century, when the population of Paris was scarcely a third of what it now is. These facts

forcibly contradict the assertions of those who declare that an increase of suicides is connected with and coeval with the spread of democratic opinion. M. Vacher is much more disposed to refer it to the feverish speculation and thirst for gold which have prevailed during the last thirty years. Besides the 797 actual suicides there were 231 unsuccessful attempts. The most common means employed was hanging, which took place in 234 suicides. Drowning was resorted to in 100 cases, precipitation in 58, shooting in 77, "white arms" in 50, and poison in 41.

RECOLLECTIONS OF NÉLATON.

By Professor DIDAY.

We extract the following passages from an interesting article by Professor Diday, contained in the *Lyon Médical* of the 12th instant:—

The career of Nélaton has set a problem to many excellent judges which they have had to confess their difficulty in solving. "The true psychical position of the man being given," they say—"how is his success to be explained?" Well, for those who witnessed the commencement of his career nothing is more easy. Such as you have seen him at his apogee, with that rare combination of a consciousness of power and a manifestation of kindness so happily united and spread over his honest face, by such also my recollections of youth bring him to my mind. From 1832 he already "counted" among us. In the waiting-room of the Hôtel-Dieu, amidst the future great men of every calibre, who from night to morning were noisily proclaiming themselves in that legendary *rez de chaussée*, the entrance of "Auguste" always produced an effect. At first sight of him one felt attracted by I do not know what charm, already mingled with a kind of respect, towards this young man of mild yet firm bearing, with so modest yet so assured an aspect. Anyone who had at that time predicted for him one day the popularity of Dupuytren would have been met with no denial from any of us. I may here rectify a biographical error. All who have written on Nélaton declare that he was a pupil of Dupuytren. Now, it is certain that he was a very frequent and a very assiduous attendant upon the lectures of the senior surgeon of the Hôtel-Dieu, and I can testify that he appreciated with the fullest admiration the method and the profound yet simple instruction of the illustrious professor. But he was never one of Dupuytren's *internes;* for, although inscribed for admission among these for 1835, Dupuytren's illness and death prevented his ever serving under him.

This deference which Nélaton obtained from us without ever seeking for it manifested itself under all circumstances. I recollect one amongst a thousand. One day a man was brought in with a dangerous hæmorrhage. The *interne* on duty was present, and he alone had to do with the case. But as Nélaton happened to be there, by an instinctive movement all others made way for him, and he was requested to perform the necessary operation, which he did with a dexterity that had already become remarkable.

Follow him in his career and you find him met in the same manner by the judges of his merits as by his comrades; and this, be it noted, without any steps whatever being taken on his part, a single request being proffered, or even the most legitimate exhibition of his titles to attention being made. His inaugural thesis, "Sur les Tubercules des Os," in 1836, was a revelation. Two years later he presented himself at the *concours* as an *agrégé* in surgery. There his success *à priori* seemed but doubtful; for, by the traditions of the Faculté de Paris, these posts, though offered for *concours*, are ordinarily destined for the *fils de la Faculté*—those who have become successively attached to it, first as anatomical assistants, and then as prosectors. These are regarded as their appanage, which they have a right to count upon. They do count upon them, and generally the event justifies them in doing so. Nélaton had none of these titles, and he was not recommended by even the smallest book nor by the smallest private course of lectures. Therefore, he, of his competitors, who possessed all these antecedents and that joined to real merit and an exceptional talent for exposition, flattered himself that he should have an easy triumph. Nélaton thought so too, and would have felt well satisfied to obtain any one of the four vacant places. He presented himself, rendered somewhat awkward in appearance by his very modesty, and spoke, certainly not as an orator, but as a man of study, and especially as a man of sense; and at last, of all of us, he was the only one who was astonished at his being proclaimed first among the elected.

This period corresponds to continuous and indefatigable labour, which at a later period yielded its fruits to Nélaton, but the immediate result of which is yet another of the significative characteristics of his moral nature. He worked, and worked hard, but others reaped the honour. Continually some new-fledged author, some candidate not too far advanced or even some professor from whom the editor of a *dictionnaire* had extorted the promise of an article, sought out our friend. His advice was sought, and he presented a memoir—I say presented, for he never dreamed of accepting any lucre for his complaisance. At certain epochs this became an *exploitation* on a large scale. In 1844, for example, when in a *concours* all the candidates demanded Nélaton's advice on their theses, he had not the courage to refuse any of them. Nay, so willingly did he lend himself to these demands that at the last hour he was obliged, in order to satisfy them all, to pass the night in the printing-office.

The same qualities to which he owed his first success obtained for him some years after what was then called the field-marshal's bâton of our profession—a chair *obtained by concours* in the Faculty of Paris. The very non-militant life of this candidate, his almost utter want of show of scientific work done, his reserved manner, and unpolished speech, would have damaged any other but him in such an arena—now closed, but once the theatre of so many brilliant passages of arms. But neither the spectators nor the jury allowed themselves to be deceived. "Celui-là, on sait, qu'il sait," said a good judge—a true expression, which supplied the motive and justification of his nomination. But was there not also a secret prompting? If we are to believe the intimate chronicle of this last *concours*, the absence of certain qualifications had, under the circumstances been of more service to Nélaton than those which he had given proof of possessing. "Oh! as for that one," exclaimed a professor, "we may safely nominate him; he is not cut out for practice."

The professor to whom this calculation was attributed, himself an experienced clinician, had not much reason to applaud his own prognosis in this case. Nélaton's professional soon equalled his professorial success. I cannot here repeat all the marvels of his double career, so brilliantly accomplished and so superabundantly complete. What strikes me and what I wish to note is that Nélaton always continued such as we had known him—meriting his celebrity, while avoiding to proclaim it. Just as his pupils felt themselves attracted by his words, without show or pretension, to him who in searching with them taught them the art of finding, so also were his patients seduced by that half-smile of affectionate assurance and visible sincerity which seemed to say to them far better than in phrases, "I have searched out your disease, and am able to cure it. Why tremble? Do I look uneasy?" This man, so thoroughly true, and so indulgent for all and everything, was unjust towards himself. His good fortune astonished him. "It seems to me that I am in a dream," said he to me one day in 1863, when showing me the sumptuous *salons* of his hotel. "I am quite ashamed of the money I gain," he has been many times heard to repeat.

After adverting to the affection borne by Nélaton towards his provincial brethren, and especially for those of the Lyons school, M. Diday thus concludes—

"May this *souvenir*, the sincerity of which it is pleasant to me to attest, be my excuse for this imperfect sketch. It would be easy for me to complete it, and I might try to render it interesting; I prefer to leave it instructive. May not the analysis of the elements which have concurred for the elevation of Nélaton, and the exhibition of the conditions by which he acquired his fortune and renown—alike legitimate,—prove of service to his successors, as well as to all those who aspire to become such? If I have succeeded in throwing a few rays of light on their path, I shall be compensated for any sadness which I have felt in the task. A consolation, indeed, already has offered itself to me, and that is derived from this thought—born of my subject—namely, that the age which has produced a man at once so great and so simple cannot be so much the slave of pomp and appearance as it has been represented to be, and that knowledge is certain to triumph over charlatanism whenever it resolves never to avail itself of any of its arms."

LETTERS ON THE SOUTH OF FRANCE.

(*From a Foreign Correspondent.*)

AIX-LES-BAINS (SAVOIE).

AIX, although not usually looked upon as the South of France, may be so considered, both from its situation and its climate. It is distant from Lyons only a few hours' journey towards the Mediterranean, and under a degree of latitude which gives it a touch of the blue sky of Italy. The climate of Aix is mild in winter. Chestnuts and fig-trees flourish, and snow seldom falls.

We passed some weeks in Aix, and it seemed to us that the climate had much analogy with that of Pau. Here, as in Pau, strong wind is not frequent, and the invalid can be benefited by sound sleep. For many ages the waters of Aix have been successfully used in the treatment of chronic rheumatism in the form of vapour-baths, ordinary baths, and douches. Their utility is incontestable in many cases of anchylosis and chronic ulceration. During the late war they worked wonderful cures of wounds.

Dr. Brachet, a military doctor who was especially charged with the treatment of the wounded in Aix, attributes to its waters a remarkable power of facilitating the expulsion of bone fragments.(a) How far these properties of the waters of Aix are to be attributed to their chemical composition, especially to the sulphuretted hydrogen contained in them, we do not seek to determine; common water, perhaps, of the same temperature, and used in the same manner, would produce similar effects. But the particular apparatus used at Aix, and the experience of the doctors and persons employed in its application, are not to be found everywhere.

We take this opportunity to make a remark concerning watering and climate stations in general. When once a place of this kind has a name, it does not matter in what manner, for being very useful in a particular disease, it has a great chance of really acquiring this property. In the same way, a doctor who has once the reputation of being very clever, has a good chance of becoming so. Why is this? In the first place, trust is a wonderful auxiliary in every medical case. A patient who believes that he is going to a place where he is likely to be cured has made the first step towards health. But there is another reason. When once a place has the reputation of being a specific against a disease, the consequence will be that a great number of patients afflicted by the same disease will flock thither. The medical men of the place will therefore be driven to pay special attention to the treatment of that disease, and will acquire particular experience and skill in this direction. In fact, the place soon becomes a school for specialists. Resources of every kind will also be provided as soon as they contribute to the treatment of such disease; and even if the virtue of the place should be at first purely illusory, it will become real by means of art. At Aix, for instance, where rheumatic patients predominate, the attendants have acquired a proverbial perfection in the art of *douching* and *massage* (shampooing). M. Brachet possesses besides a splendid constant-current galvanic battery, an example which deserves to be imitated by his colleagues. For chest invalids and sufferers from other kinds of exhaustion there is facility for obtaining milk of different kinds and from the various species of mammalia.

We have mentioned some affections in which the waters of Aix are useful. These waters may do good service, however, in many other maladies. Their use is evident in every case where perspiration and congestion of the skin are indicated. It is also scarcely necessary to add that they possess the therapeutical power of all sulphuric waters in the treatment of syphilis, skin diseases, and chest complaints. In this respect they are analogous to the waters of the Pyrenees. The waters of Aix are, besides, very rich in active elements, especially in sulphuret of sodium. The waters of Challes (a place in the environs), which are frequently used at Aix, contain more sulphur than any waters of the Pyrenees. To this may be added that the elevation of Aix is only 240 mètres above the sea; whereas Cauterets, Eaux Bonnes, etc., are much higher. This is a great virtue of Aix, especially for sufferers from the chest, who are generally incommoded by a too great rarefaction of the air.

For the treatment of tuberculosis Aix has been warmly recommended in an interesting book by the late Dr. Berthet—"Aix-les-Bains, ses Thermes" (Chambéry, 1862). Dr. Berthet must have been a man of much intelligence and talent for observation. In his own case he experienced much good from the inhaling and drinking cure. Many of the innovations he proposes in his book have since been carried out at Aix.

Aix itself possesses three kinds of mineral water—four, if we add that of Challes, in its close neighbourhood. In the town are two very warm sulphurous springs, which feed the baths and inhalation cabinets of the great establishment. One of these springs is improperly called "Source d'Alun," being simply a sulphurous water. At a quarter of an hour's distance from the town there are cold sulphurous springs in a park called Marlioz. These also are used for baths and inhalations. Every half-hour an omnibus leaves Aix for Marlioz. The park of Marlioz is beautiful. There is a restaurant for general refreshment, and a farm where fresh milk can be obtained at any hour in the day.

We see, then, that a cure in Aix as regards baths, douches, and inhalations can be equally made with cold and warm water. It must be remarked that the warm cure requires especial care, particularly in bad weather, for the patient is obliged to go through the cold to reach his home after its application. He is generally wrapped in blankets, and carried in a chair closely curtained on all sides. Still it is of course quite impossible to shut out the air altogether and prevent its entry into the bronchial tubes. It would be desirable that an hotel were connected with the bathing establishment, in order to prevent this risk to the patient.

The bathing establishment itself is well organised, and affords a curious arsenal of apparatus for douching, inhaling, etc. In the inhaling cabinets ingenious contrivances are made to bring the air in contact with a very large surface of water. To inhale the hot vapour is very soothing to the bronchi, and it acts as a powerful expectorant. The sulphuretted hydrogen mixed with this vapour may have some good effect upon diseased lungs.

At Marlioz the air of the inhaling apartments is charged with sulphuretted hydrogen, produced by cold mineralised water. Here the atmosphere is said to be too irritating for some patients. Aix, in fact, deserves notice as possessing the most valuable therapeutic resources.

Here, too, nature is picturesque. Excursions to Chambéry, Annécy, and Grande Chartreuse may be easily made. There are also steamers plying on the lake of Aix for those who prefer water to land. Ostensibly there is no gaming table, but there is . . . a *cercle*, or club, with very suspicious-looking little green tables! There is one want, however,—the absence of good public music in Aix. The military band of Chambéry alone plays there, and that only twice a week.

The general administration of Aix, as well as the medical men, are most fraternally and generously disposed towards those of the profession. Medical men have the whole cure gratis, even to the use of the omnibus to Marlioz, and free admission for themselves and families to the Casino and Cercle upon being presented by a doctor of the establishment.

(a) See "Traitement des Blessés aux Eaux d'Aix-les-Bains," par le Dr. Brachet, Chirurgien-Major, etc. (Paris: Chaix et Cie.).

ON ENDOCARDITIS IN RELATION TO ERYSIPELAS OF THE FACE.

By Dr. JACCOUD,

Professeur Agrégé à la Faculté de Médecine de Paris.(a)

IT was at La Charité, in 1866, that I observed the first example of cardiac complication occurring in the course of erysipelas of the face. As since then cases have multiplied, each year furnishing me with a more or less rich contingent of facts, I am able, without temerity, to reject the idea of a mere coincidence, and free myself from that prudent hesitation which should prevail with every observer in the interpretation of a new pathological complexus. The following year, at the St. Antoine Hospital, I taught my pupils to inquire into the condition of the heart in spontaneous erysipelas with the same solicitude as in articular rheumatism, eruptive fevers, typhus, or the puerperal condition. In 1868 and 1869, at the Municipal Maison de Santé, I verified new examples of these morbid manifestations; and in the first edition of my "Traité de

(a) *Gazette Hebdomadaire*, 1873, No. 25.

Pathologie" I incidentally indicated them by representing the thermic curves in a case of severe erysipelas accompanied by endocarditis. Later still, my conclusions, based upon a larger number of facts, became wider and more firm; and, in 1872, I was able, in my "Clinique de l'Hôpital Lariboisière," to sum up in the form of propositions all that observation had then taught me concerning the clinical relations of erysipelas of the face and acute cardiac phlegmasia.

Nevertheless, these relations are, it would seem, as yet but little known; and, at all events, their vulgarisation is not proportional to their importance, and I believe that it will be useful to call attention to them in a few words. One of my most distinguished pupils, M. Sevestre, is preparing a work on the subject, *in extenso;* and I now wish simply to enumerate the fundamental facts with the object of diffusing to a greater extent these new clinical ideas, and to secure for my conclusions the priority to which they appear to me to have a right. These, then, are the propositions which my observations allow me to formulate, being, with some additional development, the same that I have published in my "Clinique de la Lariboisière."

Erysipelas of the face should be placed among the acute diseases which present phlegmasias of the heart among the number of their possible determinations. This possibility is realised only in a small number of cases, and in this respect it resembles typhoid and the eruptive fevers. *Endocarditis* is by far the most common form of this heart-affection. By its chronological relations with the exanthem, which it may exceptionally precede or follow, by its relative frequency, and by the uniformity of its characters, this endocarditis proves itself to be a true determination of erysipelas, and not the capricious effect of a chance hazard. It scarcely ever gives rise to the subjective symptoms of primary endocarditis. Scarcely does it induce in some cases an unexpected rise of temperature. It does not announce itself, and is only recognised when it is deliberately sought for. In fact, it has no other positive signs than the phenomena of auscultation corresponding to the seat of the phlegmasia. The endocarditis affects the left auriculo-ventricular orifice, and is a *mitral endocarditis*. Once, in a woman twenty-six years of age, it coincided with a tricuspid endocarditis, the lesions being found, at the autopsy, more marked on the right than on the left side. In no case has the inflammation ever been seated at the arterial orifices.

By reason of its seat, the endocarditis of erysipelas gives rise to the physical signs of acute mitral insufficiency; and it is characterised, with or without *frémissement* on palpation, by a systolic souffle at the apex. The souffle may trench on the *petit silence*, but I have never found it modify the second normal sound. As the other symptoms of endocarditis are usually absent, the diagnosis rests entirely on the verification of the souffle, the characters of which I have indicated. This fact imposes extreme reserve on clinical judgment, for just as we should err in default, and should allow the endocarditis to pass unperceived if we neglected to practise auscultation day by day, so we should err by excess if we attributed to acute endocarditis every souffle that may be heard in the subjects of erysipelas. Here are the rules which have guided my appreciation. I do not regard as significative, or, in other words, I do not impute to acute endocarditis, any souffle that does not correspond to the following conditions:—It must be systolic and at the apex; it arises during the course of the erysipelas or some hours before; it is independent of the thermic degree of the fever which it may survive; the patient has never been affected by articular rheumatism or by pleuro-pulmonary inflammation; and the erysipelas is not actually complicated by pleurisy or pneumonia. In this way may be avoided the causes of error which might lead the judgment astray. The first conditions eliminate the anæmic and the febrile souffles, and the others prevent the fault being committed of attributing to the erysipelas an endocarditis really depending on some other morbid condition. The rigorous observation of these rules guarantees the justice of the diagnosis in the cases in which the autopsy is wanting; and it is because I have never departed from this severity of appreciation that I have been enabled to affirm the pathogenic relations of erysipelas and endocarditis, although, with the exception of two cases, my observations have been purely clinical.

In my lectures at the Lariboisière, I indicated the evolution of this endocarditis in the following terms:—"The erysipelatous affections of the heart may prove fatal during the period of the existence of the disease, but when this actual danger has passed away, they (with the exception of myocarditis) ordinarily terminate in complete resolution. I have not yet seen a single case in which the endocarditis of erysipelas became the point of departure of a persistent valvular lesion. If further observation confirm this negative fact, this endocarditis would be, in this point of view, a much less serious affection than that of rheumatism." Observation, whose teachings I thus reserved, no longer allows me to form so favourable a judgment. I have seen this year a man, twenty-seven years of age, affected by endocarditis during the course of erysipelas of the face, retaining, after his perfect recovery, a systolic souffle at the apex which left no doubt as to the persistence of mitral insufficiency. Consequently, the endocarditis of erysipelas is liable to the same prognosis as that of rheumatism. It may, as it ordinarily does, terminate in complete resolution; it may prove fatal during the acute stage; and it may leave in the valves definite traces of its passage. When, therefore, we are investigating a valvular lesion, it is necessary to inquire concerning anterior erysipelas, just as it is to inquire concerning rheumatism, eruptive or typhoid fevers, or acute diseases of the respiratory apparatus.

Pericarditis is a far more rare affection in erysipelas, and never goes beyond the stage of dry pericarditis, revealed by more or less extensive friction sounds, with or without the *bruit de galop*. It never continues after the termination of the erysipelas, and I have never observed it alone, unaccompanied by endocarditis. For these reasons, it is of far less importance than this latter affection.

Myocarditis, which is still more rare, may accompany endocarditis or exist alone. It can be suspected only when paretic failure of the heart succeeds to a disordered agitation of the organ; and its existence can only be affirmed by an autopsy. This myocarditis, which doubtless is always fatal, and which may furnish the explanation of the unexpected fatal termination of some cases of erysipelas, has not, in my opinion, the same signification as endocarditis. It is no longer a true determination of the erysipelas, but the direct result of the excessive elevation of the temperature—a hyperthermic myositis. The two patients (men of twenty-seven and forty-five years of age) at whose autopsies the initial changes due to myocarditis were exhibited, had both presented a temperature far in excess of that usually observed in erysipelas. Analogous cases, concerning surgical erysipelas, were published by Ponfick in 1868. I need dwell no longer on facts of this kind, which relate only to fatal erysipelas, and are entirely exceptional. The demonstration of endocarditis and endopericarditis occurring in erysipelas of the face in non-rheumatic individuals, is that which constitutes the importance of my observations, and the object of this paper. The clinical and theoretical interest of the facts is, I believe, sufficiently great to justify the persistence with which I have called the attention of my colleagues to them.

REVIEWS.

Surgical Diseases of Infants and Children. By M. P. Guersant, Honorary Surgeon of the Hôpital des Enfants Malades, Paris, Honorary Member of the Société de Chirurgie, etc. Translated from the French by Richard J. Dunglison, M.D. Philadelphia: Henry C. Lee. London: Trübner and Co., 60, Paternoster-row. 1873. Pp. 354.

A book on the surgical affections of early life from one whose authority in such is so generally recognised as is that of M. Guersant is sure to be welcomed by the profession in this country. This volume consists of short essays on the surgical diseases most frequently met with in children. It has been no part of the author's intention to deal exhaustively with the whole of infantile surgery; he desires rather to put on record his views on certain subjects as they have been expressed in his clinical lectures at the Hôpital des Enfants from 1840 to 1860. The reader will find a great deal omitted that he might, perhaps, have expected to meet with, for all those rarer diseases and malformations which occur on an average but once or twice to any one surgeon are not touched upon. Still there is much to detain the attention of the practitioner as well as of the student in these pages. The subjects discussed are those of which the author is evidently well capable of judging from his own practical experience of them, and the descriptions of diseases are clear and concise. There is, however, no attempt at arrangement in the contents of the book; after reading to the end of a chapter on cervical adenitis, we

come upon one on phimosis, followed by another on fractures. Polypus of the rectum is side by side with hypertrophy of the tonsils, and so on throughout there is the same absence of anything like grouping. This is due, perhaps, to the fact that these chapters were originally delivered in the form of clinical lectures, and are now published in the same order in which they were addressed to the students attending M. Guersant's class. But this does not at all affect the subject-matter of the chapters. We will now proceed to mention one or two points in detail; and first we must allude to some very valuable remarks in Chapter I. on the manner of performing operations on the young. The three subjects discussed are important ones—viz., (1) the preparation of the patient, (2) the performance of the operation, and (3) the after-treatment.

In writing under the second heading the author rightly draws great attention to the fact that operations on children are more difficult than in adults, and that a more exact knowledge of anatomy is requisite, because, as the spaces are smaller and the regions of less extent, it is needful to exercise greater caution in incisions, and to limit them to smaller dimensions. Further, as children do not bear pain and long operations well, it is desirable to operate quickly; and for this reason also a most positive anatomical knowledge should be possessed by the surgeon, in order that he, in acting rapidly, might act with confidence.

The subject of tracheotomy in croup receives considerable notice. M. Guersant condemns the operation as a rule when the patient is below the age of two years. The number of successful operations performed prior to that period is, he feels assured, very small. But while evidence of the disease being of a general character, as shown by false membranes in the nose, behind the ears, in the vulva, or on a blistered surface, is a strong contra-indication, false membranes when limited to the air-passages themselves, even though they extend to the trachea and bronchi, do not constitute an objection to the operation. It no doubt would be admitted, however, by the author that the subsequent extension of the inflammation and false membrane along the air-passages below the opening is a most frequent cause of death after tracheotomy for croup.

The method of operation is most minutely dwelt upon, and decided preference is given to the double canula advocated by M. Trousseau. The author states that of the thirty-two children first operated upon, in which the simple canula was used, only two were saved. He considers a dilator indispensable in the operation. The one in use at the Hôpital des Enfants is "devoid of hooks at its extremity, and furnished with a spring which may be opened by pressure, and not by separating the branches."

A clear account of the symptoms of rectal polypi in children, and of the treatment employed by the author, is given in Chapter VII. They are, he thinks, generally formed by a mucous follicle which has increased in volume and become hypertrophied. They are generally found attached by a pedicle just above the sphincter, though in some autopsies he has discovered them as high as the cæcum.

Chapter X., on "Vesical Calculus—Lithotomy—Lithotrity," is one of great interest. We are here informed that "the study of 140 cases of calculus enables me to decide that age makes no difference in the physical and chemical constitution of these foreign bodies. . . . Their form and volume have varied not less than in the adult, for we have extracted some as small as a pea and others as large as a hen's egg." In speaking of lithotrity, M. Guersant says he cannot repeat what he wrote in 1828—"Lithotrity is impracticable in children under five years of age." His experience at the present time is favourable to this operation at all ages—even in children fifteen or eighteen months old, without regard to sex. In cases in which, from the size, hardness, or adherence of the stone, or when more than one is present, lithotrity is unfavourable, lithotomy must be resorted to, and among the various methods of this operation he likes best the bilateral.

In Chapter XV. the operation of hare-lip is described. The author disapproves of the universal employment of twisted sutures, and advocates Thierry's needles, made of iron, with a movable lance, which, when once removed, enables a little screw to be slid on, which may be tightened or loosened at will. When these needles are not used, the plan resorted to by M. Guersant, and also by his successor M. Giraldès, is to pass interrupted sutures of double silk or a silver thread by means of a curved needle.

In Chapter XXV. the subject of "Caries of the Vertebræ" (Pott's disease) is treated of; and in Chapter XXVI. some very valuable remarks are made on "Congenital Imperforation of the Anus and Intestines." When speaking of Amussat's operation for this deformity, the very important difference in the anatomical relations of the kidney in the adult and in the child are alluded to. In the adult we only meet with the inferior extremity of this organ, whereas in the new-born the kidney passes considerably beyond the external border of the quadratus lumborum muscle, and even descends into the iliac fossa.

In the treatment of foreign bodies in the air-passages (Chapter XXVIII.), M. Guersant, all other means failing, would resort to laryngotomy if he thought the body was in the larynx, and to tracheotomy if in the trachea or bronchial tubes.

The treatment of cancer of the eye has been very unfavourable in the hands of the author. Cures have been but of very slight duration, even when the eye has been removed at the commencement of the disease. Relapses have most frequently taken place before the formation of the cicatrix or within one year or eighteen months afterwards, and then the fatal progress has been very rapid.

Cancer of the testicle (Chapter XXXIII.) is no less fatal, the prognosis no less certain. In all cases but one, which was lost sight of, a recurrence was met with. The author has not seen cancerous tumours of the testicle produce ulceration of the scrotum, "neither have we seen chimney-sweeper's cancer, which is more common in England than with us."

In Chapter XXXVI., "On Hypospadias and Epispadias," we find the following remarks:—"Until these later days surgeons restricted themselves to advising the use of bandages and of apparatus to guide the flow of the urine to avoid irritating the skin of the neighbouring parts. More recently Gerdy at first proposed to pare the edges of the skin and afterwards unite them by sutures. Roux of Toulon, Nélaton, and Richard had the idea of performing an autoplastic operation by taking flaps of the skin from the anterior portion of the abdomen to form the anterior wall of the bladder, and to make also walls for the canal of the urethra, divided with the skin and a scrotum. These experimental operations, being painful in the execution and very difficult, have rarely been performed, and have sometimes been followed by death or incomplete results. They do not appear to us worthy of our advocacy, and we can only say that they are not dictated by sound surgery." We think these remarks are too sweeping when read by the light of some of the cases operated upon by our countryman John Wood. If it is true the results have been incomplete, it is also true they have been very beneficial in some instances.

We might extend our references and observations to the whole seventy-three chapters had we the space at our command; but we must conclude this notice of an excellent little volume by saying, as we did at the commencement, that it contains a large amount of useful practical information, and records the experiences of a surgeon well able to give instruction on the subjects he treats of. The English and American readers too may be congratulated upon what appears to be a faithful and simple translation of the original text, without either note or comment by the translator to interfere with the impressions the author's own words are intended to convey.

Lectures on Madness in its Medical, Legal, and Social Aspects. By Edgar Sheppard, M.D., M.R.C.P., Professor of Psychological Medicine in King's College, London, and one of the Medical Superintendents of the Middlesex County Lunatic Asylum at Colney Hatch. London: J. and A. Churchill. Pp. 186.

It is not our rule to criticise lectures or communications which have appeared in our own columns, nor should we have done so on the present occasion had it not been for some sharp comments directed not to the matter but to the manner of the book, which substantially consists of the lectures Dr. Sheppard published in this journal. It is hardly fair to deal with the mere surface of any man or thing sound and honest at heart, however awkward it may seem; but on the present occasion there is not even such an excuse, for the language, though striking, is not the less clear on that account; and allowance must always be made for the difference between a spoken and a written discourse. This is, for instance, specially notorious in the matter of sermons: a preacher may deliver a discourse which seems to his hearers singularly striking, but which, when printed, loses all the *vis viva* it derived from the man's

lips. We would beg our readers, therefore, to look into the substance of these lectures. Dr. Sheppard is a man well skilled in his profession, and who has had a long experience as an alienist. To a shrewd man the mass of human waste congregated in such an Asylum as Colney Hatch must be full of instruction; and though it may be impossible to single out individual cases, the broad generalisations and conclusions of such a man are worth listening to.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M.D. Lond., M.R.C.P., Lecturer on Pathology and Morbid Anatomy at Charing-cross Hospital Medical School, and Senior Assistant-Physician to Charing-cross Hospital. Second Edition.

The present edition of Dr. Green's excellent little manual may be looked upon as a very decided improvement on the last. A considerable quantity of new matter has been added, and many new and beautiful wood engravings, which are of especial value in a work of this kind, which cannot always be studied with the aid of actual specimens. The most important additions have been in the domain of tubercle and pulmonary phthisis, to which Dr. Green has devoted much care and attention. The views here expressed are substantially those advanced in our columns some time ago in some papers by Dr. Green. A chapter has also been added on septicæmia and pyæmia. Altogether we are in a position to endorse the encomiums we formerly passed on the volume, as being the best we could put in the hands of the student.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

October 6.

Enlargement and Opening of the School of Medicine—List of Successful Students.

More than usual interest has been attached to the commencement of the present winter session at the Liverpool School of Medicine, in consequence of its being made the occasion for formally opening the extensive additions which have recently been made to the School premises. These additions comprise a new museum, sixty feet in length by thirty in breadth, two chemical laboratories and a balance-room, a large physiological laboratory, a new and most commodious lecture theatre, an injecting-room, a boiler-house, corridors and water-closets, and an increase in the size of the dissecting-room to nearly twice its former dimensions. The museum has a handsome Grecian *façade*, in keeping with the design of the original building. It is well lighted from the roof, and has a light iron gallery running all round it. The floor of the gallery is of thick ground glass, while that of the museum itself is of encaustic tiling. The larger chemical laboratory in which the students perform their practical work is fitted up with great care and completeness, and affords every facility to the student for the prosecution of a most important and interesting branch of his curriculum. The most interesting addition of all, however, is probably the physiological laboratory, which seems quite a model of completeness, and is surpassed by very few, if any, of the metropolitan schools. It is of an oblong form, well lighted from the roof, and has running down it lengthwise two very long parallel benches, at which the students will work. Underneath the smooth and solid tops constituting the benches are series of drawers for instruments, and cupboards for the microscopes; while let into the tops at regular intervals are basins, with an ample water supply from taps connected with horizontal pipes, which run the whole length, a foot or two above the basins. The width is sufficient for students to work on both sides, so that there is accommodation for a great number. Each pair of workers is provided with a small case, containing some half a dozen liquids, such as carmine solution, glycerine, etc. On one side of the room are glass cases for the general instruments used by the lecturer and demonstrator, while at the farther end are a daïs and desk, from which directions can be given so as to be seen and heard by all in the laboratory. There is no doubt that, under the able management of Dr. Caton, this will become, as it deserves to be, one of the most useful and attractive departments of the School.

The room formerly occupied as a museum is now fitted up as a reading-room and library for the students. Dr. Inman, Consulting Physician to the Royal Infirmary, and formerly a lecturer at the School, has just presented to the library 200 volumes of recent works in medicine, surgery, etc.; while it is indebted to Dr. Vose for a handsome donation in money. Another very important addition for which the creation of the new premises has allowed space is a bone-room. This adjoins the dissecting-room, and is fitted up with a great number of good osteological preparations, with skeletons and plates, and cannot fail to be of the greatest possible advantage to those who are entering on the study of anatomy, to whom a constant reference to the parts of the skeleton is so essential.

The premises were formally opened by J. Torr, Esq., M.P., in the presence of a very large number of medical and other gentlemen from the town and neighbourhood; and after the opening an adjournment was made to the large theatre of the Medical Institution (kindly lent for the occasion), where the introductory address was delivered by Dr. Caton, and the prizes afterwards distributed by Mr. Torr to the successful students, of whom the following is a list:—*Winter Session.*—Exhibitioners: Messrs. T. L. Roberts, J. Lewtas, G. G. S. Taylor, and J. Marmon. Third year subjects: Messrs. G. W. Joseph, silver medal; R. N. Pughe, silver medal; and G. G. S. Taylor, bronze medal. Second year subjects: Messrs. W. F. Shain, silver medal; J. Bark, bronze medal; S. F. Bigger, 1st hon. certificate; A. L. Douglas, 2nd hon. certificate; and E. S. Wood, 3rd hon. certificate. First year subjects: Messrs. J. T. Smith, silver medal; W. H. Wright, bronze medal; W. Gruggen, 1st hon. certificate; and W. Latham, 2nd hon. certificate. *Summer Session.*—Second year subjects: Mr. F. C. Gresham, bronze medal. First year subjects: Messrs. J. Twinem, silver medal; W. Gillibrand, bronze medal; and W. Townson, hon. certificate. Comparative Anatomy and Zoology: Messrs. R. H. Jones, prize; and H. Pilkington, hon. certificate.

I am happy to state that the health of the town continues good, and that no new case of cholera has been introduced.

FOREIGN AND COLONIAL CORRESPONDENCE.

AUSTRIA.

Vienna, October 6.

To-day the first meeting of the private International Conference takes place. The subjects consist in an examination of the exhibits in the Sanitäts Pavillon, and in especial the consideration of the best mode of transporting wounded men. This question will not be decided by a mere examination of the various waggons and ambulance carts, brancards, and sanitary trains, but an actual trial will be made, and a vote subsequently taken. To-morrow we go to Vöslau, the members of the Conference travelling by the sanitary train, when they will see in actual operation the manner in which the transport of wounded men takes place, and form a conclusion as to what is the best way of supporting them. This is a most important matter, and will give rise to an animated discussion. A dinner will be cooked *en route* in the kitchen attached to the train, but not for the delectation of the members of the Conference, who are to be regaled by Professor Billroth in the Hotel Back at Vöslau, where we shall also have the pleasure of listening to the sweet music of Strauss's band, conducted by the distinguished musician himself.

The Empress Augusta of Germany has taken the most lively interest in this sanitary exhibition and in the Conference; it is to her that its installation is mainly, or indeed altogether, due. She has written a letter to Dr. Wittelshöfer, the President of the Sanitary Division of the Exhibition, in which she expresses her thanks to him, together with Professor Billroth and Baron Mundy, for the work they have so well carried out, and her great wish to see the Society whose emblem is the Red Cross perfected and extended, and the sphere of female usefulness as well in peace as in war turned to advantage.

I will not describe the contents of the sanitary pavilion in detail. There are of course many surgical instruments. One case contains what, without much exaggeration, might be described as a collection of bullet-extractors from the time of Hippocrates down to the present day. Bartolomæus, Ambrose Paré, and Garengeot are represented by forceps of rather a clumsy construction, while representing most recent times are several kinds of electric bullet-forceps and extractors. Every

species of bandage and splint finds a place. Also the various methods of applying plaster-of-Paris bandages, models of transport waggons, artificial limbs, specimens illustrating the effects of gunshot injury of bone, photographs of the victims of military science and the triumphs of surgical skill, are largely illustrated.

There is a large French train of eight carriages, elaborately fitted up, and in the surgeon's carriage even luxuriously. Besides isolated carriages from Hamburg, Dresden, and Munich, there is a German train, less elaborate than the French, but I should say equally efficient; it is, in fact, a train which saw much actual service and did good work during the late war.

The first sitting was opened by an excellent speech by the President (Professor Wittelshöfer), who concluded by asking the meeting to call Langenbeck by acclamation to preside over them.

Langenbeck, on taking the chair, alluded to several matters of interest, and feelingly spoke of the sudden death of the Grand Duchess Helena of Russia, who first during the Crimean war brought a woman's aid to the sick and wounded Russians; he also spoke very warmly of Nélaton. After the election of Professor Esmarch, Count Serrurier, General Baumgarten, and Professor Dummreicher as V.P.'s, Baron Mundy and Professor Billroth addressed the meeting as to its scope and objects. Professors Volkmann, Fischer, Roth, Neudorfer, and several other members joined in an animated discussion on the various forms of brancard. It was decided to practically test them before coming to any decision.

Tuesday, the second day of the Conference, was spent in the most agreeable manner possible. A discussion, without decided result, having taken place, we started from the Exhibition grounds, in a long train of eighteen carriages, fifteen being sanitary waggons of the various constructions exhibited in the Sanitäts Pavillon, and the rest ordinary passenger carriages. The carriages communicated with each other by a central passage throughout the train, and it was therefore easy to inspect all the arrangements, and try the relative amount of comfort experienced whilst lying on the different forms of bed and stretcher. The more securely and firmly fixed they were, the more comfortable they appeared to be to me. Those resting on springs or swung in slings afforded a too great freedom of motion, which would, I think, be severely felt by a wounded man. I concluded that, had I myself a broken leg or thigh, I would greatly prefer being transported in what Baron Mundy calls the "*suspension fixe.*" Our experiments were scarcely finished ere we reached Vöslau, the district of one of the best Austrian wines. The weather was beautiful; the scenery is hilly and wooded, and the slopes and plains are all vine-clad. The Hotel Back is on a terrace commanding a superb view. Professor Billroth entertained some eighty guests in what was simply a princely fashion, and the refined gold was gilded by the music of Strauss's band, conducted by the famous Johann himself. Billroth, in a few well-chosen and eloquent words, welcomed his guests: "I greet you, gentlemen," he said (pointing towards the terrace), "with the beautiful scene around us, I greet you also with art (turning towards Strauss), I greet you, in fine, *in Austria with Austria;*" and then the band struck up "The Beautiful Blue Danube," and the effect was electrical. Langenbeck proposed another toast: "I am sure," he said, "everyone here present has been a pupil of Ricord. Let us drink his health. *Moi, le vieux disciple du jeune maître*, do so with all my heart." "Yes," said Ricord, in reply, "I am young, it is true, *mais ce n'est pas ma faute!*"

The voting on the various questions takes place to-day. There will be an almost complete uniformity of opinion; and the official account shortly to appear will form an important document, which cannot fail to arouse public attention and be followed by practical consequences.

After the discussion yesterday morning a trial of the ambulance waggons and *cuisines volantes* was made in the Hippodrome, in the presence of the Archdukes Wilhelm and Karl Ferdinand. Baron Mundy explained various details to their Imperial Highnesses, and the members of the Conference, from the president downward, became for the moment a corps of volunteer sick and wounded, and essayed for themselves the merits of the different waggons. I will not trespass on your space or on your readers' patience by entering into the discussion of those merits here. Those interested will have an opportunity of examining the results arrived at in the report shortly to be issued in a complete form.

To-night (Thursday, 10th) the Archduke Wilhelm, who is the Grand Master of the rich and powerful Teutonic Order, entertains at dinner some of the members of the Conference; and so will end one of the most interesting and agreeable *réunions* at which I have had the good fortune to assist.

WILLIAM MAC CORMAC,
Wien, October 10. Surgeon to St. Thomas's Hospital.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

FRIDAY, OCTOBER 10.

P. HEWITT, President, in the Chair.

DR. TILBURY FOX exhibited a living subject affected with Parasitic Sycosis. The patient had been sent to Dr. Fox the day before by his medical man, and on being requested to do so, readily consented to exhibit himself. The disease began at the outer angle of the mouth six months ago by a patch of eruption having all the characters of ordinary ringworm of the surface (tinea circinita). This patch gradually spread until it invaded the whole of the left cheek, the left upper lip, and the left half of the chin. The spreading edge of the patch was always red, very well defined, and herpetic; whilst the central portion became pale, and desquamated slightly. The use of remedies destroyed the disease about the cheek, and the malady now consists of a red, slightly scaly surface, occupying the left half of the upper lip, a little of the right half of the same, and the whole of the left side of the chin. In addition, there are eight or nine small tubercular swellings, one of which is slightly pustular in aspect, and scattered here and there over the diseased area. These lumps began to come about a month since. The hairs in the site of these little tubercles lie loose in the follicle; they come away very readily; they are swollen, lustreless, opaque, and loaded with fungous elements. The man, in addition, has a small circular patch possessing all the characters of ordinary ringworm in the middle of the chin beneath the jaw. Dr. Fox said that he had only met with two cases of this parasitic sycosis within the last few years. As Hebra denied its occurrence, he thought it important to bring the case under the notice of the Society. He further pointed out the unsymmetrical character of the disease, the origin of the latter from common ringworm, the slow development and indolent character of the small tuberculous swellings, and the absence of any decided suppuration, as points of diagnostic interest; the common non-parasitic sycosis furnishing contrasts in these particulars, no less than in the presence of diseased hairs in the one and not in the other. Dr. Fox placed under the microscope specimens of the hairs invaded by the mycelium of the fungus (microsporon metographytes) and also of the root sheath, in which the conidia (or spores) were seen in abundance.

Dr. DUFFIN said this form of skin disease was rare; he had only seen one case. The patient, a German tailor, had a large patch on his chin, and another on the right side of the face. In some parts there were pustules, in others the skin was only red, but in both spores were found. The Vienna physicians maintained that the malady was rare; the Parisian said it was common. At one time Hebra held it to be fictitious, but had now modified his opinion.

Dr. THEODORE WILLIAMS brought forward three cases of Spasmodic Asthma treated by Chloral. The first was that of a married woman, aged 23, who came from the Isle of Man, where, during the last nine months, she had suffered from asthma of so severe a character as to confine her to her bedroom for four months. Various remedies had been tried in vain. On her arrival in town, Dr. Williams did not at first pursue active treatment, hoping that the change of climate might give relief. The fit, however, coming on as usual, chloral was given in twenty-grain doses. After the first dose, she fell asleep for an hour; after the second, she slept a whole night; and a few more rendered her breathing quite clear. The drug was then omitted, and the patient remained free from asthma for more than a week. The second case was that of a lad, aged 16, who had been subject for six years to attacks occurring once a week and lasting three days. Chloral was given during a severe paroxysm, with the result of causing sleep and immediate relief to the breathing. He remained in the Brompton Hospital free from attacks, in spite of several threatenings of

dyspnœa, which were always averted by the timely administration of chloral. The third patient was an unmarried woman, aged 27, with a history of asthma of two years' standing; the attacks occurring every morning, lasting two or three hours, and often recurring in the forenoon. During a very severe one, which occurred in the Brompton Hospital, a variety of drugs were tried with little effect. Chloroform inhalation gave some relief, but caused cardiac intermission. Hypodermic injection of morphia did good, but her increasing lividity precluded its continuance. Chloral was then given in twenty-grain doses, and the first dose induced slumber and easy respiration. The drug was continued in smaller doses for upwards of two months, during which time the attacks seldom recurred, and, when they did so, were extremely mild. Once the chloral was omitted, and the asthma immediately returned, but ceased on resuming it. All the cases were complicated by catarrhal symptoms, and in the third case there was considerable emphysema, which diminished during the patient's stay in the hospital. Biermer, of Zurich, had already used chloral extensively in these cases. Dr. Theodore Williams's own experience, founded on upwards of twenty cases, was decidedly favourable to its use in spasmodic asthma. In only two cases had any bad symptoms arisen.

Dr. Southey said that the patient who had been under his care was of a markedly hysterical temperament, and any little occurence in the ward brought on an attack of asthma. In one bad attack he gave her nitrite of amyl, which seemed to benefit her; but he was not too sure about its efficacy, and it was not a remedy to leave in unskilled hands. In such cases he thought stimulants did most good; and chloral, he thought, would be found most beneficial when the disease was most purely neurotic.

Dr. A. P. Stewart said that chloral seemed to have a decided effect in these cases, but in many he thought it risky and uncertain. In some instances it did well for a time, and then, for no reason at all apparently, it began to disagree, and its use was followed by extreme depression of the circulation to a most alarming extent. In others the same happened after long use. In many cases no doubt it was very good, but he would be strongly disinclined to order it several times a day. Often it gave rise to severe itching, so as to destroy rest, as well as to severe irritation about the eyes. He thought bromide of ammonium in large doses better in every way.

Mr. Nunn had seen some cases of asthma, almost like suffocative attacks, produced by food—in one patient by rice.

Dr. Williams did not think chloral a stimulant, and in one case stimulants properly so-called had been given largely before the chloral. He had seen no mischief arise from its use. The cases he thought mainly due to damp.

Dr. Southey read the account of a case of Chronic Bright's Disease in a young man, aged 21, the subject of syphilis. The patient had had scarlet fever when a child, and had suffered with dysentery several years previously. The first symptom which led to his admission into St. Bartholomew's Hospital was erysipelatous inflammation of the left ankle, following a trivial injury. His urine was loaded with albumen, but was always excessive in quantity; its daily average was fifty ounces, but on many days more than seventy ounces were passed. His temperature was invariably at or above normal, and he presented very trivial anasarca during his illness. Generally his appetite was good, but at times he suffered in the morning sickness, and had severe colicky pains. Among the anomalous symptoms noted were the following:—Bright red patches of erythema came out on different portions of his body, sometimes on the face, at others on the trunk and limbs; they were attended by febrile symptoms, and coppery-coloured stains marked their situation for a while. Their disappearance was usually attended with the most profuse perspirations or critical sweats. These rashes, as well as transient mottlings of the arms and legs, and sudden transitory attacks of acute pain in calves, loins, and back, were attributed by Dr. Southey to the syphilitic poisoning, of which there was further confirmatory evidence in amygdaloid cervical glands, and scars of old buboes in both groins. After being two months under observation, during all which time the microscopical characters of the sediment of his urine varied very little, fatty and granular casts of varying size being always present, although never in large quantity, he was suddenly seized with rigors of a most severe kind. His temperature rose to 103·2°; he complained of general pains in different parts of his body, and especially of headache, localised behind his ears. This was followed by profuse sweating, which afforded some relief. For three successive days these ague-like attacks were repeated. The abdomen then became tympanitic and tender, and acute peritonitis supervened, to which he succumbed after a few days; his temperature gradually rising to 106°, which it reached twelve hours before death. At this high temperature he passed into an insensible state, with protruded eyeballs, dilated pupils, and stertorous breathing; but up to this period his intellectual faculties had never been clouded, and he never exhibited any epileptic convulsions. The necropsy revealed old as well as recent peritonitis, large and soft liver and spleen, large pale fatty kidneys, the pair together weighing seventeen ounces and a half. All the viscera were examined by iodine, but did not furnish any amyloid reaction.

Dr. Silver asked if the kidneys had been tested, as in almost every respect the case was a typical one of amyloid kidney. Such forms of disease usually occurred after syphilis. The quantity of water passed was very large, the amount of albumen considerable, and the specific gravity was also frequently considerable, whilst there was no dropsy and little tendency to uræmia.

Dr. Williams asked what was the nature of the liver and kidney changes.

The President said it was not very common to have constitutional symptoms with scars in the groins. Were there no enlarged glands? He now had a case under his care where there were two kinds of sores and two kinds of glandular enlargement. He had also seen a similar case previously. Scars did not, as a rule, indicate the existence of syphilis.

Dr. Southey said the liver was large and granular. The kidney had all the marks of intratubular change. He thought the case differed from amyloid kidney in the quantity of albumen and specific gravity of the urine passed.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, October 14.

Dr. C. J. B. Williams, F.R.S., President, in the Chair.

Mr. Henry Lee communicated a case of Imperfect Development of the Circular Muscular Fibres of the Rectum and Vagina. The case is one in which a large accumulation of fæces occurred in the lower bowel. It formed a tumour, which extended six inches above the pubes, and was five inches broad. The perineum was deficient, and also the circular muscular fibres of the lower part of the rectum and vagina. These two passages opened in common. The rectum and vagina were always relaxed, and the uterus very imperfectly developed.

Mr. W. Spencer Watson related a case of Idiopathic Hyalitis, with Acute Inflammation of the Vitreous Humour of both Eyes. A man, aged about thirty years, a coal-porter, was seized with dimness of vision, which increased so rapidly that in the course of a few days he could not find his way across the room without a guide, his aspect being characteristic of amaurosis. The ophthalmoscope revealed an uniformly distributed turbidity of both vitreous humours. The diagnosis was uncertain, the patient being a free drinker, and having smoked to excess; he had also an ulcer of a suspicious nature on one leg, but no other traces of anything like constitutional syphilis, and no appearance or history of any other disease. Under a course of mercury, rapidly administered to the extent of rendering the gums spongy and tender, vision rapidly improved, and was completely restored in ten days. The progress of the case (taken in connexion with the simultaneous healing of the ulcer on the leg) points to syphilis as the origin of the disease. It is concluded from this case that inflammation of the vitreous may occur, independently of injuries, without any iritis or choroiditis, and without any impairment of the retina. The rarity of the affection and the very rapid improvement under treatment make the case remarkable.

Mr. Henry Lee said he wished to make a remark on one point in the paper. It was implied that increased action was necessary for repair. But when increased action was going on in one part, there was a diminution in another; so he would say, a diminution of activity in the hyaloid, not an increase, cured.

Mr. Cooper Forster said the author of the paper doubted the presence of syphilis because no scars were found on the penis. If found, they would only indicate one kind of sore; and their absence was no proof that the patient had not had

syphilis. He thought the abuse of tobacco had more to do with producing hyalitis than syphilis.

Mr. SPENCER WATSON, in reply, said there was no enlargement of the glands of the groin. He thought the hyalitis was due to syphilis: he had never seen the excessive use of tobacco produce it; its action was rather upon the nerves. He agreed with the remark made by Mr. Lee, that increased action was not necessary for repair.

OBITUARY.

THE LATE DR. THURNAM, DEVIZES.

(*Communicated.*)

By the sudden death of this able and highly respected physician, on September 24 last, the Wilts County Asylum sustained a loss which will not be easily replaced.

Dr. Thurnam was born at Ludcroft, near York, on December 28, 1810. As his parents belonged to the Society of Friends, his education was of a private character; but to the excellence of it, it may in justice be said, the pupil was a living testimony.

After passing through the required course of medical study he became a Member of the Royal College of Surgeons of England in 1834. In the same year he was appointed the Resident Medical Officer of the Westminster Hospital, which office he held till 1838, when he was chosen as the Superintendent of the Retreat near York. In 1843 he became a L.R.C.P., and in 1846 M.D. of King's College, Aberdeen. That during the above periods he distinguished himself by the zeal and ability with which he cultivated various branches of medical science there is ample proof. Amongst others may be cited the various published memoirs which he contributed on different pathological subjects, more especially those on partial and spontaneous aneurism of the heart, to the great merits of which all writers on cardiac diseases of that period, whether in this country or on the Continent, have borne testimony.

During his residence at the Retreat, he published in 1841 the "Statistics of the Retreat," and in 1843, "Observations on the Statistics and Treatment of Insanity." Of this latter work it was stated, at the time of its publication, that in its application of the numerical method to the subject of insanity, "we may appeal to Dr. Thurnam's work as an example of the interesting and novel results which may thus be deduced, and which, though they might be suggested by ordinary individual experience, are only capable of being established as facts by calculations founded on a large number of observations. Those only who, like ourselves, have been somewhat extensively engaged in statistical researches, will be able fully to appreciate the amount of labour and care which is required to insure the accuracy which throughout characterises Dr. Thurnam's work." Before referring farther to the chief scene of his labours, we think it will not be out of place here to remark that, though he evinced so much assiduity in the pursuit of strictly medical subjects, it was by no means to the exclusion of other branches of scientific research. As a Fellow of the Society of Antiquaries, Dr. Thurnam, by his joint editorship of "Crania Brittanica," his "Observations of British and Gaulish Skulls," and by various contributions to the different journals on allied subjects—by all these he had earned for himself no mean degree in the domain of archæology and antiquarian lore. In the Wilts Archæological Society, as a member of the council, he had in different ways rendered valuable service. In the annual excursions of the Society he was not unfrequently looked to as an expositor of the objects of interest which were being visited.

In 1849 he was selected by the magistrates of the county of Wilts as the suitable and proper person to whom to entrust the management of first establishing and afterwards of superintending their asylum, which was opened for the reception of patients in 1851. The ability manifested and the success which attended his labours in this important undertaking may be considered as having fully justified their choice. What evidences of painstaking diligence and high conscientiousness he had shown in the pursuit of medical science were the more manifestly developed in the discharge of the duties which he had thus undertaken. It is hardly doubtful whether in this aspect of his varied labours he did not belong to the "countless numbers" referred to by the Premier at the late meeting of the Medical Association, who "are true martyrs of humanity, exhausting themselves in a ceaseless unnoticed anxiety for those whose sufferings they seek to alleviate." It is well known to the writer that not only was Dr. Thurnam much respected as well as beloved by the poor patients in the midst of whom he spent so large a portion of his life, but in the difficult duty of governance his patience and tact in settling disputes which from time to time might occur won for him the title of the "peace-maker," or, as one of his *employés* recently expressed himself on the same subject, "he ought to have been a judge." His practice on such occasions was such as might well be followed by others under similar circumstances. He would allow each to state his case, and then appoint a time a few hours later, on that or the following day, when he would hear them more fully, and decide the point in hand, thus allowing time for the passions of each to subside. By these means, we have understood, he uniformly succeeded.

For some time previous to his death he had complained of headache and drowsiness, but which he had hoped that change and rest would prove adequate to remove. Not having been able to effect his purpose, but expecting to do so shortly, he remained at his post to the last; and even on the morning on which he died he had been into the wards of the Asylum to attend to some sudden call of duty. Even his last words evinced the possession of his faculties immediately previous to an apoplectic seizure which soon terminated his existence.

Dr. Thurnam has left a widow and three sons, with whom we know a large number of friends, both lay and professional, deeply sympathise. Of him it might be truly said that he died beloved and lamented. Both attendants and patients (*i.e.*, those of the latter who were in a condition to comprehend what had occurred) evinced most sincere grief at their unexpected loss.

W. HOWITT, F.R.C.S.

On Tuesday, William Howitt, of Fishergate-hill, Preston died at the age of 63. Since April last the deceased gentleman had been ill, and his demise makes the third death in the family since 1869; for in November of that year his eldest daughter died; in 1870 Mrs. Howitt, his wife, died; and now we have to record his decease. Mr. Howitt was a native of Lancaster, having been born there in August, 1810. He was educated at Lancaster Grammar School; and on completing his tuitional course there he remained for a time with his father, who followed the medical profession in the county town. Afterwards he went to London, where he studied for the same profession; then he proceeded to Paris with a similar object in view; and in 1835 he came to Preston, and started practice on his own account. Mr. Howitt, who was a Fellow of the Royal College of Surgeons of England, continued in active practice in the town up to about 1867; and till the period of his final illness he held the appointments of certifying surgeon to the factories of the town, and district surgeon to the London and North-Western and the Lancashire and Yorkshire Railway Companies. On January 5, 1870, he qualified as a magistrate for the County of Lancaster; and in that capacity he was always on the side of judicious management and sound economy. For many years he acted as a guardian for Preston; on two occasions he was chairman of the board; and up to the time of his death he held the office of vice-chairman of that body. In religion Mr. Howitt was attached to the Church of England; in politics he was a Liberal; but during recent years he virtually withdrew altogether from the turmoils of party and the conflicts of the "isms." During his illness his medical advisers were Dr. Fernside, Dr. Brown, Dr. Dixon, of Preston, and Dr. Southam, of Manchester. The remains of Mr. Howitt were interred in Preston Cemetery. The funeral, in accordance with a previously expressed wish, was of a very private and unostentatious character.

THE following grace passed the Senate of the University of Cambridge on the 16th:—"That, on the recommendation of the Local Examinations Syndicate, a student, though he is above the age of sixteen, may be admitted to the examinations for students under that age, provided that he produces a certificate signed by a graduate of the University, or a member of the medical profession whose name is on the Medical Register, that such graduate or member believes him to be *bonâ fide* intending to become a medical student; and that the names of students admitted under this condition and satisfying the examiners be sent to the Registrar of the General Medical Council, but that the ordinary certificates be not granted to such students."

MEDICAL NEWS.

THE QUEEN'S UNIVERSITY IN IRELAND.—The annual meeting of the Senate for the purpose of conferring degrees, honours, and diplomas was held in St. Patrick's Hall, Dublin Castle, on the afternoon of Thursday, October 16. The chair was taken by Sir Dominic Corrigan, Bart., M.D., M.P., Vice-Chancellor of the University. From a statement in the Vice-Chancellor's introductory speech, it appeared that in the twenty-three years of the existence of the University the degree of B.A. had been conferred upon 795 candidates, that of M.D. on 635, and that of M.Ch. on 250 candidates. The following degrees in Medicine and Surgery were subsequently conferred :—

DEGREE OF M.D.

First Class.—Aurelius Victor Maybury, Cork.

Second Class.—Robert Clements, Belfast; Louis Richard Dawson, Belfast; Edwin Hemsted, Belfast; Roger Macauley, Galway; Michael Walsh, Galway.

Third Class.—Michael White, Galway.

Passed.—Ringrose Atkins, M.A., Cork; Robert Talbot Beamish, Cork; John Lane Corbett, Cork; Henry Corby, B.A., Cork; Francis E. Davis, Belfast; Richard J. Drury, B.A., Galway; Robert Kerr Eccles, Belfast; A. Mathewson Edge, Belfast; William Irvine Faulkner, Belfast; John E. Vaughan Foss, Cork; Thomas J. Gallwey, Cork; Alfred J. Gilmore, Belfast; Joseph Henry Gormley, Galway; John Wilson Hamill, Belfast; Richard Heath, Belfast; Benjamin R. Jagoe, B.A., Cork; Edward H. Kelly, Belfast; William Young Kingston, Cork; Richard R. Leader, Cork; Charles H. MacCartic, B.A., Cork; Charles E. M'Glinchy, Belfast; Hugh M'Millen, Belfast; James Moran, Cork; John Morris, Galway; Jarlath J. Mullen, Galway; Edward J. Murtagh, Cork; John William Nicholls, Galway; William Pearson, Cork; Charles M. Plowmau, Cork; Caleb K. Powell, Cork; Richard Frith Quinten, B.A., Belfast; Joseph Robertson, Belfast; Edward Shipsey, Cork; Carew C. Howard Smyth, Cork; Michael Sweetman, Cork; William E. Warren, B.A., Galway; John Forsyth Wilson, Galway.

DEGREE OF M.CH.

George W. F. Armstrong, M.D., Cork; Ringrose Atkins, M.A., Cork; Philip Lambert Benson, M.A., M.D., Cork; John Lane Corbett, Cork; Henry Corby, B.A., Cork; Francis E. Davis, Belfast; Louis Richard Dawson, Belfast; William Irvine Faulkner, Belfast; Thomas J. Gallwey, Cork; Michael Gillespie, B.A., M.D., Galway; Alfred J. Gilmour, Belfast; A. Joseph Andrew Gormley, Galway; Richard Heath, Belfast; Edwin Hemsted, Belfast; Benjamin Richard Jagoe, B.A., Cork; David Johnson, M.D., Belfast; Edward H. Kelly, Belfast; William Young Kingston, Cork; Richard R. Leader, Cork; Hugh M'Millen, M.D., Belfast; John Andrew Malcomson, M.D., Belfast; Aurelius Victor Maybury, Cork; William Molloy, M.D., Belfast and Cork; Douglas Mullen, M.D., Galway; Jarlath J. Mullen, Galway; John William Nicholls, Galway; William Pearson, Cork; Charles M. Plowman, Cork; Caleb K. Powell, Cork; Richard Frith Quinteu, B.A., Belfast; Edward Shipsey, Cork; William Simpson, M.D., Galway and Belfast; Carew C. Howard Smyth, Cork; Michael Sweetman, Cork; Michael Walsh, Galway; William Edward Warren, B.A., Galway; John Wheeler, M.D., Cork; Michael White, Galway; John Forsyth Wilson, Belfast; Alexander Wylie, M.D., Belfast.

Diplomas in Midwifery were granted to—

George W. F. Armstrong, M.D., Cork; Ringrose Atkins, M.A., Cork; J. Laue Corbett, Cork; Louis Richard Dawson, Belfast; Robert Kerr Eccles, Belfast; Thomas J. Gallwey, Cork; Michael Gillespie, B.A., M.D., Galway; Alfred J. Gilmour, Belfast; David Johnson, M.D., Belfast; Edward H. Kelly, Belfast; William Young Kingston, Cork; Richard R. Leader, Cork; Hugh M'Millen, M.D., Belfast; Aurelius Victor Maybury, Cork; William Molloy, M.D., Belfast and Cork; John James Morris, Galway; Douglas Mullen, M.D., Galway; Jarlath J. Mullen, M.D., Galway; John William Nicholls, Galway; Richard Frith Quinten, B.A., Belfast; William Rutherford, M.D., Galway; William Simpson, M.D., Galway and Belfast; Carew C. Howard Smyth, Cork; Michael Sweetman, Cork; Michael Walsh, Galway; John Wheeler, M.D., Cork; John Forsyth Wilson, Belfast; Alexander Wylie, M.D., Belfast.

Prize in Composition, limited to the competition of undergraduates in medicine—

Prize awarded for the essay signed "Hermes Trismegistus," to Daniel Wilson, of Queen's College, Cork.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examination meeting of the College held on Tuesday, Wednesday, and Thursday, October 14, 15, and 16, the following candidates obtained the licence to practise Medicine :—

Bourke, George Deane.	Kelsall, Edward William.
Horne, Patrick.	Stoney, George Legge Buchanan.
Kelly, Michael James.	Wolfenden, Joseph Hines.

The diploma in Midwifery was granted to—

Bourke, George Deane.	Stoker, William.
Kelly, Michael James.	Stoney, George Legge Buchanan.
Kelsall, Edward William.	Wolfenden, Joseph Hines.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, October 16 :—

Eastall, Henry Francis, Shooter's Hill-road, S.E.
Waller, William Bevan, Milner-square, Islington.

The following gentleman also on the same day passed his Primary Professional Examination :—

Crawshaw, Benjamin, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

LUSH, W. J. H., M.R.C.S. Eng., L.R.C.P. Ed., L.M.—Medical Officer to the Fyfield District of the Andover Union, *vice* Mr. Hammond, resigned.

MILITARY APPOINTMENTS.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon Thomas Ramsay, to be Surgeon-Major, *vice* William Henry Price, placed on temporary half-pay. Surgeon William Temple, M.B., V.C., to be Surgeon-Major, *vice* Robert Watson, placed on temporary half-pay. Surgeon William Kippen Stewart, M.D., to be Surgeon-Major, *vice* Alexander Richmond, retired on temporary half-pay. Surgeon James Joseph McCarthy, M.D., to be Surgeon-Major, *vice* Joseph Salkeld Johnstone, M.D., retired on temporary half-pay. Surgeon Usher Beere Eaton, M.D., is placed on temporary half-pay. The restoration to full-pay of Staff Assistant-Surgeon Alexander Neill, which appeared in the *Gazette* of August 15, 1873, is cancelled.

ARMY HOSPITAL CORPS.—Apothecary to the Forces Francis Dancy Hamilton, to be Lieutenant of Orderlies.

BIRTHS.

CALTHROP.—On September 1, at Patialah, Punjaub, India, the wife of C. W. Calthrop, M.D., Sanitary Commissioner, of a son, who survived his birth only a few hours.

CAREY.—On October 12, at Weston-super-Mare, the wife of Sanger Carey, M.D., Surgeon-Major 24th Brigade Depôt, of a son.

CARMICHAEL.—On October 13, at 42, Northumberland-street, Edinburgh, the wife of James Carmichael, M.D., of a son.

HOFFMAN.—On October 18, at Fulham, the wife of H. W. Hoffman, M.B., of a daughter.

JONES.—On October 20, at Grange House, Bromley, Kent, the wife of Alfred Orlando Jones, M.D., of a son.

KERR.—On October 18, at Markyate Street, near Dunstable, the wife of Norman S. Kerr, M.D., F.L.S., of a daughter.

THOMAS.—On October 15, at 97, Bradford-street, Birmingham, the wife of William Thomas, M.B., F.R.C.S., of a daughter.

WALL.—On October 19, at 2, Burlington-road, St. Stephen's-square, the wife of Reginald Bligh Wall, M.R.C.S., of a daughter.

MARRIAGES.

BEAUMONT—PERFECT.—On October 13, at West Malling, Kent, Robert W. Beaumont, Staff Surgeon H.M.S. *Northumberland*, to Jane (Jeannie), daughter of the late George Leopold Perfect, M.D., and stepdaughter of Thomas Harvey Lowry, M.D.

DAVIES—ALLEN.—On October 16, at St. Stephen's, Avenue-road, St. John's-wood, David J. Davies, Esq., of Liverpool, to Elizabeth Annie Lawrence, eldest daughter of David John Allen, M.D., of Wellington House, St. John's-wood.

GRELLET—HANSCOMBE.—On October 16, at Shillington, Beds, Charles John Grellet, M.R.C.S., of Hitchin, to Martha Ann, only daughter of the late William Hanscombe, Esq., of Pirton Grange, Herts.

DEATHS.

DOWARD, JAMES, Inspector-General of Hospitals, Madras Army (retired), at Haddington, on October 18.

GILBERT, ANNA MARION, widow of the late Henry Gilbert, M.R.C.S., of Kensington, at St. Wilfrid's Haylands, Ryde, the residence of her son-in-law, the Rev. Stuart Scholefield, on October 16, aged 60.

GODWIN, JAMES, M.R.C.S. Eng., L.S.A., at Twyford, near Winchester, after a short illness, on October 3, aged 42.

GORDON, CHARLES ALEXANDER, aged 18, serving on board the *Penlomond*, second son of Deputy Surgeon-General C. A. Gordon, M.D., C.B. The ship was last spoken on October 11, 1872, in lat. 8° N., long. 25° W.

HARRISON, AMELIA ECKFORD, widow of the late John Harrison, M.D., at Hampstead-lane, Highgate, on October 16.

MUGGERIDGE, ELLEN GRICE, wife of Henry Harris Muggeridge, M.R.C.S. Eng., L.S.A., of Norfolk-terrace, Bayswater, W., on October 14.

RENDLE, SOPHIA, wife of Edmund Rendle, M.D., at 6, Buckland-terrace, Plymouth, on October 18.

STOKES, HELENA SARAH, youngest daughter of William Stokes, M.D., at 5, Merrion-square North, Dublin, on October 18.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CHERTSEY, EPSOM, REIGATE, AND DORKING.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to Mr. Francis H. Beaumont, Buckland Lodge, Reigate, on or before November 1.

DALTON-IN-FURNESS DISTRICT LOCAL BOARD.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to F. H. Clark, Clerk, Dalton, on or before October 31.

GOOLE AND SELBY UNIONS.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to the Clerk to the Guardians of the Selby Union, or or before October 30.

GUEST HOSPITAL, DUDLEY.—Honorary Surgeon. Applications, with testimonials, to Mr. E. Poole, Secretary, on or before October 31.

HALIFAX INFIRMARY.—Assistant House-Surgeon. Candidates must possess one qualification. Applications, with testimonials, to the Chairman of the Medical Staff, on or before October 28.

KENT AND CANTERBURY HOSPITAL.—House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Board of Management, before October 28.

LEEDS PUBLIC DISPENSARY.—Senior Resident Medical Officer. Candidates must be duly registered. Applications, with testimonials, to Mr. John Horsfall, 31, Albion-street, Leeds, on or before November 6.

LIVERPOOL DISPENSARIES.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 29.

METROPOLITAN DISPENSARY AND CHARITABLE FUND.—Physician. Candidates must possess a Diploma from a British University, and also be Fellows or Members of the Royal College of Physicians, London, or undertake to become so within six months after election. Applications, with testimonials, to the Secretary, before November 15.

QUEEN'S COLLEGE, GALWAY.—Professor of Materia Medica. Applications, with testimonials, to the Under-Secretary, Dublin Castle, on or before October 27.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer. Candidates must be doubly qualified and registered. Applications, with testimonials, to the Secretary, 13, Cavendish-street, Ramsgate, on or before November 9.

ROYAL FREE HOSPITAL.—Senior House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 29.

SWANSEA UNION.—Medical Officer of Health for the Rural Parishes in the Union. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to G. B. Haynes, Clerk, 5, Fisher-street, Swansea, on or before November 1.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WILTS PAUPER LUNATIC ASYMUM.—Medical Superintendent. Candidates must be duly qualified and registered. Applications, with testimonials, to Mr. A. G. Meek, Clerk to Committee of Visitors, Devizes, on or before October 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Plomesgate Union.—Mr. N. F. Hele has resigned the Aldborough District; area 7425; population 2774; salary £40 per annum.

APPOINTMENTS.

Belford Union.—Lewis G. Broadbent, M.D. Aberdeen, M.R.C.S.E., L.S.A., to the Eastern District.

County of Kent.—Henry Letheby, B.M., and Charles M. Tidy, B.M., as Analysts.

Easingwold Union.—Tertius D'Oyley Pain, L.S.A., to the Alne District.

Neath Union.—John H. Davies, M.R.C.S. Eng., L.S.A., to the First Eastern District.

A NEW wing is to be added to the City Lunatic Asylum, at Stone, at a cost of £9000.

MR. A. W. BLYTH, of Worcester, surgeon, has been elected Medical Officer of Health for the district of Martley.

THE fever in Memphis, New York, has so much subsided that the quarantine restrictions have been withdrawn.

THE epidemic of small-pox is very serious at Rio. The disease is generally prevalent throughout the empire.

THE guardians of Rotherhithe are about to erect an infirmary for the sick-poor of St. Olave's Union at a cost of £12,000.

WE regret to learn from India that Dr. Lang, Assistant-Surgeon to one of the regiments in Cachar, was drowned while bathing on the 12th ulto.

NINE hundred and thirty-eight cases of cholera had been reported at Berlin from the breaking out of the epidemic up to the 13th inst. Of these 628 were fatal, 223 recovered, and 87 remained under treatment.

A HOT spring, marking 90° Fahr., has been discovered (says the *Swiss Times*) in the neighbourhood of Schams, in the Grisons, and near to the saline spring of Tarasp—another spring of the same character as the latter.

THE Governor of Malta reports that the health of the island and its dependencies was good throughout the year 1872. The deaths were 3326.

DR. TIDY'S report of the health of Islington for the five weeks ending September 27 states that the death-rate was only 15·2 per 1000 as compared with 20 per 1000 for the whole metropolis.

THE return of deaths in the Punjaub, registered in the week ending August 23 last, states that the usual autumnal increase in sickness has begun. This is most marked in the districts from Lahoro southwards. The mortality in large towns is also on the increase. Only two deaths were registered from cholera during the week; they occurred in the rural circles of Ludiánah and Jhelam. Of these nothing is known; but from accounts just received from Gurgáon it would appear that the disease is not yet extinct there, as was hoped, but has made its appearance in two other towns there—namely, Mazaffra and Firozpúr. In the former, between August 28 and September 2, eighteen cases and two deaths were reported, while in the latter thirty-four cases and fourteen deaths occurred between September 1 and September 5. It has also broken out in the town of Nizám-ud-din, only a few miles from Delhi, where twenty cases and seven deaths have been reported.

LEEDS SCHOOL OF MEDICINE.—The number of new students who have entered the Leeds School this year is twenty-eight. The total students attending now is ninety-five.

CLINICAL SOCIETY.—At the meeting of the Clinical Society on Friday evening, October 24, papers will be read by Sir William Gull on "Anorexia Hysterica" and on "A Cretinoid State superveuing in the Adult," and Dr. Guinier, of Montpellier, will show a new method of "Gargling the Larynx," illustrating this upon himself.

MR. JOHN FLINT SOUTH.—This gentleman, whose resignation of his seat in the Council of the Royal College of Surgeons was accepted at the last meeting, was admitted a Member of the College so long ago as August 6, 1819—before some of the present members of the Council were born. He was one of the first of the Honorary Fellows, having been elected December 11, 1843. He had previously—viz., in 1841—been elected a member of the Council, conjointly with Mr. Arnott; in 1844 he was appointed Hunterian Orator; in 1849, with Mr. Cæsar Hawkins, he was elected a member of the Court of Examiners; and in 1851 he received the highest honour his colleagues could offer him—viz., the President's gown; he was re-elected to this high office in 1860. With Mr. South the life-membership of the Council expires.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.—The general annual meeting for the election of officers for the session 1873-74 was held in the College hall, Kildare-street, on the evening of Wednesday, October 15. The chair was taken by Dr. James Duncan, President elect of the College. The report of the Council for the past year was read by Dr. G. F. Duffey, Honorary Secretary, and referred to the prosperous condition of the Society; to the lamented death of Henry Eames, M.D., who had for four sessions filled the post of Honorary Secretrary; and to the papers read during the past session. The following office-bearers were subsequently elected by ballot:—*Council:* Lombe Atthill, M.D.; J. Hawtrey Benson, M.B.; Thomas Fitzpatrick, M.D.; Arthur Wynne Foot, M.D.; Samuel Gordon, M.B.; T. W. Grimshaw, M.D.; Thomas Hayden, F.K.Q.C.P.I.; George Johnston, M.D.; Henry Kennedy, M.B.; James Little, M.D.; Alfred H. McClintock, M.D.; J. W. Moore, M.D. *Honorary Secretary:* George F. Duffey, M.D.

THE CHOLERA IN THE PARIS HOSPITALS.—Between September 4 and October 16 inclusive there were treated in the thirteen civil hospitals and hospices of Paris 352 cases of cholera. Of these, 94 were discharged and 211 died, leaving 47 still under treatment. In relation to the high mortality (69·18 per cent.), it is to be remembered that many of the patients were dying or seriously ill of other diseases when attacked by cholera. The mortality from cholera in Paris, taken altogether, is about 50 per cent.

OUR FRENCH CONTEMPORARIES.—The *Révue Scientifique* gives a very interesting account by Professor Cornil of the annual meeting of the British Medical Association, and of the gracious reception accorded to the foreign *savants* by the public institutions and private individuals. Some amusing mistakes are made in the orthography—and titles especially—in commenting on the fine speech of "Lord Gladstone," in Lincoln's-inn, where "Mons. Fergusson" presided, and amongst the guests was "M. Creetchett" (for Critchett). The current number of the *Gazette Médicale*, in giving an account of the medical institutions in this country, publishes the result of the examinations at the College of Surgeons, showing the severity of the examiners, or the weakness of the students, and pays a well-deserved tribute to MM. John Chatto and T. M. Stone, the latter of whom the writer states, with some surprise, has held office since 1832. With the museum and library Dr. C. Delvaille is greatly pleased.

A NEW HEALTH-RESORT.—In climate, Ajaccio (says the correspondent of the *Times*) is said to resemble Mentone more than any other of the Rivieran stations, but its insular situation renders it less close and stuffy, and at the same time insures for it a more equable temperature. The following thermometrical readings were taken at Ajaccio some years ago, and during a season said to be exceptionally severe:—In October and November the tem-

perature varied from 55° to 66° Fahrenheit; in December, January, and February from 52° to 60°; in March from 54° to 64°; and in April from 60° to 70°. The thermometer from which these observations were taken was placed in a window with a north-eastern aspect, and his (the correspondent's) own experience led him to credit the statement that they represent the Corsican temperature in an unfavourable season. During his stay there (from February to May) very little rain fell, and there was generally bright sunshine, and during the month of March they had uniformly perfect weather, altogether without rain, and free from harsh winds. In the first half of April they had, it is true, squally and very unpleasant weather, but after that they had a return of the same splendid climate which they had in March, though, of course, with an increased temperature. As to fever and malaria, there is no doubt that during the summer months, and in the lowlands, they exist to a very serious extent; but perfect safety is to be obtained, even in the summer, by moving up to a mountain residence. And what is more to the purpose, between this time (October) and the middle of June fever does not exist at all at Ajaccio.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Marais, Honfleur.—Enclosure received.

Phthisical Pleurisy in 1818.—Matthews, in his "Diary of an Invalid," has the following entries:—"The Place, Naples. March 6: Seized with an acute pain in the side. 9th: Decided pleurisy; summoned an English surgeon to my assistance; high fever; copious bleeding. Owe my life, under heaven, to the lancet, whose repeated application was necessary to relieve me from the intolerable distress under which I had been gasping for some days." Matthews, whose "Diary" is still one of the most readable of books and one of the best guides to Italian art and antiquities, travelled because phthisical. The bleeding evidently did not hurt him.

Gaol Fever.—One example of this plague was given in May, 1750, when Sir Samuel Pennant, Lord Mayor, Baron Clark, Sir Thomas Abney, Judge of the Common Pleas, the Under-Sheriff, many counsel, jurymen, and others died of a putrid fever brought into the Court of the Old Bailey by the prisoners confined in the foul air of Newgate. "Since that time," says Pennant the historian, "every precaution has been taken to keep the Court airy." He should have lived to witness the trials of the Claimant. Black Assizes (so called from the fatal effects of gaol fever on judges and persons in Court) are, we believe, reckoned by the dozen.

An Appeal.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having been Medical Officer of Swymbridge, North Devon, nearly sixteen years (my appointment being an annual one), the Board of Guardians, without any notice or provocation whatever, elected another medical man (five miles distant) at the expiration of the Michaelmas quarter. Being 73 years of age, with a delicate wife, I make this appeal to the medical profession, hoping I shall receive sympathy in my trouble by their subscribing whatever they may feel disposed to do in order to assist me towards my future succour, having nothing to fall back on, the salary having been so low. I appeal *in pro formâ pauperis.* Highly respectable gentlemen can testify to the truth of this assertion by a reference to the editors or to me. Subscriptions will be thankfully received by the editors of this journal. I am, &c., Jno. Hawkes Jackman.

Swymbridge, Barnstaple, North Devon, October 14.

Expectant.—Since the foundation of the Queen's University of Dublin, 635 students have received the degree of Doctor in Medicine, and 250 of Master in Surgery.

Inquirer.—The value of the annual produce in meat in the United Kingdom (according to the estimate of Mr. John Algernon Clarke, before the House of Commons Select Committee), amounts to £75,000,000, or a little more than 30s. per acre; 47,000,000 acres are under all kinds of crops, fallow and pasture.

A. L., St. Bartholomew's.—You will find the exact dates of both examinations in the *Medical Times and Gazette* last week; and the amount of fees at both hospitals in our Students' Number.

An old Guy's Student and a Fellow.—In addition to the vacancy caused by the resignation of Mr. South, we believe Mr. Hilton's term of office will expire; he will of course offer himself for re-election into the Council of the College of Surgeons, as his colleagues could ill afford at the present crisis to lose his valuable experience in collegiate matters.

W. W., jun.—Yes. There is a species of insanity known by the epithet *notional*, in which, as well as in *delirium tremens*, there is frequently no general depravation of the reasoning and comparative faculties, but where the disease consists entirely in the patient mistaking the objects of his thought or imagination for real and present existences.

Thurley.—The time for the examinations at Cambridge for the degree of Bachelor of Medicine has recently been altered, and will in future take place twice annually, commencing on the Thursday following the first Monday in December, and in the Easter Term on the Thursday next but one preceding the general admission to the B.A. degree.

Philo.—Dr. Francis Bernard was chief physician to King James the Second.

Quackery.—According to the official returns just published, the stamp duty on patent medicines in the year ended March 31 last amounted to £95,812 19s. 7d. Surely for such a comparatively paltry sum it is disgraceful to a paternal government to endorse with their stamp quack medicines, many of which have been proved to be dangerous, and in some cases even fatal.

Tubes for Vaccine Lymph.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In using the capillary tubes for vaccination, there are sometimes difficulties both in charging them with lymph and in their application economically. I have found a simple and effective, as well as cheap, remedy for these difficulties (which may possibly have been dealt with by some such contrivance before). A tube of about a quarter of an inch calibre, but may be a little more or less, and about a couple of inches in length, with a split cork inserted at one end, so that when free the cork is in two longitudinal pieces—one of which has along its plane surface a shallow groove (as by a careful angular cut with a long knife), so as to, with the other ungrooved half in apposition, hold a capillary tube, of which about one-eighth of an inch projects at the smaller end of the cork, and the rest of the length of the capillary tube at the other end of the cork. The smaller end of the cork being then stuck into the tube enough to hold it *in situ*, with the capillary tube in the relative position to the cork as above mentioned, it is then obvious that either for drawing up lymph by the pressure of the air (by the mouth) when the capillary force is insufficient, from the capillary tube being too large in calibre (as some are in most of the bundles supplied)—*i.e.*, by inhalation at the open end of the tube described; or, on the other hand, for exuding(a) *economically* the lymph without danger to the operator, either from puncture from glass or from virus,—both such purposes are by such means facilitated. The tube may be of any material, but glass is the cleanest to deal with. Possibly a bit of fine indiarubber tube might do, and without a cork, by merely pinching the tip of the capillary tube *pro tem.* in the distal end of the indiarubber tube. The tube I enclose is from a cigarette called "Bijou," with Alexander's patent crystal-carbon tube, a box of which can be had for a shilling, with either ten, twelve, or fourteen cigarettes; and these tubes would last pretty well a lifetime.

P.S.—Since writing the foregoing I have tried a bit six inches long (price 2d.), of fine indiarubber tube, and it answers well and has some advantages, such as mobility when using; but I prefer, on the whole, the glass tube and split cork. I am, &c.,

14, St. Jean d'Acre-terrace, Stoke, Devonport. R. W. Woollcombe.

The Medical Department.

The following memorial has just been forwarded to Simla for transmission:—

Unto the Right Honourable the Secretary of State for War, War Office, London.

This, the Memorial of the Surgeons-Major and Surgeons of the Medical Department of her Majesty's British Army at present serving in ——

Humbly sheweth,—1. That with every desire to co-operate with the authorities in carrying out the new system of medical organisation which it has been deemed necessary to establish in the army, your memorialists regret to find that the Army Medical Warrant of the 1st March, 1873, has, in certain respects, materially injured their prospects. Your memorialists had looked forward with confidence to the appearance of the above Warrant, believing that, whatever further privileges and advantages her Majesty might be graciously pleased to confer on them, none of the rights and privileges granted by previous Warrants would be withdrawn. In cherishing this hope, your memorialists, as members of a Department having the health and physical efficiency of the army in their keeping, trust that they may not be deemed unreasonable.

2. That such of your memorialists as have been suddenly deprived of appointments with regiments in consequence of the new Warrant, and thereby pecuniarily injured, are, we consider, entitled to compensation.

3. That whilst a Controller, Deputy-Controller, and Assistant-Controller rank, respectively, on appointment, as Major-General, Colonel, and Lieutenant-Colonel—according to date of commission—the corresponding grades in the medical department of Surgeon-General, Deputy Surgeon-General, and Surgeon-Major, after twenty years, are accorded *lower* relative rank.

4. That Clause 5 affects your memorialists injuriously, depriving them of the precedence and privileges conferred by the Royal Warrant of the 1st October, 1858—namely, as to the presidency of mixed committees, and of departmental or relative army seniority in choice of quarters when doing duty with regiments.

5. That the word "necessarily," as used in Clause 6, will have the effect of depriving the Surgeon-Major of forage, as guaranteed by the Warrant of 1858. A *trained charger* is absolutely necessary to enable a Surgeon-Major, with troops under arms, to discharge his duties efficiently.

6. That a charger is equally necessary for the Surgeon of the Department for the efficient discharge of the duties when with troops under arms.

7. That the principle adopted in Clause 12, of making selection for promotion the rule instead of the exception, is, in our humble opinion, likely to open a door for patronage, which, however carefully exercised, may, in many instances, act injuriously to faithful and efficient officers.

8. That this selection being, by Clauses 12 and 21, placed in the hands of the Commander-in-Chief, instead of those of the head of our own profession in the army (who is best fitted to form a just opinion as to our respective professional abilities and claims to advancement), is, we would respectfully submit, erroneous in principle, and not likely to prove beneficial either to the Department or the Service.

9. That whilst the officers of the Indian Medical Department obtain the actual rank and pay of Surgeon-Major after a total service of twelve years, the officers of the British Medical Department serving in India are not insured even the mere *local* rank (which carries no pay) after completing that amount of service. We are of opinion that the local rank should be conferred upon the Surgeons of the British Medical Department after a total service (on full pay) of twelve years; and, further, that Surgeons should be promoted on the completion of fifteen years' full-pay service; or, if not thus promoted, that they should receive 17s. 6d. per diem, as guaranteed to the late Assistant-Surgeons of that length of service.

(a) I have exuded above twenty-five deposits of fluid from one capillary tube with this contrivance. It would be useful in the country or abroad, where fresh capillary tubes either uncharged or charged are not always at hand.

10. That if Clause 15 is made universally applicable to holders of regimental appointments—the late Surgeons and the Assistant-Surgeon—at the date of the Warrant, considerable pecuniary loss will accrue to many.

11. That the principle of retaining administrative and executive medical officers after the ages of sixty-five and fifty-five respectively cancels Clause 11 of the Warrant of October, 1858, and will act prejudicially by impeding promotion in the Department.

12. That, in consequence of the decreased value of money, and the greatly increased cost of the necessaries of life, the retired daily pay of medical officers has become insufficient—the half-pay of a Surgeon-Major being only from 12s. to 16s. 6d. after twenty years', and from 16s. 9d. to 20s. after twenty years' full-pay service; but these higher rates are only granted to him when worn out and unfit for further service.

13. That the present indefinitely prolonged tenure of administrative appointments deprives the junior ranks of a fair and reasonable prospect of promotion, and of the increased advantages attaching thereto.

14. That whilst all other officers of the British Service in India or elsewhere seldom experience any difficulty whatever in obtaining ample periods of leave for various purposes, the officers of the British Medical Department serving in India and elsewhere are not only not allowed more than six months' leave for the recovery of the most seriously impaired health, but are denied anything like sufficient leave for professional improvement or attention to private concerns. This grievance has pressed long and most severely upon your memorialists, and is felt all the more acutely from the fact of all other officers being treated so very differently.

15. That the position in the Regimental Army List of the names of the Surgeons-Major, who are now virtually departmental officers, appears to us no longer necessary, the more especially as the position accorded them therein is neither befitting the members of a great and learned profession, nor such as to promote self-respect or efficiency.

16. That our position at mess is also irksome and anomalous. Mess being regarded as a parade, we, as so-called non-combatant officers, are placed there, as regards precedence and authority, junior to the latest promoted non-commissioned officer or last appointed sub-lieutenant, should these happen to be the senior so-called combatant officers present. As to the band, we are in a similarly unprivileged condition, although to both these institutions our subscriptions are only exceeded by those of the Lieutenant-Colonel of the regiment.

17. That we regard the continued appointment of military men to the post of Governors of General Hospitals in the army as causing needless expense to the public, and a chronic condition of irritation and discontent in the Department, which considers its own superiors much better qualified for the due administration and discipline of such hospitals. We are given to understand that this reform has already been successfully effected as regards the General Hospitals of the Royal Navy.

18. That, whilst all other departmental officers, and even all regimental staff officers, receive a considerable staff salary in additiou to the pay of their rank, the Surgeon-Major in charge of a regiment draws nothing but the bare pay of his relative rank.

19. That, as regards the additional duties imposed upon your memorialists by Clause 6 of the Special Circular of March 6, 1873, they are of opinion that they ought not to be required to undertake them unless provided with a sufficient staff of specially trained subordinates, and an adequate charge allowance in consideration of the increased work and responsibility, as is customary in all other departments.

Wherefore for these reasons your memorialists pray—

1. That the privileges guaranteed by previous Warrants be restored.

2. That compensation be granted such of your memorialists as have suffered (or may suffer) pecuniary loss by summary removal from regiments in consequence of the Warrant.

3. That the relative rank of Surgeon-General, Deputy Surgeon-General on appointment, and of Surgeon-Major, after twenty years, be that of Major-General, Colonel, and Lieutenant-Colonel respectively, according to date of commission.

4. That the benefits conferred by Clause 17 of the Royal Warrant of October 1, 1858, as regards presidency of mixed committees, and relative rank in choice of quarters when doing duty with regiments, be restored.

5. That the forage allowance guaranteed by the Warrant of October 1, 1858, be restored.

6. That a similar allowance be granted to the Surgeons when with troops under arms.

7. That promotion in the executive ranks be, as hitherto, chiefly by seniority.

8. That selection for promotion be entirely vested in the head of our own profession in the Army.

9. That Surgeons of our Department serving in India be granted the local rank of Surgeon-Major after twelve years' total service; and that all Surgeons be promoted after fifteen years' full pay service; or, if not thus promoted, that they receive a daily pay of 17s. 6d. as guaranteed to Assistant-Surgeons of that standing by a former Warrant.

10. That, as regards Clause 15, vacation of regimental appointments by their incumbents—the late Surgeons and Assistant-Surgeons—at the date of the Warrant be optional for a term of five years from such date, as guaranteed in Director-General's Letter No. 20270/15, dated August 17, 1870, which states—"that the scheme for reorganising the Department will not, if approved, affect any regimental officer, nor alter his position in his corps, for at least five years."

11. That, as regards age retirements, Clause 11 of the Warrant of October 1, 1858, be carried out in its integrity.

12. That increased retiring allowances be granted for the reasons hereinbefore stated, according to the following scale—namely, at twenty years, 20s. per diem, with 1s. extra for such additional years up to twenty-four years, after which no increase unless promoted to the Administrative ranks.

13. That the tenure of the appointment of Surgeons-General be, under no circumstances whatever, extended beyond five years.

14. That the grievous deprivation of leave, from which your memorialists have hitherto suffered so severely, be redressed, and that they be treated, as regards leave for the recovery of their health, for professional improvement, and for attention to private affairs, in the same liberal spirit as other officers are.

15. That the names of the Surgeons-Major be no longer inserted in the regimental list, and that they, being *purely departmental* officers, be regarded as such, and in no sense whatever as regimental.

16. That all medical officers be in future exempted from compulsory attendance at regimental messes and subscription thereto, or to regimental bands, as is the case with all other departmental officers.

17. That the appointment of military men as Governors of Army Hospitals be abolished, and that these offices be reserved for meritorious officers of the Medical Department invested with the necessary powers.

18. That all officers in medical charge of regiments and batteries be granted charge allowance, like all other departmental officers holding charges.

19. That an efficient staff be provided for carrying out, under the supervision of the senior medical officer, the additional duties enumerated in Clause 6 of the Special Circular of March 6, 1873, and that he be granted an adequate allowance to compensate for increased work and responsibility.

And your memorialists will ever pray. (Signed by)
56 Surgeons-Major,
157 Surgeons.

213 Total signatures.

Number of Surgeons-Major and Surgeons actually serving in India (according to last quarterly Army Lists), 306; minority not signing, 93.

Mortimer.—There are somewhere about 1000 medical officers in the army.

Antony, Drury-lane.—Various opinions are entertained respecting the reptile that inflicted the fatal sting on Cleopatra. The aspic of the ancients is the *Coluber Naja*, called by the Arabs *nascher*, and classed by Lacepède as the Egyptian viper.

A Doctor's Log.—No. VI.

(*Continued from page* 456.)

February 14.—One or two cases of sprains and contusions, dyspepsia, bronchitis, amongst the officers, the latter depending on careless exposure to the night air. Some want iodine paint and arnica applied to bruised limbs, but No!—bearing in mind previous experiences. On one occasion an officer's wife, the mother of a large family, contracted erysipelas through using arnica: her eyes closed, dangerous fever, deposition in joints, her life in danger, followed by long and tedious convalescence. On board ship, too, poultices of linseed-meal and mustard too often induce greater susceptibility to cold. Take up a pamphlet to read that in Bengal out of 34,287 men—divided into total abstainers, temperate, and intemperate,—the percentage of daily sick in each class was represented by 3, 5, and 80; the deaths of total abstainers 1, of temperate 2, and of intemperate 4 per cent. Just the old story. And when one remembers the sieges, campaigns, and expeditions—for instance, to the North Pole and the Red River,—my intention is to raise to the utmost individual protest against the spirit ration. In the revised instructions for the guidance of troops arriving at Bombay it is stated that men will exchange their rations for liquor unless prevented, will eat unripe fruit, bad pork or vegetables, rancid bacon or native sweetmeats, will drink the first water they come across, ignoring filtration, besides exposing themselves bareheaded to the sun, or sleeping at night on damp ground or in heavy dew. There are endless minute directions about cholera, cautions to medical officers to inspect stores for which they are responsible, to take receipts for everything, to look after the water, food, and drains, bedding, straw, encampments, etc.; but the most important information is that the pay of Assistant-Surgeons runs from £31 to £45, Surgeons from £78 to £82, and the remote grade of Surgeon-Major from £105 to £109 a mouth: very satisfactory but for the heavy expenditure—the rupee only providing a shilling's worth,—the many luxuries, however costly, which become necessaries in India. The Indian Ocean becomes pleasant—the atmosphere, excepting in the cabin at night, very tolerable; the sea as smooth as the Serpentine. It is said that the *Serapis* during a cyclone here was for eight hours on her beams ends, at an angle of thirty-eight degrees, the fury of the gale intensified by lightning and rain, the furnaces partially extinguished; and the passengers imagined their last hour had come.

Excepting porpoises at Gibraltar, seagulls, a solitary jackal in the desert, and a few camels strung, the tail of one fixed to the nose of another, have met nothing, not even a shark or flying fish. Thinking over the whole voyage, the parade on a cold winter morning at Woolwich (the day after the Emperor's funeral), the band playing "Auld Lang Syne" on the road to the railway—the special train to Portsmouth—the confusion on board—the removal of the gangway—the cheers of those on shore, whilst the vessel led us reluctantly away—the last glimpses of the Isle of Wight and gradually of England, which never looked so lovely before—the dreary feeling after, and the storm in the Bay of Biscay flit through the mind;—and, as a doctor, one cannot help thinking of the diseases to be treated, very probably endured, before long, namely—cholera, dysentery, diarrhœa, sunstroke, malaria, intermittent and remittent fevers, insanity, cerebral, hepatic, renal, splenic, and cardiac affections. The diseases of women are reported most difficult; a voyage to England, visits to Drs. Gream, Tilt, Graily Hewitt, Bennett, Oldham, Barnes, and last but not least Mr. Spencer Wells, required. Children, too, will give plenty of work—anxious and often unsatisfactory,—but having taken out every book on this branch, and had practical experience, hope to turn the latter to account. It is stated that the Indian people have all the appointments, all the private practice, and that if an Assistant-Surgeon becomes promoted, and is supernumerary, his pay remains stationary, the promotion ignored. Hear that surgery and diseases of the eye bring in good incomes to the Indian practitioners, but that their expenses are very heavy.

16th.—The beginning of the end. Subscription-lists for stewards, band, and a regimental charity; great entertainment in the evening,—dancing, songs,—followed by three cheers for the Empress of India (that is to say her Majesty the Queen), and then three cheers for Captain Grant and the first lieutenant. Note to-day that a dressing-gown, serge suit, postage-stamps, a lamp, two forage-caps, comfortable shoes, and one or two books descriptive of the journey should be included amongst necessaries. Mothers are advised to bring out different varieties of infants' food—specially Ridge, Hard, and Robinson's—also a small medicine-chest, there being such a run on quinine, opium, podophylliu, ipecacuanha, Warburgh's tincture, and the mild mercurial preparations—else the chance of the remedies being old or adulterated. Bromide of potassium, colchicum, turpentine, antimony, acetate of lead, chloroform, carbonate of ammonia, chlorodyne, castor oil (all at times valuable), might be concentrated into small space. No medical officer should be without a catheter, a penknife, a pair of scissors, needles and thread. Common-sense appliances and adaptations will tide over many emergencies, but, should the occasion require, there is no substitute for the catheter. The hypodermic syringe, too, how valuable when other things fail! Learning lessons daily will be the excuse for harping on certain points forced on attention.

Let me urge upon officers—for instance, medical officers—the necessity for the very strongest boxes; also to have their names and destination painted large and legible—written directions or paper labels useless. Also look after your boxes yourself—trust no one. A most valuable box was sent from London to Woolwich for transfer to Portsmouth, and, but for-

the merest accident, it would have remained in a baggage-shed in England whilst the owner, when 1000 miles up country in India, would have discovered and felt the loss. Everything is reported to be very dear, so that it is economical to hring out things. One officer going up country will have to pay £120 for extra haggage; in the long run he considers it worth his while. We disembark, according to rumour, in full dress as at home—gold-laced jacket, red-striped overalls, belts, sword, sabretache, substituting a white helmet with a gilt spike for the busby. A flying-fish appeared in the hospital through the port, very probably anxious for advice gratis, and was promptly cooked for the sergeant's dinner. It is stated since the opening of the Suez Canal some new curious fish have appeared—there an unknown breed. Those who have bathed in the Bitter Lakes complain of the pungency of the salt. The *Serapis* stuck there on one trip, and before they could get her off many tons of coal and baggage had to be transferred to lighters. Just now the sunsets attract even the oldest travellers, resembling a blazing circular ruby rapidly sinking helow the horizon. At night the stars and planets eclipse the most hrilliant fireworks, rivetting the attention of the singers, the dancers, the happy young couples, the depressed, crusty old hachelors. The Southern Cross, Orion, and Venus specially beautiful; but although the motto of the vessel runs "Heaven's light our guide," the sailors take but little interest in this particular. To-night, talking to one of them, he tells of the sharks about Panama; how that men are afraid to put their feet in the water, and an old scoundrel, well known by certain marks, and nicknamed "Jacky Jones," has been about there for years. A warrant officer states that when the thermometer stood at 80° Fahr. at Bermuda, in three days he was at Halifax, when it stood at 3°. I wonder if this is true. In 1861, during the *Trent* affair, the cold crossing some of the lakes in sleighs was very intense, yet very hracing. The sailors say the *Serapis* never had a cooler passage. What must it be in the really warm weather?

(*To be continued.*)

COMMUNICATIONS have been received from—

Dr. Beigel; Dr. Symes Thompson; Dr. Eodison; Mr. Poole; Mr. F. Sutton; Dr. Letheby; Dr. Dudfield; Dr. Irving de Lisle; Dr. Brown; Mr. T. B. Anstie; Mr. Lawson Tait; Dr. C. Hanofield Jones; Dr. J. Ward Cousins; Mr. J. W. Hulke; Mr. J. Chatto; Dr. Mac Cormac; Mr. T. M. Stone; Mr. H. Reeves; Dr. Abbotts-Smith.

BOOKS RECEIVED—

Report of Dr. Gibbon, Medical Officer of Health to the Board of Works for the Holborn District—Headridge on Contractions of the Upper Jaw—Benuett's Experimental Inquiry into the Physiological Actions of Theine, Caffeine, Guaranine, Cocaine, and Theobromine—Squire's Photographs of Diseases of the Skin—Cuningham's Report on the Cholera Epidemic of 1872 in Northern India—An easy Introduction to Chemistry, edited hy the Rev. A. Rigg—Johnson's Leetures on Bright's Disease—Heath's Romance of Peasant Life.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—London Medical Record—Public Health—Lancaster Guardian——Pharmaceutical Journal—Lincoln, Rutland, and Stamford Mercury—Gazette Médicale - Gazette Hehdomadaire—Le Mouvement Médical—La Tribune Médicale—Le Progrès Médical—La France Médicale—Révue des Sciences Médicales en France et à l'Etranger, No. 4, Octoher—Birmingham Daily Gazette—Medical Press and Circular—Canada Medical Record—Monthly Review of Dental Surgery.

APPOINTMENTS FOR THE WEEK.

October 25. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

27. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. (Clinical Night.) Mr. Churton (of Erith), "A Case of Suppurative Pericarditis" (with specimen). Mr. A. E. Durham (Surgeon to Guy's Hospital), "A Case of Foreign Body in the Pleura accidentally introduced through Opening made for Empyema, and successfully removed." Dr. Routh, "A Case of Stone impacted in Kidney" (with specimen). Dr. Purcell, "Specimen of Calculus in the Pelvis of Kidney."

28. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Miller Ord, "On a Case of Duchenne's Pseudo-hypertrophic Muscular Paralysis." Dr. C. J. B. Williams (President), "On the Acoustic Principles and Construction of Stethoscopes and Ear-Trumpets."

29. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

31. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 18.

BIRTHS.

Births of Boys, 1274; Girls, 1160; Total, 2434.
Average of 10 corresponding years 1863-72, 2062·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	645	638	1283
Average of the ten years 1863-72	698·0	648·6	1346·6
Average corrected to increased population	...	...	1481
Deaths of people aged 80 and upwards	...	...	37

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	...	...	4	...	...	...	8
North	751729	...	15	1	2	5	1	6	...	5
Central ...	334369	...	1	1	1	2	2	2	2	5
East	639111	...	18	14	...	10	1	8	3	6
South	967692	...	20	2	2	10	1	1	5	6
Total	3254260	...	55	18	5	31	5	17	10	30

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·749 in.
Mean temperature	48·4°
Highest point of thermometer	61·7°
Lowest point of thermometer	34·1°
Mean dew-point temperature	44·1°
General direction of wind	S.W.
Whole amount of rain in the week	1·29 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 18, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Oct. 18.	Deaths Registered during the week ending Oct. 18.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2434	1283	61·7	34·1	48·4	9·11	1·29	3·28
Portsmouth ...	118280	12·4	91	38	67·2	37·0	50·4	10·22	1·02	2·59
Norwich	81677	10·9	63	31	58·0	33·0	46·7	8·16	0·83	2·11
Bristol	189648	40·4	140	78	57·6	33·7	47·5	8·61	0·38	0·97
Wolverhampton ...	70084	20·7	58	34	59·1	36·1	47·5	8·61	0·05	0·13
Birmingham ...	355540	45·4	282	191	59·0	35·5	48·1	8·94	0·20	0·51
Leicester	102694	32·0	86	45	62·7	34·0	46·7	8·16	0·06	0·15
Nottingham ...	89557	44·9	48	52	61·4	32·4	46·0	7·78	0·25	0·63
Liverpool	505274	98·9	346	214	57·1	40·2	48·7	9·28	0·24	0·61
Manchester ...	354057	78·9	239	192	60·8	36·5	47·0	8·33	0·36	0·91
Salford	130468	25·2	104	62	61·5	36·0	47·5	8·61	0·48	1·22
Oldham	85141	20·4	65	29	54·0	...	...	...	0·38	0·97
Bradford	156609	23·8	128	64	55·4	35·0	45·4	7·44	0·19	0·48
Leeds	272619	12·6	253	124	57·0	34·0	45·7	7·61	0·24	0·61
Sheffield	254352	11·1	230	117	60·0	34·0	47·6	8·66	0·02	0·05
Hull	128125	35·9	94	47	59·0	32·0	44·9	7·17	0·00	0·00
Sunderland ...	102450	31·0	80	32	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	95	95	...	...	...	...	...	...
Edinburgh	208553	47·1	163	84	...	...	...	...	...	...
Glasgow	498462	98·5	380	235	53·5	35·2	45·4	7·44	0·20	0·51
Duhlin	314666	31·3	159	146	60·4	28·0	49·3	9·61	0·06	0·15
Total of 21 Towns in United Kingd'm	7507575	34·5	5536	3193	67·2	28·0	47·2	8·44	0·35	0·89

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·75 in. The lowest was 29·42 in. on Monday at noon, and the higest 29·98 in. on Friday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 hy the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Duhlin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

ON METHOD IN SURGICAL DIAGNOSIS.

A Lecture delivered at University College Hospital.

By PROFESSOR ERICHSEN,

Senior Surgeon to the Hospital, and Holme Professor of Clinical Surgery in the College.

Gentlemen,—It is my intention to-day, as preliminary to the course of clinical surgery, to direct your attention to the subject of surgical diagnosis. Now, when you are called to a patient who is suffering from an injury or labouring under a disease, the first point that you have to determine is what is the matter with that patient; and the determination of that point is, in ordinary professional language, called making the diagnosis of the case. How are you to make that diagnosis? This is not a matter that can be effected by any intuitive instinct; but there is a certain method to be adopted just as there is in conducting a treatment.

The importance of effecting a correct diagnosis is this: that the treatment must necessarily be entirely founded upon the diagnosis; and according as the diagnosis is more or less correct, so will your treatment be more or less rational. If the diagnosis is correct, the treatment will be removed from that blind empiricism that deals only with symptoms which are effects, and not with the disease or injury itself which is the cause of these symptoms.

In effecting a diagnosis you may look upon a patient very much in the same way as a lawyer looks upon a reticent witness in the box. You have a something before you which is not disposed to tell the truth. It is your business to elicit that truth; and just as a skilled counsel employs a certain method which experience has taught the members of his profession will tend to elicit that truth—experience confirmed, perhaps, by his own sagacity and natural instinct—so the surgeon employs a certain method to elicit the truth which the patient is unable to reveal, willing as he would be, perhaps, to do so, and which the disease cannot tell us. In making a diagnosis you will find that you have to employ both your senses and your judgment. In fact, a diagnosis is effected by a method of observing; and observation is nothing more than the application of the senses, tempered, modified, and improved by the judgment. The mere use of the senses will not enable you to effect a diagnosis. You may see and not be able to observe. You may hear and not be capable of understanding. You may touch and be unable to feel. You learn how to effect a diagnosis by the combined influence of study and practice. Mere study will not give it to you. No man, however much he might consult books, and however learned he may be in surgery, could possibly through the force of that book-learning be able to distinguish elasticity from fluctuation. No practice, however great it may be, is capable of explaining to the surgeon the nature of a complicated injury or disease the first time he sees it. You must combine the two. You must study in order that you may know what you may expect to find, and this you learn from that concentrated experience of your predecessors, which is to be found in works, or which is to be heard in lectures; and you are enabled to find what you may expect to meet with by the cultivation of your senses. It is therefore by that combined influence of study and of practice, of judgment and of sense, that a diagnosis is at last effected.

In effecting a diagnosis you will find that the patient will present two distinct classes of phenomena, and it is very important to bear in mind the distinction and the difference that exist both in kind and in importance of those two classes of phenomena. He will, in the first place, present a series of phenomena which are recognisable by the surgeon himself, however unable the patient may be, from his injury or disease, to explain them. These phenomena are commonly called *objective*, and they are described, or ought to be described, in surgical language as "*signs*." Let me give you an illustration. A man is brought into the hospital unconscious, with a laceration of his scalp, with a depression of his cranium, and with bleeding from the ear. He is unable to tell you a single word as to his condition; but you recognise this at once by the local signs just mentioned, coupled with the more general signs perhaps of dilated pupil, of stertorous breathing, with heavy, slow pulse. Those are the signs that he presents, and those signs are unmistakable by the surgeon. They indicate at once, without a word from the patient, without the necessity of putting a question to anyone, what his actual condition is.

But there is another series of phenomena presented by the patient which are of less importance than those that I have just mentioned, and that series of phenomena goes by the name of "*symptoms*." They are *subjective*—that is to say, they are not recognisable by the surgeon, but they are dependent upon the statement made by the patient. The surgeon can form no judgment of them except so far as the patient tells him. A man, for instance, comes to the hospital complaining of a violent pain in his head. You cannot possibly determine whether he has got that pain or not, except by his own statement. He tells you he has, and you must take it that he has got it, especially if he presents other phenomena that are corroborative of that statement. Such a pain is a symptom, and there are many of these that are met with. They are all dependent upon the statement of the patient, and they are all incapable of proof by the surgeon, except so far as his reliance on the patient's statement is concerned, whatever be the value of that as a matter of proof. You will therefore see that there is an immense difference in point of value as well as in kind between a sign and a symptom. But there is a further difference between the two. A sign indicates not only the fact of a lesion, but it indicates the very nature of that lesion in the majority of cases. It is, or it may be, the lesion itself. A symptom merely indicates the fact of there being a disturbance of some kind, but it does not indicate more than that. It in no degree shows what the nature of that disturbance may be. In making a diagnosis, then, always bear in mind the difference of value between signs and symptoms, between the objective and subjective phenomena presented by the patient.

The objective phenomena—those that I have just been mentioning as signs—are cognisable to the surgeon through the medium of his senses, and he judges of them by the sense of sight, of touch, and of hearing. The other senses are of little value in surgery. Now, the senses necessarily vary in acuteness in different people; but the mere acuteness of sense has nothing to do with the power of observation through that sense. The power of observation is a matter that is learned by practice, and that is often possessed, and that in a remarkable degree, by people who may not be quite so acute in some of their senses as others. You must educate, in fact, your senses, however perfect they may naturally be, in order to obtain accuracy in diagnosis.

Now let me tell you what you may learn by those different senses when they are properly educated. In the first place with regard to the sense of sight. Always employ that; always look at your patient; always strip him; always examine the injured or diseased part with your eye; look at it—look at it carefully. From want of this simple precaution, many a patient has been mistreated. I have known, for instance, a patient treated for typhoid fever, who, in reality, had a great carbuncle on his back which had never been looked at and never been seen. You may actually find a patient suffering from a broken bone, and the injured limb has never been looked at by the practitioner who was called to see the patient. Always look at the part that has been complained of, and in the case of many general constitutional conditions examine the whole of the surface of the body. For by the sense of sight you get an enormous amount of important information rendered unconsciously by the patient himself, every portion of which is objective—is a sign—and hence is of the greatest value in diagnosis. You look, for instance, at the patient's countenance. You immediately see whether he is healthy or cachetic; whether he is strumous or sanguine. You at once take an inventory, as it were, of his whole constitutional condition by the simple aspect of his face. You judge of the patient by looking at his attitude. The extreme restlessness of exhausting disease or the depression of septic disease is at once recognisable by the sight. The expression, not only of the countenance, but of the whole body, will often indicate to you almost unmistakably the nature of the disease under which the patient is labouring. A person, for instance, with peritonitis, the result of strangulated hernia, lies flat upon his back with his knees drawn up, and with his face drawn in a somewhat agonised expression.

But not only do you judge by the general aspect of the patient, more or less of his general constitutional condition, or of the malady or injury under which he may be labouring, but you must also examine carefully the attitude of the part

of the body that is complained of, and you will at once see in many cases what is the real nature of the injury from which he suffers. The attitude of a patient, for instance, with a fractured clavicle is quite peculiar and characteristic. The way in which he supports the injured limb by the elbow with the opposite hand, the manner in which he inclines his neck and head over to the injured side, are all almost unmistakable evidences of the nature of the injury he has met with. The attitude of the lower extremity in fracture of the neck of the femur is equally characteristic. The attitude of the hand in a case of impacted fracture of the radius is equally unmistakable. In that way, by examining the attitude of the limb, you determine almost unmistakably and at once the very nature of the lesion from which the patient is suffering.

But you ascertain many other things by looking at the patient. You determine, for instance, the questions of relative size of a part: if there is swelling, you see that; if there is shortening or lengthening, you determine those points. In doing so, you should always measure and examine the corresponding sides—or parts rather. You should always examine the two opposite limbs—the sound limb and the diseased or injured one,—and measure one in relation to the other, and compare one with the other. You do this because sometimes there will be congenital malformation or accidentally acquired deformities of limb that may, unless this precaution be taken, mislead you as to the character and extent of the lesion. Then, again, by means of the sense of sight you determine whether the part is transparent or is solid. You have a tumour of the scrotum, for instance; you examine it by transmitted light, and you see at once whether the light passes through it—whether it is transparent or not,—and your diagnosis is founded almost at once upon the determination of that single fact. Or, again, you notice by sight whether there is undulation—the wave of a liquid in a part,—and a variety of other important matters as to colour, as to the extent and depth of wounds, as to the condition—the progress that is being made towards recovery.

But, in addition to sight, or next, perhaps, to the sense of sight, the most important sense to the surgeon (in determining the presence of objective phenomena, of signs) is that of touch; and that sense may be equally educated with the sense of sight. What is known, or what was known formerly, in the profession as the "*tactus eruditus*," can only be acquired by long practice. By the touch the surgeon, as it were, can see more deeply into the interior of the body than the organ of vision can carry him; and there is a light, so to speak, at the end of each finger of a skilful surgeon that penetrates the cavities of the body and that throws its ray through the skin into the solid tissues beneath it, clearing up much that would otherwise be obscure. The surgeon, with a skilled touch, is able in this way to derive the most accurate information as to the condition of parts that he cannot see.

Make it a rule of practice in surgery always to touch and handle a diseased part. Do not content yourself with simply looking at it, but always handle the diseased part or limb, and in that way you will frequently get most important information. In a case of erysipelas, for instance, you may simply see a uniform blush upon the surface; but handle the part, and you feel a deep, doughy, infiltrated, or semi-fluctuating sensation, indicating at once the existence of deep-seated mischief in the planes of cellular tissue lying perhaps between the muscles of the limb. So with the touch you determine a great number of special points of the first importance. In cases of injury, for instance, you ascertain by the touch—by handling the part—whether a limb presents the sensation of crepitus, of crackling or grating of broken bone; you determine by handling the parts whether a joint is out of place or not. The general swelling around it, perhaps, would prevent your ascertaining this by the eye alone; but, by comparison with the opposite limb, you learn by the sense of touch whether the bony points are in their true relations or not. By the sense of touch, too, you determine that most difficult point in surgery—whether a tumour contains fluid, or whether it is a semi-fluctuating elastic but solid body; whether you have, indeed, undulation and fluctuation, or mere elasticity. You determine, by the sense of touch, the texture, the consistence of many parts—whether a tumour is hard or whether it is soft, whether it is smooth or whether it is nodulated; whether a surface is unbroken in the interior of the body, or whether it is ulcerated. In a variety of ways, then, you determine points of the utmost importance by the sense of touch.

So, also, by the sense of hearing you ascertain a good deal. But the sense of hearing is of minor moment, as a rule, to the surgeon than it is to the physician; and in surgery you will find that the sense of hearing and the sense of touch go together in a somewhat remarkable manner, so that it is often very difficult to say whether you feel a thing or whether you hear it. Take as an instance the grating of a broken bone. You put your hands upon the limb, and you feel it most distinctly, and you think you hear it. It is very doubtful in many cases whether you actually hear it or do not; but at all events the sense of hearing goes with the sense of touch in many of these cases in a way that is very puzzling; it is somewhat difficult to dissociate the two. It is the same with the crackling in a chronically inflamed joint, or that peculiar crepitation that you have along the sheath of an inflamed tendon. It is difficult to tell in touching it whether you hear the sound or whether you feel the peculiar crackling or crepitation as the case may be. In many cases, however, the sense of sound is of the utmost importance. I set aside all those case of exploration of the chest which are common to the physician and the surgeon, and about which I wish to say nothing; but in purely surgical cases I cannot give you a better illustration of the value of the sense of hearing than what is elicited in the case of a hernia, about the nature of which you are doubtful, whether it is strangulated or whether it is simply irreducible. You hear the bubbling sound of the returning gas, and you know at once that the gut cannot be strangulated—that it is simply irreducible. In the case of stone in the bladder you hear the stroke of the sound against the stone, and you determine its existence in this way by the sense of hearing more than by the sense of touch. It is, indeed, a rule in surgery never to believe that there is a stone in the bladder unless you actually hear that it is there by the stroke or click of the sound against it. In that way the sense of hearing becomes a most important auxiliary to the surgeon.

These three different senses—the sense of sight, the sense of touch, and the sense of hearing—are all supplemented, rendered more acute, and the sphere of their action greatly extended, by the ingenuity of the surgical mechanism; and we have a number of instruments which we daily employ in surgery, the sole object of which is to extend the sphere of information derivable from these senses, or to render them more acute in the determination of what they seek. With regard to vision, for instance, we have two sets of instruments by which its aid is greatly extended, and by which a vast amount of information can be obtained, which could not otherwise be elicited by the sense of sight. We have specula of all kinds, the object of which is to separate the walls of narrow or deep cavities, like the rectum or the vagina, and, by throwing a stream of light into the bottom of these, to enable the surgeon to see what is the condition of parts removed several inches from the surface of the body. We have reflectors of different descriptions, the object of which is to throw a stream of light into the interior of the body, and to enable the surgeon by this artificial light to see the condition of more deeply seated parts which would be beyond the reach of his vision under ordinary circumstances. The ophthalmoscope, the laryngoscope, the endoscope, the auroscope are all instruments of this kind, and all constructed upon this principle.

Then, with regard to the sense of touch, we have other instruments which enable you to propagate the sense of touch through long and narrow and tortuous channels, through which the finger could not by any possibility be introduced, or to the bottom of which, if introduced, it could not reach. These instruments are probes and sounds of various kinds. By introducing a probe through a sinuous channel you come down to the exposed bone or to a foreign body like a bullet. By introducing a sound into the bladder you examine by the touch the interior of the organ, which you could not reach in any other way.

In order to improve the sense of hearing we have also two sets of instruments. We have the stethoscope, which is employed by the surgeon as well as by the physician; and we have also instruments the object of which is to increase the sound of the part that is touched. We have, in point of fact, a sort of sounding-board. There is an instrument, for instance, a sounding-board, that is adapted by some surgeons to the end of a sound, and which greatly increases, by its vibrations, the sound produced by the contact of the end of the metallic instrument with the foreign body in the bladder.

In these various ways these different senses are supplemented, and their range and sphere of action are greatly increased by

the employment of various surgical instruments; and a very large number of those which we employ are constructed designedly for the purpose of improving our methods of diagnosis.

So much, then, for the methods to be employed in the determination of the signs of the objective phenomena presented by the patient; now for the mode of estimating the value of the symptoms.

(To be continued.)

ON THE RIGHT USE OF DISINFECTANTS.(a)

By H. LETHEBY, M.B., M.A., etc.,

Professor of Chemistry in the College of the London Hospital; Medical Officer of Health and Public Analyst for the City of London; and President of the Society of Medical Officers of Health.

I am induced, gentlemen, to bring this subject under your consideration for the purpose of removing the many dangerous fallacies which beset it, and of arresting, if possible, the unblushing quackery which disgraces it. A glance, indeed, at the so-called sanitary literature of the day will show how boldly and how confidently the use of certain inert bodies is recommended to the public as powerful disinfectors The danger of this, gentlemen, cannot be over-rated; for when by such means undue confidence is placed in the disinfecting power of an agent which fails in its purpose, the result is not merely a waste of materials and a loss of valuable time, but it is also a serious danger to the public. Therefore it is that we should be most careful in the selection of disinfectants—using those only which are known to be effective. It is necessary also that we should be thoroughly conversant with their several modes of action, and that in applying them we should be guided by rational principles suggested by the scientific aspects of the subject.

It is hardly necessary to say that the question in all its relations is very large and extensive; for by the term "disinfection" I mean the removal, or neutralisation, or destruction of that which is offensive to the senses or hurtful to the body, limiting it of course to those cases where offensive effluvia, or noxious matters, or specific contagia are the subjects of treatment; and here I may remark that, although the questions before us are undoubtedly connected with the difficult problems now occupying the attention of physiologists, pathologists, and chemists as to the origin of infusorial life, and the cause of specific infectious maladies, as well as of organic decomposition, yet it is at the same time sufficiently independent of these abstruse inquiries as to be capable of very effective practical treatment at our hands, without much reference to the conflicting theories of genesis. To us, indeed, it is of little importance, except for the scientific elucidation and explanation of our empirical facts, whether the manifestations of life in a decomposing liquid be the *cause* of putrefaction and fermentation, or the *effect* of it: and whether it comes "*ex vivo*"—that is, from pre-existing life, as the Biogenists, the Homogenists, and the Panspermatists believe; or "*de novo*," as the Abiogenists, the Heterogenists, and the Non-Panspermatists maintain. Nor does it concern us in our practical treatment of the subject whether each distinct kind of spontaneous organic decomposition and each specific form of infectious disease are the results of the vital manifestations of special germs—differing in each case—or whether they are caused by the molecular movements of organic matter in peculiar states of decay; for that which we aim at, and which we undoubtedly are able to accomplish, is the destruction or prevention of the hurtful thing which causes offence or produces disease. And as in many cases this is associated with the changes incidental to organic decomposition, it may be effected in one of four ways—as, first, by strengthening the affinities of organic substances, and thus enabling them to resist decay; secondly, by so acting upon them with chemical agents as to produce new compounds which are not susceptible of organisation or decay; thirdly, by hurrying on the changes of decomposition and oxidation, so that the particles may quickly arrive at their final stages of decay, and be brought to rest; and, fourthly, by the use of special agents which are found to have specific powers of disinfection.

(a) Read at the meeting of the Society of Medical Officers of Health on Saturday, October 18, 1873.

As examples of the first of these methods of preventing decay I may allude to the effect of cold and to the desiccation of organic matters.

As instances of the second I will refer experimentally to the coagulation of albuminous matters by alcohol, creosote, the mineral acids, and most mineral salts.

Under the third head are the oxidising influences of chlorine, hypochlorous acid, permanganate of potash, and atmospheric air, aided by water and porous substances.

And as examples of the fourth method of disinfection I may allude to sulphurous acid, to carbolic and cresylic acids, and to the volatile oils.

The relative values of these several disinfecting substances have again and again been tested by experiment. As far back as the year 1858 I entered very fully into the question of their action on sewage; but very recently they have been examined by Dr. John Dougall, of Glasgow, and Dr. Crace Calvert, of Manchester, with the view of ascertaining their respective disinfecting powers, as tested by their action on protoplasmic and fungus life, and on vaccine lymph. I have tabulated the principal results of these experiments, and submit them to you for examination. Let us therefore discuss them in the order in which they are there placed:—

1. The Mineral Acids.—These are *Sulphurous Acid*, *Nitric Acid*, *Hydrochloric* or *Muriatic Acid*, *Sulphuric Acid*, and *Chromic Acid*. This is the order in which Dr. Dougall found they prevented the development of infusoria in infusion of hay, in urine, and in a mixture of beef-juice and egg albumen—sulphurous acid being the least effective, and chromic acid the most; for in the first case as much as one part of sulphurous acid in 117 of water was required to prevent such life during six days, while in the last case as little as one part in 2200 of water was sufficient. A like conclusion was arrived at when a solution of one part of the substance in 500 of water was used with a little beef-juice or egg-albumen. Dr. Crace Calvert, however, found that sulphurous acid was more powerful in its action than nitric or sulphuric acid when used in the proportion of one part in a thousand of solution of albumen, for in the case of sulphurous acid it required eleven days to produce vibrio life and twenty-one days for fungus life, there being no putrid or mouldy odour for more than forty days; whereas with the like proportion of nitric or sulphuric acid the existence of such life was observed on the ninth and tenth days. In all cases the addition of these acids in small proportions, as from 1 to 2 per cent., to putrid matters swarming with animalcules immediately arrested life. In like manner the vitality of vaccine lymph was completely destroyed by the vapours of these acids. It would seem, therefore, that they are all powerful disinfectants, and this accords with experience; for as far back as the year 1773 Guyton Morveau, one of the most distinguished chemists of France, recommended muriatic-acid vapour as a means of disinfecting hospitals; and in 1797 Dr. Carmichael Smith obtained a Parliamentary grant of £5000 for the successful use of nitrous fumes in the disinfection of our prisons. But sulphurous acid enjoys a reputation of much more ancient date. Homer tells us that Ulysses, after destroying the suitors, fumigated the rooms in which the bodies lay, as well as the rest of the palace, with the fumes of "pest-averting sulphur." Ovid, too, in the "Fasti" speaks of the cleansing and purifying power of sulphur; and Pliny, in his "Natural History," says "that brimstone is employed ceremoniously in hallowing of houses, for many are of opinion that the perfume and burning thereof will keep out all inchantments—yea, and drive away any foul fiends and evil spirits that do haunt the place." The Chinese have always attached considerable importance to the action of burning sulphur as a disinfectant, and have from time immemorial used pastilles of sulphur for internal fumigation, and squibs and crackers for external.

In the act of generating the gas by burning sulphur in atmospheric air, thirty-two parts of it by weight combine with the same weight of oxygen to produce sixty-four parts of sulphurous anhydride, which occupies precisely the same bulk or volume as that of the oxygen consumed. The density of the gas is considerable, for its specific gravity is 2·247, or very nearly twice and a quarter that of atmospheric air; a cubic foot of the gas, therefore, weighs a trifle less than 1206 grains, and it takes 603 grains of sulphur and a cubic foot of oxygen, representing five cubic feet of air, to produce it. Its chief characteristic is its powerful odour; for as little as one part or volume of the gas in 100,000 volumes of air is readily discoverable by the nose; nine parts of it in 100,000

of air are disagreeable, and provoke coughing; twenty parts of it in that quantity of air are powerfully irritating; and forty-three parts of it in 100,000 of air, or rather more than four parts in 10,000 of air, are actually irrespirable, and a much smaller quantity than this will rapidly kill plants. Water absorbs from forty to fifty times its bulk of the gas, and produces a solution of powerful antiseptic and disiufecting properties. The same is the case with the combinations of the acid with alkalies forming the sulphites and bisulphites.

2. The Organic Acids—as *Carbolic*, *Cresylic*, *Acetic*, *Picric*, and *Benzoic Acids*—are all disinfectant and antiseptic. According to Dr. Dougall, the most powerful of them is benzoic acid, for as little as one part of it in 533 of water will prevent the appearance of infusorial life, whereas as much as one part of acetic acid iu 125 of water is necessary for this purpose. Carbolic acid occupies an intermediate position, for it requires one part of the acid in 267 of an organic solution to arrest the development of animalcules for six days; moreover, according to Dr. Dougall, the addition of one part of carbolic acid to 200 parts of a solution swarming with infusoria had no injurious action on them, although the like proportion of picric or benzoic acid was immediately fatal to them. So also with respect to vaccine lymph: air saturated with the vapour of carbolic acid at ordinary temperatures had no destructive effect on its vitality after exposure thereto for twenty-four hours; and even wheu mixed with the lymph in the proportiou of 1 per cent., and allowed to dry, the activity of the virus was not impaired. Pettenköfer, indeed, has shown that although carbolic acid will arrest the development of ferment cells, it does not destroy their vitality; for if after such treatment they are freely diluted with water, they again start into activity. Its antiseptic power, however, is evidently great; for, according to Dr. Crace Calvert, the presence of one part of the acid in 1000 of an organic solution will check decomposition aud prevent the appearance of vibrio or fungus life for more than forty days. At the Morgue in Paris, where the acid has been freely used, Dr. Devergie found that in hot summer weather one part of carbolic acid (No. 5, which contains 85 per cent. of carbolic and cresylic acids) in 1900 of water, freely applied to the dead bodies, completely prevented putrefaction; and even wheu diluted to the extent of one part in 4000 of water the effect was most marked. In my own experiments in the city of London I have noticed that a very small quantity of carbolic acid in the sewers prevented decomposition, and that a solution of 1 per cent. of it upon meat arrested putrefaction.

Specimens of the acid are upon the table, there being several varieties of it in commerce for different purposes. The pure acid is a camphor-like solid, which fuses at 95° F. and boils at 366° F., the boiling point of cresylic acid, with which it is commonly associated, being 397°. It is not very soluble in water—only to the extent of about 3 per cent.—but it is freely soluble in alcohol, ether, and glycerine. It has no acid reaction on litmus paper, although it combines with the alkalies to form salts. A good test, indeed, for the purity of carbolic acid is the solubility of five parts of it in one part of caustic soda dissolved in ten of water. You have seen its powerful coagulating action on albumen, and I hardly need say it is an energetic caustic.

The commercial preparations of it are—1, the pure crystals for medical use; 2, the fluid crystals of the British Pharmacopœia strength for surgical purposes; 3, the loose crystals for disinfection; and No. 4 and No. 5 for commoner purposes. The last-named variety, as prepared by Messrs. Calvert and Co., is guaranteed to contain 85 per cent. of carbolic and cresylic acids, free from tar oils and sulphuretted hydrogen, and this is well suited for all the commoner kinds of disinfection. It may be used in the proportion of half a pint of the acid to two gallons of water, and if the odour is objectionable, the purer quality, No. 4, may be employed. Other preparations of it are "*the powder*" (carbolate of lime), which should contain at least 15 per cent. of acid as shown by the neutralisation of the lime with hydrochloric acid; "*McDougall's fluid carbolate*," which is the acid in neutral combination; "*Cliff's antiseptic liquid*," which is a solution of the acid in soft soap; "*Westerton's patent zymotic fluid*," which is a mixture of carbolic acid, pyroligneous acid, and ether, with a little scent; and there are several kinds of carbolic acid and coal tar soaps. But it is best to avoid these nostrums and rely on the action of the pure or nearly pure acid.

3. The Alkalies—*Lime*, *Potash*, *Soda*, and *Ammonia*—are not very powerful disinfectants unless they are used in a somewhat concentrated state, when they are useful for detergent purposes and for the destruction of organic matter. Cream of lime, for example, as well as a strong solution of potash and soda, may be advantageously employed in cleansing rooms, stables, cattle-sheds, slaughter-houses, etc.; and powdered lime, sprinkled freely about cellars, church vaults, cattle lairs, etc., will absorb moisture, carbonic acid, etc., and help the oxidation of organic matters. Added to sewage in the proportion of from ten to twenty grains per gallon, it combines with the carbonic and phosphoric acids, forming a flocculent precipitate which rapidly subsides, and carries with it all suspended matters as well as a notable proportion of soluble organic matter. It likewise kills the infusoria of the sewage, and checks the decomposition of it for several days.

4. The Haloids.—The most important of these are *Iodine*, *Chlorine*, *Chloride of Lime*, *Chloride of Zinc*, *Chloride of Aluminium* (*Chloralum*), and *common Salt*. *Iodine* is not of much practical importance, although it has been recommended for use in the sick-chamber. *Chlorine*, however, is a powerful disinfectant, and has been used with considerable success from the time (1791-92) when Fourcroy, the distinguished French chemist, proposed it as a fumigating agent. It is easily prepared by adding black oxide of manganese to strong muriatic acid—using about a quarter of a pound of the former to half a pint of the latter in a basin or dish,—frequently stirring the mixture, and, if possible, heating it. It is also produced by the gradual addition of muriatic acid to permanganate of potash (Condy's fluid); and this, indeed, is very like the preparation now advertised under the name of *chlorozone*—the muriatic or hydrochlorous acid having been added in comparatively small proportion. Chlorine is a heavy gas, its specific gravity being as nearly as possible two and a half times that of atmospheric air. It is extremely irritating, and, like sulphurous acid, cannot be effectively and safely used in the sick-chamber except for sweetening the air, as the quantity necessary to disinfect is irrespirable. The same is the case with chloride of lime, when its acid (hypochlorous) is set free by carbonic or muriatic acid, as it must be to become an effective aërial disinfectant. In proper proportions, however, both of these agents are powerful disinfectants, as they not only check putridity and the development of animalcules in organic solutions, but they also kill such creatures when added in the proportion of about 4 per cent., and they destroy the vitality of vaccine lymph. Like other agents which favour oxidation, they actually promote decay and the generation of infusorial life when used in small proportion. To disinfect with chlorine, therefore, or with hypochlorous acid, the chamber must be vacated, so that the air may become charged with at least 1 per cent. of these agents, and then the destruction of the miasm or contagium is insured. A solution of chloride of lime in the proportion of one pound to two gallons of water (5 per cent.) is useful for washing floors, etc., but it must be used cautiously for the disinfection of clothing, as solutions of this strength act injuriously on animal tissues, although they are not so hurtful to vegetable fibres.

Chloride of Soda (Labarraque's liquid) is a compound homologous with chloride of lime, and it enters into the composition of Watts's chlorinated soap; but, as it rapidly undergoes decomposition, the antiseptic power of the soap is *nil*.

Chloride of Zinc (Sir William Burnett's fluid) is a liquid which ranges from 1309 to 1594 of specific gravity—the former containing about 30 per cent. of the chloride, and the latter about 54. Its action is evidently due to its power of coagulating albumen, and of absorbing ammonia and sulphuretted hydrogen. Used in the proportion of one part of the chloride to 300 of water it instantly destroys infusorial life, and even when diluted so as to contain but one part in 1000 of an organic liquid it checks decomposition, and prevents the appearance of animalcules and fungi for more than forty days. Its chief use, however, is as a disinfectant of fæcal matters; for it has no power as an aërial disinfectant, and is too corrosive in its action for textile fabrics.

Chloride of Aluminium or *Chloralum*, which is a solution containing about 15 per cent. of the salt, appears, from the researches of Dr. Dougall, to be powerfully antiseptic, for when used in the proportion of only one part of the substance to 933 of water it prevented the development of animalcules for six days. Dr. Crace Calvert also found that an organic solution containing one part of chloralum in 1000 of the solution did not exhibit vibrio life until after ten days. In another experiment, however, with albumen and starch-paste—each containing 2 per cent. of the substance—decomposition with

offensive odour began in nine or ten days; and in my own researches I found that putrefactive decomposition could not be prevented with less than 4 per cent. of the substance. In the illustrations before you, you will notice how ineffective it is in checking putrefactive decomposition. Moreover it is not an aërial disinfectant, and is therefore worthless in a sick-room; and with regard to its deodorising power it manifestly does not contain anything which is capable of absorbing putrid miasms. Like common alum, however, and crude sulphate of alumina, it is a good precipitating agent for sewage, and when combined with the action of lime it thoroughly defæcates such matters.

5. Mineral Sulphates—as *Sulphate of Zinc, Sulphate of Iron, common Alum*, and *Sulphate of Copper*, as well as the waste solutions of metallic salts from wire-working, iron-galvanising, lacquering, etc.—are useful disinfectants when the object is to coagulate albuminous matters and to destroy living organisms, as well as to neutralise offensive miasms. Each of these substances will prevent the manifestation of infusorial life in organic solutions containing from one to four parts of the salt in the 1000; and a solution composed of from one to two pounds of the substance in a gallon of water is a good disinfectant of drains and of fæcal matters directly they are discharged from the body. Mudie's disinfectant is sulphate of iron or green copperas, which is the cheapest of all these substances. None of them, however, can be advantageously used as aërial disinfectants, as they are not in any case volatile.

6. *Permanganate of Potash* and *Chlorozone* are both oxidising agents, and do not appear to exert much action on vital manifestations, but they are very active in the destruction of dead organic matter. The use, therefore, of these agents in the sick-room as disinfectants is altogether fallacious, for we have no reliable evidence of their power of destroying contagia. The sheet, indeed, saturated with Condy's fluid, which is recommended to be hung up in the sick-chamber, will quickly, like other dead organic matter, decompose the fluid and render it inert. This property, however, of attacking and oxidising dead and decaying organic matter gives it value as a means of purifying potable water, and for this purpose it is alone useful. The same may be said of chlorozone, for the small quantity of free chlorine present in it is not capable of much energy of action.

7. The Volatile Oils—as *Camphor, Turpentine*, etc.—are probably effective to some extent, for we not only perceive that they hinder the development of animalcules and fungi, but they also generate ozone; for ages, indeed, these substances have enjoyed a high reputation as trustworthy disinfectants and deodorisers. They are the correctives universally employed in religious worship, and from time immemorial they have entered into the composition of the ointments of the high priest and the incense of the altar. Among eastern nations the practice of fumigating the house with costly spice and rich-smelling drugs has been contemporaneous with history. During the middle ages, when the plague, the black death, and the sweating sickness decimated the cities of Europe, immense importance was attached to these agents as disinfectants. The advice of the learned Dr. Caius, who wrote of the sweating sickness in 1552, was to "have always your handkerchief perfumed with a mixture of spices for your nose and your mouth, both within your house and without, and in your mouth a piece either of setwel or of the root of *Enula campana* well steeped before in vinegar roseate, or a mace, or berie of juniper. In want of such perfumes, as before said, take of myrrh and dried rose-leaves, of each a like quantity, with a little frankincense, for the like purpose, and cast it upon the coals, or burn juniper and their berries." Until very recently, too, the practice in our criminal courts was to lay a bunch of rue on each side of the prisoner, to prevent the spread of contagion brought from the infected gaol. Now, it is a curious fact, as I will show you experimentally, that the oxidation of perfumes and volatile oils is generally accompanied with an active ozonisation of the atmosphere—indeed, Professor Paolo Mantegazza, of Pavia, who has carefully investigated this subject, says that this is a very convenient method of obtaining ozone: for under the influence of light (especially solar light) and air the essential oils, even in small quantities, will ozonise comparatively large proportions of atmospheric oxygen. It may well be, therefore, that the volatile oils and essences deserve the reputation they have so long enjoyed as purifying agents; and that the recommendation of Empedocles, to plant aromatic and balsamic herbs about your house as preventives of pestilence, is supported by scientific as well as empirical facts. Moreover, as benzoic acid is a large constituent of the incense used in the Latin and Greek churches, it is possible, looking at its antiseptic powers, that this also may be useful as a disinfectant.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGY AND CLINICAL USE OF THE SPHYGMOGRAPH.

By F. A. MAHOMED,
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No. XI.

(*With Photo-lithographic Plates.*)

Dicrotism: its Production; conditions determining its Intensity—Varieties of the Pulse in Acute Disease—The Pulse in Typhus.

In approaching the consideration of the pulse in acute diseases, it will be necessary first to consider some points connected with the physiology of the circulation, more especially those bearing upon the production of dicrotism. One of the earlier papers in this series (No. III., *Medical Times and Gazette*, March 2, 1872) was devoted chiefly to this subject; but since that was written it has been found necessary, owing to more extended experiments and further observation, very materially to alter the views therein expressed. An apology is therefore necessary for a conclusion too hastily arrived at, after investigating only one side of the case, however strong that side appeared to be in experimental proof.

The hydro-dynamic problems of the circulation form some of the most complicated in physiology, and their extreme difficulty alone would afford excuse for many errors. It was stated in the paper above mentioned that dicrotism was produced by, and was dependent upon, a condition of high arterial tension; it is on this most important point that it has been found necessary to alter the views then entertained.

The experiment previously related of placing an elastic bag at the commencement of the aorta, in a schema formed of comparatively inelastic tubing (of which the tracing had previously been non-dicrotic), and by this means immediately producing dicrotism, no other condition having been changed, appeared to prove—as, indeed, it did—that the dicrotic wave owed its origin to the elastic recoil of the aorta. But further than this, it was shown that by constricting portions of the schema representing the capillaries, or by increasing the rapidity of the contractions—either proceeding increasing the tension in the system of tubes representing the arteries—the dicrotic wave was increased. This result seemed as conclusive as the previous one. In further experiments on straight and more elastic tubing, however (many of them made conjointly with my friend Dr. Galabin, who has especially advocated the present view in his highly interesting paper "On the Cause of the Secondary Waves of the Pulse," read before the British Medical Association at its recent meeting), it was found that dicrotism was more readily produced when the the tension was reduced to a minimum, such as in a straight tube of large calibre with an unconstricted outlet. Other experiments also proved the dicrotic, or some wave exactly resembling it, to exist, even when the aortic valve had been removed. Dr. Galabin has carried these observations still further, and has shown that when a straight tube of equal calibre throughout is used a reflected wave is produced, which originates at the distal end of the tube, and travels from the periphery towards the centre. He has found, however, in a more mechanically correct and still more simple schema, composed of bifurcating tubes, that the same law of the coincidence of dicrotism with low tension remains true.

These results, so utterly contradictory, naturally present many difficulties in their explanation. It is certain, from observations on animals, on the human subject under abnormal conditions, and on the schema with an elastic aorta, that the aorta is greatly dilated by the influx of blood produced during systole, and that immediately this action ceases it is followed by the contraction of the elastic coat. This contraction is surely the result of a distinct mechanical power (that of elasticity), and is not merely the result of the inertia of the arterial walls as argued by Dr. Galabin (in opposition to the view of its production as the result of their elasticity), and

must necessarily produce a second or dicrotic wave in the pulse. If this be the case, the elastic recoil of the aorta must be admitted as the prime origin of the dicrotic wave. Doubtless, as stated in the paper above referred to, the recoil from the closure of the aortic valves is one component of the dicrotic wave, but it is only a secondary one, and would scarcely have existence were it not for the elastic contraction of the aorta. The conditions under which this wave becomes most developed are somewhat difficult to ascertain; while discussing them, it must be remembered that they do not resolve themselves into a question of high or low tension occurring in a system of tubes of unvarying elasticity, but the relaxed or contracted state of the muscular walls of the arteries must also be taken into account; and, according as one or the other condition obtains, the walls enclosing the blood-column become more or less elastic, or rather their innate elasticity is permitted to act with greater freedom. The dicrotic wave appears to vary in intensity, chiefly with the variations in these conditions—*i.e.*, it is more intense when the muscular walls are relaxed, it is less so when they are contracted; or, in other words, it is more intense with a highly elastic tube, less so with a more rigid one.

In the normal state, with the muscular coat of the arterial wall healthy and of good tone, or more especially in Bright's disease, when they are hypertrophied and acting more powerfully than usual, the pulse is non-dicrotic and the condition is one of so-called "high-tension"; while in fevers, or other conditions where the vaso-motor nerves are poisoned and the muscular coat is inactive and relaxed, the pulse is dicrotic, and the condition has been called that of "low tension."(a)

That the muscular coats of the smaller arteries have power to resist the distending tendency of the heart's contraction is proved by the well-known fact that it possesses the power of contracting if a small artery be completely divided, and so arresting hæmorrhage—in this case overcoming that portion of the force of the heart's systole which reaches it by its own power of contraction. This of course is only true of the small arteries, and could not take place were it not that the blood-pressure diminishes in inverse proportion to the distance from the heart.

If it be admitted, therefore, that, given a healthy condition of the muscular coats of the arteries, their tonic contraction being of good power, the heart has not power to distend them beyond limits regulated by themselves, it follows that in those conditions accompanied by good muscular tone, or in Bright's disease, the space afforded in the arterial system for the reception of the blood thrown into it during the systole of the heart is at a minimum. The blood-tension must in these cases be high. The aorta, which is distended greatly during the heart's systole, has not the opportunity to contract and empty itself sufficiently to regain a condition of rest or non-distension, the pressure in front being too great for it to completely overcome before the next systole occurs, which therefore finds it still more or less distended; such contraction as it does make is made slowly and gradually, and is only able to maintain the constant onward flow and produce a marked fulness of the vessels during diastole. The movement is not sufficiently sudden to form a wave superimposed upon, and travelling more quickly than, the ordinary blood-current. Distension is sudden and complete after each systole, but the corresponding contraction during diastole is gradual and incomplete. The dicrotic wave under these circumstances is not only imperfectly formed, but the high tension of the arterial walls through which it passes obstructs its progress, and tends to obliterate it.

On the other hand, under conditions by which the arterial muscles are relaxed and inactive, either owing to bad tone, or in a more excessive degree to reflex paralysis from poisoned blood, or from nerve derangement, the space afforded for the blood in the arterial system would be greatly increased, while the opposition to its onward movement would be correspondingly diminished; in other words, low arterial tension would exist. Under these circumstances, the elastic walls of the aorta are at liberty to act more freely. After distension during the cardiac systole they contract during diastole more completely and more suddenly, by virtue of their elasticity, the pressure to be overcome being diminished. This more complete contraction of the aortic walls produces a larger dicrotic wave, which, owing to the decreased lateral pressure or "tension" of the blood-column, encounters less resistance to its onward movement.

Following the dicrotic wave there is often seen another small wave or secondary dicrotism. Occasionally, in very slow pulses with relaxed arteries and low tension, it becomes strikingly developed. This is probably due to an oscillatory or vibratile movement of the arterial walls occurring in their efforts to regain their equilibrium. It is to this wave that I should prefer to apply Dr. Galabin's theory of the inertia of the arterial walls.

So far this discussion of the pulse, or rather its most important feature in the febrile state—namely, dicrotism—has been chiefly theoretical, and with only its physiological import in view. Its clinical meaning must now be examined, its value as a symptom and an aid to prognosis in fever investigated.

One of the first questions which demands an answer when considering the clinical importance of dicrotism, is whether or not the development of this wave bears any exact relative proportion to the temperature of the patient. It has been sought by some to show that it does bear a very close relation; but this assertion is incorrect, and for the purpose of controverting it, several tracings coexistent with high temperature, and showing various degrees of dicrotism, have been placed at the commencement of the accompanying plate. But inasmuch as a high temperature often indicates a severe condition of fever, so hyperdicrotism affording the same indication often accompanies it. In the same manner a medium temperature indicates a mild degree of fever, and is coincident with only moderate development of the dicrotic wave.

The pulse of the febrile state may assume either the sthenic or the asthenic type,—in other words, it may be non-dicrotic or dicrotic. The former of these conditions is the rarer, and will not be much discussed in the present paper, but be reserved for a future occasion, when it will be shown to be coincident with a certain vascular condition, and to give rise to a well-known series of pathological conditions more usually referred to renal disease. The latter, or asthenic, type is the form which is generally found in fevers.

Fig. 1, Pl. ix., is an example of the non-dicrotic or sthenic form of pulse, occurring in this instance in a case of erysipelas on the second day of the disease, the temperature being 103°. A pressure of three ounces was used, and it required very much more to extinguish the pulse. The pulse in erysipelas usually assumes the sthenic form, especially in its early stages; when exhaustion supervenes, or should the condition become in any degree pyæmic, the pulse will become dicrotic. This character, however, may be altered by treatment. All mild forms of surgical fever, after operations, etc., occurring in healthy individuals resemble this form of pulse closely. It is a pulse which feels full and strong and well sustained to the finger; it does not vary from the normal form of pulse except in being harder, quicker, and a little larger. Persons who in health possess dicrotic pulses probably have the dicrotism correspondingly increased in this condition; otherwise it is a pulse occurring under the conditions of health, with an increased rapidity and increased force of the heart's contractions; the vessels are full, and the muscular walls of good tone.

The effect of loss of blood on this form of pulse is well seen in Fig. 2, Pl. ix. This tracing was obtained from a man who had lost an immense quantity of blood during an operation for the removal of a naso-pharyngeal polypus performed on the previous day. His temperature had risen, and it was now 102·4° F.; the condition of surgical fever was therefore present. The extreme dicrotism which manifested itself was due probably both to the diminished quantity and quality of the blood; the watery blood probably acting in great measure as poisoned blood in relaxing the arterial walls. The diminished quantity perhaps accounts for the peculiar character of the dicrotism—namely, the sharpness of the angles, and the strikingly vertical upstroke of the dicrotic wave. It is a noteworthy fact that during the few succeeding days, though the temperature each day increased, the dicrotism daily diminished, proving distinctly that the dicrotism was not due to the febrile but to the anæmic condition.

Even in the most severe cases of surgical or traumatic fever, when the patient is actually moribund, the pulse is often non-dicrotic. This may possibly be due to the much enfeebled action of the heart, which has not power to distend the aorta

(a) Bernard, by his differential manometer, has proved the influence of the vaso-motor nerves through the arterial muscular coat on the tension of the blood-column. On introducing the mouth-pieces of the instrument into the two facial arteries of a horse, the mercury stood at the same level in each arm of the instrument; but on division of one of the cervical sympathetic nerves, the mercury instantly rose on that side, indicating a diminution in the tension of that vessel.

and produce a recoil; but doubtless the vascular condition of unrelaxed arteries also exists.

An instance of this may be seen in Fig. 3, Pl. ix., obtained from a man suffering from traumatic fever and shock accompanying extremely severe contusions produced by a fall from a height. His temperature was 104°. He died on the following day (the fourth after the accident), his pulse never becoming dicrotic.

Fig. 4, Pl. ix., is an instance of hyperdicrotism occurring in a case of surgical, or rather suppurative fever, with a temperature of 103·5°, following an amputation through the thigh, the patient being moribund. Death ensued on the following day.

Fig. 5, Pl. ix., represents the pulse in a case of pneumonia which terminated fatally two days afterwards, the temperature at the time being 105·2°. The pulse possessed the same characters during the four days he was under observation. The non-dicrotic character was in this case again due in some measure to an overtaxed and failing heart, but, as in the case previously mentioned, the arterial condition cannot be absolved; for in the last stage of heart disease, when the ventricle is greatly dilated and rapidly failing, the pulse is often hyperdicrotic; and again in typhus, when the heart is very greatly affected, and death ensues from exhaustion of this organ, the pulse may be hyperdicrotic. (*Vide* Fig. 21, Pl. ix.)

The contracted arteries perhaps formed the chief factor in the sum of pathological causes of death; for by their contraction the difficulty of the circulation and labour of the heart would be materially increased. Thus the knowledge of this condition may afford the most valuable indication for treatment. In those cases in which the muscular walls are contracted, veratria and aconite may be indicated; and in those in which the arteries are extremely relaxed, digitalis may prove of advantage. It is perhaps to the absence of this rule for treatment, and to the indiscriminate use of these powerful drugs, that they have chanced to be wrongly used in some cases when the results have proved disappointing.

Fig 6, Pl. ix., affords an instance of relaxed walls and low arterial pressure occurring in pneumonia. Far more dicrotic tracings might have been selected, as the pulse sometimes assumes the condition of hyperdicrotism in an extreme degree; but in this case dicrotism occurs in a pulse requiring considerable pressure—*i.e.*, four ounces. This is comparatively rare in dicrotic pulses, and the pulse may be regarded as a transitional one, for in pneumonia I believe it to be more frequently non-dicrotic; and it is to this fact possibly that the advantages lately ascribed to the exhibition of veratria or aconite have been due. The full, hard pulse of pneumonia has been noticed by the older writers, so also has the "*contracted*" pulse. Sir Thomas Watson in his classical work, speaking of the advisability of the occasional use of the lancet, says that in those cases of high fever accompanied by a "*hard, firm pulse*," blood may be taken till it becomes "*softer*," "or, if it were *contracted*, till it becomes *fuller*." These were the directions usually given, and more elaborate means of clinical observation appear to prove their truth.

Passing from these general observations, which apply to the pulse in all febrile conditions, when it varies with the constitution of the patient, the nature of the disease, and its intensity, the character of the pulse in some of the specific fevers may be noticed. It bears a certain character in each. Typhus may be said to possess a malignant form of pulse, remarkable either for its extreme dicrotism or its failing heart.(b)

Figs 7, 8, 9, and 10, Pl. ix., were obtained from a mild case of typhus occurring in a man aged 25. The patient came under observation on about the twelfth day of his fever. Fig 7 represents his pulse on the morning of that day; his temperature was only 103·1° F., and his general condition indicated a mild attack. His pulse was extremely hyperdicrotic, but there is no loss of percussion, rounding of the angles, or other indication of a failing or overtaxed heart.

Fig. 8, obtained on the fourteenth, and Fig. 9 on the fifteenth days of his fever, which had now passed its crisis and was abating, indicate an excited but powerfully acting heart, the tracing being obtained on each occasion with a pressure of four ounces, which is extremely high, and gives the best prognosis in typhus. It is thus, as a gauge of the power of the heart's action, which is the greatest source of danger in typhus, that the sphygmograph affords assistance in these cases. So long as the tracing affords indications of a heart so well capable of performing its work, little need be feared for the patient. Fig. 10, obtained two days after the one preceding it, shows how rapidly the pulse resumes the normal character.

The six tracings (Figs. 11 to 16 inclusive) placed next on the plate illustrate the pulse of another case of typhus, rather more severe than the last, occurring in a woman aged 25. She came under notice about the eleventh day of her fever. On the twelfth day the tracing reproduced in Fig. 11 was obtained. On this day her temperature was higher, and the indications afforded by her pulse worse, than on any other day of her illness. Her temperature at the time the tracing was obtained was 104°. The pulse is by no means a severe one for typhus, although it is very hyperdicrotic and the apices are somewhat rounded. The latter feature indicates some failing of the heart's action, and is the most serious characteristic of the pulse. The dicrotism may be far more excessive, and even assume the monocrotic form, and yet be consistent with recovery.

A monocrotic pulse is merely a hyperdicrotic pulse which is so rapid that the primary upstroke becomes superimposed upon the dicrotic wave, which has not time to travel to the radial before the more rapidly transmitted primary wave of the succeeding cardiac contraction overtakes and absorbs it, as one often sees a small wave of the sea merged into the larger one which has overrun it. The dicrotic wave in these instances is probably a small and slowly travelling one, as the lower the tension the slower the transmission of these secondary waves; and the more feeble the heart's contraction, the less the aortic recoil and the smaller the dicrotic wave.

Fig. 12, obtained on the thirteenth day of the fever, shows a higher upstroke, indicating a more forcible contraction. In this tracing the dicrotic wave is almost obliterated; all that remains of it is the slight rise visible before the commencement of the upstroke. The meaning of this absence of the dicrotic wave is extremely doubtful; I can form no theory that will satisfactorily account for it. One thing appears certain—it is not identical with the true monocrotic pulse.

In Figs. 13, 14, and 15, obtained on the fourteenth, fifteenth, and sixteenth days of the fever respectively, the dicrotic wave is seen gradually to increase in size, while the temperature subsides in the same relative proportion. Fig. 16 was obtained on the nineteenth day of her fever, the first on which her temperature reached the normal point. It is remarkable how perfectly and how quickly the pulse recovers itself. This tracing is in all respects perfectly normal, both the tone of the arteries and the power of the heart being apparently good. It is hard to believe that the heart suffers as much as some writers represent—it would appear to be only overtaxed for the time being, and its failing action may be due merely to a temporary mechanical condition, and not to an actual organic change, though in extreme cases this may also exist; for if in all severe cases the heart underwent more or less fatty degeneration, it could scarcely recover itself in so incredibly short a space of time as to give a perfectly healthy tracing on the first day of the return of the temperature to the normal standard.

Figs. 17 and 18, Pl. ix., were obtained from a man, aged 51, who, while convalescing from acute rheumatism, contracted typhus. His age, and his previous attack of rheumatism, united to secure the most unfavourable condition for his heart. He was admitted into the London Fever Hospital on the fifteenth day of his fever. His pulse on the following day is reproduced in Fig. 17: the upstroke is oblique, the percussion-wave absent, the apex rounded, and the respiratory line undulating; occasionally, also, the rhythm is irregular—there is every indication, in fact, of a failing heart. The area of cardiac dulness was increased, and the sounds were extremely feeble, but no bruit was audible. The base of the right lung had become pneumonic, and this complication may account for the absence of dicrotism—the artery feeling to the finger small and contracted, instead of large and relaxed. His condition was hopeless from the time of admission. On the next day, the seventeenth of his fever, his pulse was much more feeble, smaller, and more irregular, as indicated in Fig. 18. After this his temperature rapidly fell; on the succeeding day his pulse could not be felt, nor a tracing obtained, on account of the constant subsultus, and death occurred the same evening.

Figs. 19, 20, and 21, Pl. ix., were obtained from a man aged

(b) Unfortunately it is impossible to obtain tracings of all cases of typhus, and often some of the most interesting series are spoilt by the condition of the patient, as the disease advances, not permitting a tracing to be obtained, owing either to the violent delirium or to the constant subsultus.

32, who was a hard drinker and had contracted typhus. His pulse on the first day he came under observation (about the thirteenth of his fever) was a fairly good one, though the upstrokes were slightly oblique and the apices a little rounded. It was only fully dicrotic, and the pressure employed was three ounces, indicating a heart acting with good power, though the commencement of the contraction was not so sudden and forcible as usual. His temperature was only 102·9°. On the following day his condition was considerably worse: the upstrokes were much more oblique, and the apices quite round; the dicrotic wave was diminished. It still, however, required the same pressure to develope it—though the heart's power was evidently failing. By auscultation the sounds were found to be feeble, the first sound being almost inaudible at apex.

The pulse on the succeeding day had assumed an inevitably fatal form, represented by Fig. 21—the upstrokes as sloping as the downstrokes; all angles obliterated; each contraction of the heart varying in power from the preceding one; the pulse altering its character at each pulsation, being sometimes not fully dicrotic, at others hyperdicrotic, and at another monocrotic; the respiratory line is undulating. This great change in his heart and in the prognosis of the case, be it noticed, is not indicated by the temperature, which remained almost stationary, being on this day 103°. Death occurred on the following day. The last two cases are good examples of death produced by failure of heart, and not by intensity of fever.

(*To be continued.*)

SNAKE-POISONING IN INDIA.

Communicated by J. FAYRER, C.S.I., M.D., F.R.C.P.

(*Continued from page* 251.)

Second Instalment of the Report of the Committee appointed by the Government of India to investigate the Subject of the Treatment of Snake-poisoning by Artificial Respiration. (The following gentlemen form the Committee:—Dr. Ewart, President, Dr. Mackenzie, and Mr. Vincent Richards.)

Experiment 6.—July 15.—A dog was bitten by a cobra at 7.17 a.m; the temperature was then 102·4°. 7.25 a.m.: Temperature 101·8°. 7.40 a.m.: Convulsed; temperature 101·6°. 7.43 a.m.: Commenced artificial respiration; the pupils were dilated, and the animal was much convulsed. The pupils gradually assumed their natural appearance, and convulsions ceased. The dog shakes its ears when a fly settles on them. 8.8 a.m.: Temperature 101·4°. 8.30 a.m.: Temperature 101·3°; the pulse is beating steadily and well, 100; respirations 36. 9.30 a.m.: Temperature 101·2°; respirations 28, much too slow; pulse 200, strong and regular; the usual response to the galvanic current. 10.30 a.m.: Temperature 100·2°; respirations 36; pulse good, 144. 11.30 a.m.: Temperature 100·2°; respirations 32; pulse 112, very strong; same response to the galvanic current. 12.30 p.m.: Temperature 98°; respirations 32. 1.10 p.m.: Heart ceased to beat, five hours twenty-seven minutes after the commencement of artificial respiration. This was not at all a satisfactory experiment. Blood coagulated after death.

Experiment 7.—July 16.—A dog was bitten by a cobra at 8.25 a.m; the temperature was then 103·2°. 8.35 a.m.: Temperature 103·4°. 8.44 a.m.: Temperature 103°. 8.50 a.m.: Commenced artificial respiration; the pupils were at first dilated, but afterwards became natural. 9.5 a.m.: Temperature 103°; pulse 136; respirations 60; applied heat. 10 a.m.: Temperature 101·6; respirations 40; pulse beating very rapidly; no response to the galvanic current. Noon: Pulse 190; temperature 105·5°; respirations 42; pupils dilate by galvanism. 1 p.m.: Respirations 44; pulse 180; one pupil only dilates by galvanism; temperature 105°. 2 p.m.: Respirations 42; pulse 172; temperature 104°; no response to galvanism. 3 p.m.: Respirations 44; pulse 190; femoral cannot be felt; temperature 103·8°. 4 p.m.: Temperature 104·4°; respirations 40; femoral artery beating very rapidly; no response to galvanism. 5 p.m.: Temperature 104·7°; respirations 36; pulse 200; no response to galvanism. 5.30 p.m.: Temperature 104·2°; respirations 36; pulse about 200, and pretty strong. 7.30 p.m.: The heart is beating rapidly, but pretty forcibly; respirations 44; temperature 104·2°; no response to galvanism. The blood coagulated after death. We were kindly assisted by Dr. O'Brien.

Experiment 8.—July 18.—A dog was bitten by a snake at 8 a.m.; the temperature was then 101·6°. 8.15 a.m.: The temperature has risen to 102°. 8.20 a.m.: Temperature 102·4°. 8.30 a.m.: Temperature 102°. 8.52 a.m.: As the bite was considered a doubtful one, the dog was now bitten by another cobra. 8.58 a.m.: Temperature 102·5°; convulsed. 7.5 a.m.: Artificial respiration was commenced; temperature 102·5°. 9.20 a.m.: Temperature 101·6°; the heart did not begin to beat so well as usual: respirations 44; applied heat. 10.20 a.m.: Temperature 101·1°; pulse 100, pretty strong; respirations 40. 11 a.m.: Temperature 101·6°; pulse very quick and weak; respirations 56; same response to galvanism. Noon: Temperature 103·2°; pulse 160, very irregular; respirations 44; passes water in response to the galvanic current. 1 p.m.: Respirations 36; temperature 104·2°; pulse very quick and weak; a few drops of urine pass on applying galvanism. 2 p.m.: Temperature — °; respirations 36; pulse beating rapidly and without force; no response to the galvanic current. 3 p.m.: Temperature 104·2°; respirations 44; pulse beating rapidly; no response to the galvanic current. 4 p.m.: Temperature 103°; respirations 36; pulse beating very rapidly, and is extremely weak. 4.20 p.m.: Heart ceased to beat, seven hours and fifteen minutes after the commencement of artificial respiration. The blood in this instance was fluid, and did not properly coagulate. This snake bit more viciously than ever we saw a snake bite.

Experiment 9.—July 19.—A middling-sized dog was bitten by a cobra at 8.20 a.m. 8.28 a.m.: Passed a stool. 8.30 a.m.: Temperature 104·2°. 8.45 a.m.: Fell over. Temperature 104·8; pulse 132°; respirations 36. 8.55 a.m.: Commenced artificial respiration. This dog was scarcely convulsed at all at the time, but it appeared quite dead. 9.5 a.m.: Temperature 105°; respirations 44; pulse 134, pretty strong. Slight convulsions have occurred since the commencement of artificial respiration. The pupils are now natural. 10 a.m.: Temperature 103°; respirations 44; heart beating very rapidly, and with but little force. Noon: Respirations 40; heart beating extremely rapidly, and without force; temperature 105°; passes water in response to the galvanic current. 1 p.m.: The heart can scarcely be felt beating; temperature 104°. 1.10 p.m.: Heart ceased to beat, in four hours fifteen minutes. The blood coagulated after death. This dog was the smallest yet operated on. Dr. O'Brien assisted us.

Experiment 10.—July 21.—A dog was bitten by a cobra at 7.52 a.m.; temperature previous to the bite 103°. 8.10 a.m.: Temperature 102·8°; much purged. 8.20 a.m.: Convulsed. 8.23 a.m.: Commenced artificial respiration. The pupils, from being widely dilated, became perfectly natural, convulsions ceased, and sensibility returned; sensibility lasted for an extraordinarily long time—viz., from 8.23 a.m. until 9.12 a.m., when it ceased; temperature 102°. 10 a.m.: Heart beating quickly and very forcibly; respirations 50; temperature 100·8°. 11 a.m.: Heart and respirations the same; temperature also the same; pupils dilated by galvanism. 11.30 a.m.: Belly all at once became tympanitic. The bases of the lungs are evidently congested. Heart has been beating very irregularly. Noon: Temperature 104°; heart beating very strongly though slowly; respirations 48; heart, pupils, and bladder respond to galvanism—the heart especially. 1 p.m.: Exactly the same in all respects. 2 p.m.: Temperature 104°; respirations 44. 3 p.m.: Respirations 46; pulse very rapid and weak; temperature 105°. 4 p.m.: Respirations 44; temperature 100·8°; pulse 190. 5 p.m.: Temperature 103·3°; respirations 48; pulse strong, 200; pupils dilate very slightly in response to galvanism. 6 p.m.: Temperature 102·9°; respirations 48; pulse strong, 200; pupils only slightly respond to galvanism. 8 p.m.: Temperature 103°; heart beating very rapidly and tolerably strongly; respirations 48. 10 p.m.: Temperature 103°; pulse 160; respirations 48; no response to galvanism. 11 p.m.: The same. Midnight: Temperature 103°; respirations 48; heart beating very rapidly. 1 a.m.: Heart beating very feebly; respirations 44; temperature 105°. 1.25 a.m.: Heart ceased to beat, seventeen hours and two minutes after the commencement of artificial respiration. Blood coagulated after death. Dr. O'Brien assisted.

Experiment 11.—July 3.—A dog was bitten by a cobra at 7.50 a.m.; temperature 103°. 8 a.m.: Temperature 104°. 8.38 a.m.: Convulsed. 8.40 a.m.: Commenced artificial respiration. 9.10 a.m.: Temperature 101·1°. Had a sharp convulsive movement; is now perfectly senseless; heart beating slowly and irregularly; passes water and the pupils dilate on the application of galvanism. 10 a.m.: Temperature 101°;

respirations 40; pulse 176; the usual response to galvanism. 11 a.m.: Temperature 102·7°; pulse 152; respirations 52. 1 p.m.: Respirations 44; pulse 160; temperature 102·5°; response to galvanism as usual. 3 p.m.: Temperature 103·2°; respirations 44; pulse 120; galvanism causes urine to pass. 5 p.m.: Temperature 103°; pulse small and weak, 200; respirations 44. 6.30 p.m.: Temperature 106·2°. 8 p.m.: Heart beating very rapidly; respirations 44; temperature 103°. From this time the heart's action gradually became weaker, until it ceased at 11.30 p.m. The blood was fluid when taken from the body; one hour after death it rapidly coagulated. Dr. O'Brien assisted.

Experiment 12.—July 24.—A dog was bitten at 7.50 a.m. 8 a.m.: Temperature 103·4°. 8.23 a.m.: Again bitten by another snake, as we were in doubts about the efficacy of the first bite. 8.30 a.m.: Affected; commenced artificial respiration. 9 a.m.: Temperature 102·5°; applied heat; pulse weak and irregular, 64. 11 a.m.: Respirations 36; temperature 102·8°; pulse 200; response to galvanism. 1 p.m.: Pulse 180; temperature 103°; respirations 38. 3 p.m.: Pulse 140; temperature 103·2°; respirations 36; response to galvanism. 6 p.m.: Pulse 200; temperature 102·6°; respirations 32. 8 p.m.: Pulse 136; respirations 36; temperature 100·2°. 10 p.m.: Temperature 103·2°; pulse 160; pretty good respirations, 28; had passed water; no response to galvanism. 11.20: Heart ceased to beat, fourteen hours and fifty minutes after the commencement of artificial respiration. Blood coagulated. Assisted by Dr. O'Brien.

Half a drachm of the saliva of dog No. 11 was injected hypodermically into a pigeon. The bird died on the morning of the second day.

Ten drachms of the saliva of dog No. 11 were injected into the femoral vein of a dog. The result was great prostration and a gradual fall in the temperature.

(*To be continued.*)

A CASE OF

ACUTE PLEURISY RESULTING QUICKLY IN EMPYEMA — OPERATION — RECOVERY.

By GEORGE SCOTT, M.D.,
Physician to the Royal South Hants Infirmary.

W. H., AGED 40, a short, stout, robust-looking man. States that he has all his life enjoyed very good health, having only occasionally suffered from trifling ailments. His present illness dates from Monday evening, June 2, 1873, when he had a very severe rigor. I saw him for the first time on June 4. He was then complaining of pain in the head and back, want of appetite, and thirst. His tongue was very foul. Pulse not high: between 80 and 90 in the minute. I prescribed some saline mixture to be taken every three hours.

At 1 a.m. of June 6 he was seized with a very severe cutting pain in the right side, just above the liver. A dose of opium was given, and a sinapism was applied externally to the painful part. At noon on the same day I detected a loud friction-sound at the lower part of the right lung, where he complained very much of severe pain, particularly on taking a deep inspiration. Tongue still very foul. I ordered six leeches to be applied immediately, and subsequently linseed-meal poultices to the painful part. ℞. Calomelanos gr. iij., pulv. ipecac. gr. ij., pulv. opii gr. vj., cons. rosarum q. s.; divide in pilules xij., una omni quartâ horâ sumenda.

June 7.—Pain in right side much relieved by leeches. A distinct to-and-fro sound is heard to-day over the cardiac region. ℞. Pulv. rhei, pulv. jalapæ, āā ʒ ss., podophyllin gr. ij., sodæ bicarb. ʒij.—M.; divide in pulveres iv., unus omni mane sumendus.

9th.—Pain in the right side better. There is considerable dulness on percussion at the lower part of the right lung, together with diminished respiratory sound and diminished vocal thrill at the same part, thus indicating effusion into the cavity of the right pleura. Omittantur pilulæ calomelanos, etc., et ℞. Potassæ nitr. ʒj., spt. æther nitr. ʒiij., aquæ cinnamonii ad ʒxij.—M.; cochl. magnum quater in die sum. Contin. pulv. rhei, etc., omni mane; to have no solid food, but liquid nourishment *ad libitum*, such as beef-tea, milk, yolks of eggs, etc.

12th.—Pulse 92; temperature 100·2°; respiration 36. Condition of patient is much the same as at last report.

14th.—11.15 a.m.: Pulse 90; temperature 100°; respiration 34. He complained this morning of an acute pain in the left side, just below the heart. This was considerably relieved by a mustard poultice. A friction-sound is heard on the left side of the chest posteriorly, just about the spine of the scapula, also in the axillary line and in front of this. Tongue foul. Urine more copious. Sumat æger pulv. rhei, etc., statim.

15th.—10.30 a.m.: Pulse 114; temperature 101·8°; respiration 44. Bowels moved five times since last visit. Tongue still foul. Friction-sound on the left side heard the same as yesterday. To-and-fro murmur over the cardiac region still distinct. Sumat ægar pulv. rhei, etc., cras mane.

16th.—12 noon: Pulse 106; temperature 100·8°; respiration 40. Bowels freely moved by powder; urine copious, high-coloured, and thick with lithates; tongue foul; sweating profusely. Friction-sound still distinctly heard on the left side posteriorly below the spine of the scapula, and very loud anteriorly, just below, and a little external to, the left nipple; at the latter spot the friction can be felt by the hand placed on the chest. On the right side of the chest posteriorly there is absolute dulness on percussion as high as the level of the fifth dorsal spine; above this there is slight dulness up to within one inch of the apex. The breathing is very indistinctly heard over this absolutely dull portion, and the vocal thrill is here quite absent. Above the level of the fifth dorsal spine the breathing is heard, and the vocal thrill can be felt, although neither so distinctly as on the left side. He lies chiefly on his right side. The to-and-fro murmur over the cardiac region can scarcely be heard to-day, and the heart-sounds are indistinct and muffled. When the patient is lying on his right side the respiration is thirty-nine in the minute; when on his left side it is forty-three in the minute. Diet consists of from one to two quarts of beef-tea, about one pint of milk, four or five eggs, a little farinaceous pudding, etc., and a dessertspoonful of brandy four times in the twenty-four hours.

17th.—11.15 a.m.; Pulse 100; temperature 101·9°; respiration 40. Bowels well open; urine not quite so copious; sweating profusely. Mr. Mott saw the case with me to-day, and we determined to try a little longer the effect of medicines in causing the absorption of the fluid in the right pleural cavity, but if we saw no improvement by the end of the week (June 21), to resort to paracentesis. To take double dose of the nitrate of potash mixture—*i.e.*, one ounce four times a day.

18th.—12.30 p.m. (noon): Pulse 106; temperature 101·3°; respiration 35. Passed a good night. Bowels freely open; stools rather offensive; urine in fair quantity; tongue rather cleaner. Has still profuse sweats. Anteriorly on the right side the dulness in the middle and in the mammary lines extends up to about one inch above the nipple; in the axillary line almost up to the apex of the axillary fossa. Normal breathing is heard anteriorly at the apex of the right lung, but hardly at all below this. The friction-sound is not heard on the posterior part of the left side to-day, but it is so distinctly in the axillary line below the level of the nipple. A slight to-and-fro sound is heard over the cardiac region, and the heart-sounds themselves are still rather muffled. Continue mist. potassæ nitr., etc.

19th.—4.30 p.m.: Pulse 102; temperature 101·5°; respiration 40. Slept well. Tongue foul; bowels freely open; urine more copious—at least two quarts since last visit. Friction-sound on left side and to-and-fro sound over the cardiac region have disappeared; heart-sounds are still somewhat muffled. Sumat æger pulv. rhei, etc., cras mane.

20th.—1 p.m.: Pulse 106; respiration 36. Slept very well. Not quite so much sweating; tongue still rather coated; heart-sounds heard distinctly to-day, a bellows-murmur accompanying the second sound; bowels freely open; urine of normal appearance, and measuring about two quarts in the last twenty-four hours.

21st.—5 p.m.: Pulse 102; temperature 101·3°; respiration 42. Not so well to-day, although he did not sleep badly last night; he complains of pains in the legs, shortness of breath, weakness, and a sensation of tightness across the abdomen. Sweats more than ever. Bowels moved only once since last visit; urine about one quart in the last twenty-four hours; tongue still a little foul. Messrs. Mott and Ware saw the patient with me again this afternoon, and physical signs showing that the right pleura was more than half full of fluid (below the level of the fifth dorsal spine there was absolute dulness both anteriorly and posteriorly), and the genera

symptoms—dyspnœa, sweatings, exhaustion, etc.—becoming more urgent, we determined to relieve the man at once by tapping. Accordingly, the patient being in a sitting posture, I plunged into the seventh intercostal space, midway between the sternum and spine, a trocar and canula an eighth of an inch in diameter (the latter provided with a tap), withdrew the trocar, fitted on Bowditch's syringe, and drew away about a pint and a half of bland, creamy pus. I experienced some little difficulty in doing this, owing to the thickness and flakiness of the matter. Once, when the canula seemed to be stopped up, I reversed the action of the syringe, and injected two or three teaspoonfuls of luke-warm water into the pleural cavity, with the effect of again clearing the tube, and thus enabling me to get away as much pus as I did. The wound was closed by a pledget of lint secured by strapping, and the patient was put back to bed. He required a few doses of brandy to keep him up during the operation, which, on the whole, he bore very well. To have two or three ounces of brandy in the twenty-four hours. Diet as before. Continue mist. potassæ citr., etc., et sumat aeger pulv. rhei, etc., cras mane.

22nd.—10.15 a.m.: Pulse 104; temperature 101·4°; respiration 42. Rested well last night. Sweatings profuse, although not quite so much so as before. Tongue still foul.

23rd.—2 p.m.: Pulse 106, of fair strength; temperature 101·4°; respiration 37. Did not sleep very well last night. Not so much sweating. Bowels freely open; urine thick with lithates, and not quite so copious—about two to three pints in the twenty-four hours; tongue still foul. Friction-sound is again heard at the base of the left lung posteriorly. Heart-sounds normal. Decubitus still chiefly on the right side. He is sometimes a little delirious at nights. ℞. Pulv. rhei, pulv. jalapæ, āā ʒ ss., podophyllin gr. iij., sodæ bicarb. ʒ ij.—M.; divide in pulveres vj., unus omni secundo mane sumendus.

24th.—1.30 p.m.: pulse 106, of fair strength; temperature 100·7°; respiration 36. Has slept a great deal since last visit. Bowels freely open; urine rather high-coloured, about three pints in the last twenty-four hours; sweatings more copious than yesterday; tongue coated. Friction-sound is still heard on the left side posteriorly at the base of the lung. Diet as before, but he evinces some disinclination to take as much as he has hitherto done.

25th.—12 noon: Pulse 116; temperature 102·6°; respiration 34. Slept well last night; is very sleepy during the day also. Sweatings very profuse. Percussory and auscultatory sounds are much the same as they were before the tapping on the 21st inst.—viz., dulness posteriorly is absolute up to about the level of the fifth dorsal spine; laterally almost up to the apex of the axillary fossa and anteriorly up to one inch above the nipple. For some distance above this level the dulness is considerable; in fact, it is only at the apex of the right lung that the resonance is normal. The breathing is very indistinctly heard over the right lung below the level of the spine of the scapula, and gradually diminishes downwards until at the base it is scarcely heard at all. Below the level of the nipple, anteriorly and posteriorly, the vocal thrill is totally absent on the right side. Diet as before, with the addition of a little minced mutton-chop.

26th.—Pulse 126; temperature 102·8°; respiration 40. Passed a fair night. Sweating still very profusely; skin almost covered with sudamina; bowels freely open; urine about two quarts. He is beginning to feel rather a disinclination for food. Altogether he feels worse to-day.

27th.—11 a.m.: Pulse 120; temperature 101·9°; respiration 40. Bowels freely open; urine about one quart; tongue still rather foul. Had no meat yesterday, but takes his food better to-day. Omittatur mist. potassæ nitr., etc., et ℞. Ac. sulph. dil. ʒ ij., inf. gentianæ co. ad ℥ xij.—M.; cochl. magnum ter in die ante cibum sumendum. Contin. pulv. rhei, etc., omni secundo mane.

28th.—11 a.m.: Pulse 116; temperature 100·1°; respiration 34. He was very bad yesterday afternoon and evening—suffered much from dyspnœa and extreme prostration. This morning at 12.30 he was so weak that a dessertspoonful of brandy was administered every hour for several hours in succession. This rallied him considerably. Sweatings most profuse and exhausting. Diet as before, but eggs have been increased to seven or eight in the twenty-four hours. Tongue coated; bowels freely open; urine copious.

29th.—10.45 a.m.: Pulse 122, of fair strength; temperature 100·9°; respiration 38. Tongue still coated; sweatings are still very profuse; appetite better.

30th.—12 noon; Pulse 118; temperature 99·2°; respiration 38. Heart-sounds normal. Sweatings profuse.

July 1.—2 p.m.: Pulse 124; temperature 102·3°; respiration 46, while he is lying on the back. Not so much sweating. Sleeps a great deal. Tongue still rather foul. Diet less fluid. Had some mutton and a wing of a chicken yesterday for dinner.

2nd.—11 a.m.: Pulse 122; respiration 36. Has slept a great deal since last visit. Tongue cleaning. Considerable sweating. On percussion, absolute dulness begins on the right side—anteriorly, one inch above the level of the nipple; posteriorly, at the level of the fifth dorsal spine. Left side normal. Heart-sounds normal.

3rd.—4.30 p.m.: To-day, in the presence of Messrs. Mott, Ware, and Hobley, the patient sitting in an arm-chair, I plunged a large trocar about a quarter of an inch in diameter into the seventh intercostal space in the old wound made on June 21, and there flowed away in the course of a few minutes rather more than a quart of pus of slightly offensive odour. I afterwards enlarged the opening with a narrow probe-pointed bistoury to the extent of one inch and a half, withdrew the trocar, and put in an indiarubber drainage-tube of about a quarter of an inch in diameter, and by the side of this an elastic catheter of slightly smaller calibre. These having been secured by strapping, the patient was put back again to bed. The drainage-tube was long enough to reach to a vessel placed on the floor. The ether spray was used to freeze the skin before cutting. The patient bore the operation well. Continue diet and medicines as before.

4th.—11.15 a.m.: Pulse 114; temperature 99°; respiration 36. Slept pretty well last night, and seems none the worse for the operation of yesterday. About half a pint of matter has come away by the tube. Still has profuse sweatings. Bowels not moved since last visit. About one quart of urine since yesterday afternoon. Tongue not quite so foul. By injecting water through the elastic catheter, the fluid escapes easily by the drainage-tube, and thus washes out the pleural cavity effectually. This is to be repeated every day. He lies comfortably and almost constantly now on the left side.

5th.—8 p.m.: Pulse 112; temperature 99·9°; respiration 36. Slept very well last night. Bowels open; not so much sweating; no pain in affected side. About a quarter of a pint of matter has come away by the tube. Appetite pretty good; had meat and a small quantity of vegetable for dinner. Complains of a feeling of tightness across the bowels. ℞. Olei ricini ℥ ss. cras mane sum.

6th.—3.30 p.m.: Pulse 110, rather weak; temperature 99·5°; respiration 32. Slept pretty well. Bowels have acted twice since castor oil, and the sensation of tightness of the abdomen is much relieved. Urine copious. Only about two ounces of matter have come away by tube. Tongue not quite so foul. Meat diet as before. ℞. Pulv. rhei, pulv. jalapæ, āā ʒ ss., podophyllin gr. iij., sodæ bicarb. ʒ j.—M.; divide in pulveres vj., unus omni secundo mane sum.

7th.—11.15 a.m.: Pulse 112; temperature 100·9°; respiration 36. Slept very well. Only about one ounce of matter has come away by tube. Tongue cleaning. Appetite improving rapidly. To have meat two or three times a day.

8th.—12.30 (noon): Pulse 112, of good strength; temperature 100·6°; respiration 30. Tongue almost clean. About one ounce and a half of matter has come away by the tube since yesterday. On percussion, dulness posteriorly begins on the right side at the level of the sixth dorsal spine, but it is only slight all the way down to the base of the lung. Anteriorly on the same side absolute dulness begins in the mammary line about one inch below the nipple; in the axillary line it begins on a level with the nipple. On auscultation the breathing is heard on the right side posteriorly pretty distinctly all the way down, but diminishing in loudness downwards. The breathing is distinctly heard on the anterior part of the right side of the chest. The vocal thrill is felt on the right side pretty much as on the left.

10th.—5.15 p.m.: Pulse 112; temperature 100·3°; respiration 30. Scarcely a tablespoonful of discharge has come away by the drainage-tube to-day. Tongue clean. Sweats very little.

12th.—1.15 p.m.: Pulse 106; temperature 99·4°; respiration 26. Patient is getting on very well. Sleeps well at night; feels stronger; appetite very good—eats meat three times a day. I took out both tube and catheter yesterday, and substituted two smaller elastic tubes. These latter came out either last night or this morning, and hardly any dis-

charge has come away from the opening in the side. Endeavouring to pass a small silver probe into the latter, it did not enter more than one inch and a half in any direction. I did not replace the tubes, but merely plugged the opening as deeply as possible with a long narrow piece of lint, and covered the latter with a larger piece as a dressing to the unhealed wound, and then secured the whole with strapping. This dressing is to be repeated every day until the wound is healed. Meat diet as before. To have half a tumblerful of porter at dinner, and only one ounce of brandy besides in the twenty-four hours.

14th.—11 a.m.: Pulse 106; temperature 100·4°; respiration 28. Patient is up to-day; he sat up for a short time yesterday and the day before also. Feels that he is gaining strength. Bowels act once a day regularly; urine copious; appetite very good; tongue a little coated. On examining him with the chest bare, the right side looks shrunken. On a level with the ninth rib in the axillary line the right side measures fourteen inches and a quarter, the left side measures fifteen inches and a quarter. He is gaining flesh a little. Seems in very good spirits. No discharge from side. Auscultatory and percussory signs much the same as on the 8th inst. Sumat æger pulv. rhei, etc., cras mane. Continuatur mist. ac. sulph. dil., etc.

16th.—11.30 a.m.: Pulse 110, of fair strength; temperature 99·5°; respiration 30. Tongue a little foul. Appetite not quite so good. ℞. Pulv. rhei, pulv. jalapæ, āā gr. x., podophyllin gr. j., sodæ bicarb. ℈j.—M.; ft. pulvis statim sumendus.

18th.—2 p.m.: Feels better. Powder taken on the 16th inst. acted pretty well. Tongue still rather foul. Appetite not quite so good as it has been. ℞. Mist. aperient. ℥ij.; ft. haustus cras mane sum.

21st.—Better; pulse 108; wound in side healed.

25th.—4.30 p.m.: Pulse 112; tongue foul. Stomach is evidently out of order; complains of want of appetite. ℞. Pulv. rhei, pulv. jalapæ, āā ℈ij., podophyllin gr. iij., sodæ bicarb. ℥j.—M.; divide in pulveres vj., unus omni nocte sumendus. Contin. mist. ac. sulph. dil., etc.

29th.—Not getting on well. Breathing is short, and pulse quick. Nevertheless, he was out to-day from 7 a.m. until 11 a.m. without feeling much fatigue. Powders have acted pretty well; motions offensive. Tongue still foul; and appetite not good. There is considerable dulness over the lower half of the right lung anteriorly and posteriorly, beginning at the level of the nipple. Breathing is indistinct over this dull part, but it is still audible—less so, of course, as one approaches the base; vocal thrill is here also diminished. On a level with the ninth rib in the axillary line, the right side measures fourteen inches and three-eighths, the left side measures fifteen inches and a half. On a level with the eighth rib in the axillary line, the right side measures fifteen inches and three-quarters, the left side measures sixteen inches. Sumat æger pulv. rhei, etc., hâc nocte. ℞. Mist. aperient. ℥vj.; pars quarta hausti omni secundo mane sumenda. Has a pint of porter and a little brandy daily.

August 2.—2 p.m.: Pulse 112; respiration 33. Does not feel so well. Complains much of weakness, although he goes out every day. Tongue very foul, although the bowels are very freely opened by the medicine; appetite bad. Sweated a little last night. Omit. mist. aperient. et mist. ac. sulph. dil., etc., et ℞. Pulv. rhei, pulv. jalapæ, āā ℈ij., podophyllin gr. iv., sodæ bicarb. ℥j.—M.; divide in pulveres vj., unus omni tertia nocte sumendus. ℞. Potassæ nitr. ℥j., spt. æther nitr. ℥iij., aquæ cinnamonii ad ℥xij.—M.; cochl. magnum quater indies sum.

9th.—Not doing well. Seems low-spirited, and says he is very weak and has no appetite. Feels sick occasionally, and has retching at times. Says he has great difficulty in taking the nitrate of potash mixture. To take only two doses of the latter in the day instead of four. Bowels open.

11th.—Yesterday afternoon the wound in the right side (over the seventh intercostal space) broke open, and discharged about a quarter of a pint of pus. Linseed-meal poultices have been applied ever since, and the side is still discharging pus freely. Opening admits a probe readily, and to the depth of three inches. Pulse is of good strength—90 in the minute when he is lying down, and 104 when he is sitting up. Has a little cough occasionally. Appetite not much better. Linseed-meal poultices to be continued to the side. The nitrate of potash mixture to be taken four times a day.

12th.—12.15 (noon): Pulse 88. Slept well last night. Cough troubles him a little at times. Vomited once yesterday. Side is discharging freely; about half a pint of pus has come away since last visit. Opening in cicatrix is larger—it is now about half an inch long. Has had a great deal of sweating since last visit. Tongue still very foul; appetite a little better; bowels open. Continuatur mist. potassæ nitr., etc., et sumat æger pulv. rhei., etc., statim. To omit porter, and to take half an ounce of brandy with water twice daily.

14th.—Pulse 100. Tongue much cleaner. Coughs very little now. Appetite better. Side is still discharging pretty freely.

16th.—1 p.m.: Pulse 94, of fair strength; respiration 26. Feels much better. Tongue almost clean; appetite still improving; bowels rather relaxed; no cough whatever now; side has healed up again; no discharge since yesterday morning. Omit. mist. potassæ nitr., etc., et resumat. mist. ac. sulph. dil., etc.; sumat æger ℥ ss. olei jec. aselli indies.

18th.—Much the same as at last report. Went to Ventnor to-day for change of air.

September 22.—I saw the patient this morning. He looks well and has gained flesh considerably since last report. He can walk easily and without fatigue seven or eight miles in the day. On examination of the chest there is slight dulness on percussion on the right side below the level of the lower angle of the scapula, both anteriorly and posteriorly, and here the respiratory sound is not quite so audible as in the corresponding situation on the left side. Vocal thrill is about the same on both sides. On a level with the ninth rib in the axillary line the right side measures fifteen inches and a quarter; the left side measures sixteen inches. On a level with the eighth rib in the axillary line the right side measures fifteen inches and three-quarters; the left side measures sixteen inches and one-eighth.

Remarks.—From the fact of my seeing this patient before the physical signs of inflammation of the pleura were present, I was thus enabled to ascertain precisely the time when the attack of pleurisy began. I saw the man on June 4 and June 5, but it was until the 6th of that month that a loud friction-sound was heard at the lower part of the right lung. Effusion into the right pleural cavity quickly took place, and, as above reported, the patient was in such a condition on June 21—*i.e.*, fifteen days after the commencement of the pleurisy—that it was deemed advisable to perform paracentesis thoracis. The fluid evacuated was, much to my surprise, found to be purulent. The wound was closed again after the operation. When, however, on July 3 I tapped a second time and enlarged the opening in the side, leaving the latter patent, the cavity soon contracted, and the patient made what may be considered a rapid recovery. The only untoward circumstance was that the wound closed somewhat prematurely and the matter collected again to a small extent; but when this was spontaneously evacuated on August 10 the patient soon regained strength, and was quickly convalescent. I may here repeat what I said on a former occasion,(a) that in performing paracentesis thoracis it is advisable to use as large a trocar as is possible and safe, as very small ones are apt to become blocked up by flakes of lymph, blood-clot, or thick pus, and even under the most favourable circumstances render the operation longer and more tedious than there is any occasion for. When one is certain of the presence of fluid in considerable quantity in the pleural cavity, a good-sized trocar can be as safely used as a very small one.

Southampton.

The Cholera in Paris.—The progress of cholera during the preceding week, if it has not been considerable, does not give us any hope of a speedy cessation. The cases, without being much more frequent, still continue very fatal—a circumstance we must bear in mind in appreciating the probable phases of the epidemic. We wish to be neither alarmists nor optimists. Paris is evidently still under the influence of a cholera epidemic—an epidemic which up to the present time is not very serious in relation to the number of cases, but is so with regard to the relative number of deaths.—*Union Méd.*, October 23.

Lime-water in Stings of Bees or Wasps.—M. Dauverne states as the result of numerous trials that the pain and suffering caused by these may be immediately assuaged by the application of lime-water—a remedy which may always be prepared at once by the aid of a little quick-lime and a glass of water.—*Union Méd.*, October 25.

(a) Vide *Medical Times and Gazette*, December 14, 1872, p. 652.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES UNDER THE CARE OF MR. BRYANT.

Case 1.—*Dislocation of the Head of the Femur on to the Dorsum Ilii in a boy aged* 6.

George M., aged 6, was admitted on March 20, 1871, into Guy's Hospital with a fracture of the left leg, having been run over by a cart. The fracture was a simple one, and was put up in splints. Ten days after his admission something was found wrong about his right hip, and on Mr. Coote's attention being drawn to it, a well-marked dislocation of the head of the femur backwards and upwards was discovered. Chloroform was given, and reduction readily effected by manipulation, flexion, adduction, rotation outwards, and extension. A good recovery followed.

Case 2.—*Dislocation of Right Femur into Foramen Ovale in a girl aged* 14—*Reduction by Manipulation.*

Jane H., aged 14, was admitted into Guy's Hospital under Mr. Bryant's care on June 8, 1871, with serious injury to her right hip. She had received it the day before her admission on getting out of an omnibus; her right leg being caught and drawn outwards and backwards. She has been unable to walk since the accident. On admission, the girl on standing held her right leg forward with the foot pointed; the pelvis was much tilted upwards on the opposite side, the anterior superior spinous process of the ilium being three inches higher on the left than on the right side. Posteriorly the fold of the buttock had entirely disappeared. The head of the femur could be felt beneath the adductor muscles. Mr. Bryant pronounced the case to be one of dislocation into the thyroid foramen. He reduced it with the greatest facility, with the patient anæstheticised, by simply flexing the thigh and then adducting it.

Case 3.—*Dislocation of the Femur on to the Dorsum Ilii in a boy aged* 14—*Reduction.*

Joseph S., aged 14, was admitted into Guy's Hospital on August 2, 1871, under Mr. Bryant's care, with a severe scalp wound and a dislocation of his hip after a fall off a dock of many feet. The dislocation was clearly one backwards and upwards on to the dorsum. It was at once readily reduced, after chloroform was given, by manipulation, flexion, adduction, rotation outwards, and extension. A good recovery ensued.

Case 4.—*Paralysis of Muscles supplied by the External Popliteal Nerve, and severe Pain in the course of its Distribution, the result of the Contraction of a Cicatrix.*

George S., aged 41, came under my care at Guy's Hospital on May 21 for severe pain down the front and outer side of his left leg and foot, with almost complete paralysis of the extensor muscles. The pain was at times very severe, and the paralysis had been gradually coming on for some years, following an injury sustained twelve years previously about the head of the fibula, which had caused a severe wound in the part. On examination Mr. Bryant found a dense cicatrix over the head of the fibula, and about two inches round it, tightly binding down the external popliteal nerve to the bone. Pressure on the spot excited severe pain. A free vertical division of the cicatrix on its anterior and posterior borders gave immediate relief, and when seen six weeks afterwards he was free from pain and well in all respects.

Case 5.—*Cancer of Femur after Cancer of Breast.*

Sarah E., aged 41, was admitted into Guy's Hospital under Mr. Bryant's care on March 19, 1871, with a fracture of the left thigh-bone. It appeared that she had been in the Hospital nine months before, under Mr. Poland's care, for cancer of the left breast, which was then removed. She left the Hospital, and soon experienced what were called rheumatic pains, which prevented her getting out of bed without assistance. On the day before her admission she was removing from her bed to a chair, with the aid of her daughter, when she felt her left leg give way. She thinks she slightly twisted it. On admission, a distinct fracture of the left femur is readily detected at the junction of the middle and lower third. The limb was put up in splints at once. The patient died on April 6, having gradually sunk. After death a cancerous nodule was found in the bone at the seat of fracture, as well as in the ribs, vertebræ, liver, kidneys, spleen, etc. There were also many in the seat of the operation in the left breast.

MIDDLESEX HOSPITAL.

BURSAL SWELLING AT THE OUTER MALLEOLUS CONTAINING MELON-SEED-LIKE BODIES.

(Under the care of Mr. HULKE.)

Bursal swellings of the sheaths of the flexor tendons, containing loose bodies, which are common enough on the wrist and in the hand, occur much less frequently in other situations, and are but seldom met with in the foot. Many of the solid, loose bodies—which were mostly flattened ovals—had a small projection at one end of the longest axis, the vestige of a shrunken stalk. Their structure was cellular, the interior consisting of cells resembling those of cell-cartilage, overlaid externally by others of a more flattened pavement-epithelium-like form. The history pointed to a chronic sub-acute inflammation, excited by sprains, as their origin.

A tall, weakly servant-girl, aged 18, was admitted into Queen ward, January 28, 1873, having behind and below the outer malleolus an elongated, elastic, fluctuating swelling, not tender when handled, not painful when going down, but very painful in walking, and accompanied with a feeling of great weakness, rendering her unable to stand securely on this foot. It moved with the perouei tendons when these muscles were put in action. The girl dated the swelling from a severe sprain three years ago, which was followed by much swelling of the ankle, and which laid her up for several weeks. Some time after she again sprained this ankle, and the swelling never quite disappeared. Blistering and compression not producing any decrease of the swelling, the bursal nature of which was evident, a valvular opening was made into it under an antiseptic spray, and a large number of solid, melon-seed-like, gristly bodies were let out together with a little glairy mucus. The bursa proved multilocular, and other compartments of it were subsequently evacuated; these contained only a viscid albuminous substance. All the punctures healed immediately. Firm compression was afterwards made, and she left on the 17th of the following month, much relieved.

BURSAL TUMOUR OVER GREAT TROCHANTER.

(Under the care of Mr. MORRIS.)

[Reported by Mr. Lewis, House-Surgeon.]

Bursal tumours over the great trochanter are said sometimes to be common in men, such as soldiers, who are in the habit of lying much upon their side, on the ground or on hard benches. In the following case the tumour, evidently of bursal origin, could not have been produced in this manner, as neither the man's occupation nor his history pointed to such a cause:—

John H., aged 48, a French polisher, was admitted into Forbes ward on September 2 with a tumour over the left great trochanter. He stated that his business necessitated his being on his feet all day, and that he had not been in the habit of lying on the left side, nor has he subjected that part of his body to an excessive pressure. The tumour has been forming for two years. The first symptom was a feeling of grating when the hand was applied on the outer side of the left great trochanter, especially during walking. It has not increased much for the last twelve months, but has grown very painful.

On admission there was in the position mentioned above an oval swelling, with its long axis in length of limb, and measuring three inches by two. It was hard, and slightly movable upon the bone. When quiet in bed he did not suffer much, but on moving it caused him pain.

On September 3 chloroform was administered, and the tumour was removed. An incision eight inches long was made along the axis of the limb, and the skin was reflected back on each side. The tumour was found beneath the fascia, and on the insertion of the gluteus medius and tendon of the gluteus maximus, and upper part of the origin of the vastus externus. After removal it was divided, and it was then seen to be composed of a very dense thick-walled cyst of fibro-cellular structure, with only a very minute cavity the size of a hazel-nut, which contained a few drops of semi-solid creamy-looking fluid. There is little doubt that this cavity had gone on contracting

by the gradual thickening of the walls, as the tissue immediately surrounding the cavity had no appearance of softening or degeneration.

LONDON HOSPITAL.

PECULIAR SPASMODIC MOVEMENTS IN A SUPPOSED MALINGERER—INSANITY (?)—SUICIDE: SUFFOCATION PRODUCED BY A PIECE OF RAG PUSHED INTO THE MOUTH—WITH REMARKS.

(Under the care of Dr. RAMSKILL.)

The patient (J. B., aged 57, dock labourer) said—and he made this statement calmly and clearly—that "about a fortnight before admission into the Hospital, one day whilst in the dock urinal, he was seized with violent shaking of his head, arms, and legs, which he was unable to control. He was found in this condition and taken home to bed, and during the same evening and following days had several similar attacks. He never lost consciousness, but has become deaf in his right ear." He seems to have met with more than one accident, and about eighteen months ago he fell down a ship's hold (twelve to fourteen feet). He was in consequence stunned, but soon recovered. Whilst in the Hospital it was observed that he was a muscular, well-made man. He was civil and quiet, giving very little or no trouble to the nurse. His usual position in bed was upon his back, with his hands lying across his chest. He seemed to take no interest in what went on in the ward; but this was attributed to his partial deafness; but his somewhat expressionless face changed to a smile on receiving any little attention. His only peculiarity was that he remained each day in the water-closet until called out, but during the last few days of his life he was frequently seen staring at the ceiling and moving his lips. The so-called convulsive attacks came on at irregular intervals in the day, and continued generally one or two minutes; they varied greatly as to the part affected. Sometimes his head would be moved from side to side, and with partial rotation; the shoulders and chest were also moved to some extent. In other seizures he rapidly and violently rubbed one arm with the opposite hand, or he moved one leg up and down very quickly. All the movements were made with very great rapidity, and so violently that on two or three occasions he was thrown off the bed. After each seizure his face was flushed and his body sweating profusely. He also appeared much exhausted and only semi-conscious—in fact, it was impossible to rouse him sometimes, even with pinching his skin or pulling his limbs for two or three minutes.

A day or two before his death, however, his manner altered: he became restless; he went to the bedside of a patient who was lying near, and said he was going to do something which would benefit him; he then seized the patient's throat and almost choked him. It was then found necessary to place him in another room. In the evening the nurse noticed that he was placing a piece of rag in his mouth, but did not suspect his object, and shortly afterwards he was found dead.

The post-mortem examination clearly showed that he had committed suicide. A metal crucifix, three inches in length, was found pushed far back into the commencement of the pharynx, and besides this, and pressing firmly upon it, was a piece of rag which filled up the mouth completely. The lungs were greatly congested, the right side of the heart much distended, whilst the left ventricle was firmly contracted, indicating that death was due to suffocation.

In speaking of this case, Dr. Ramskill remarked—"Probably all physicians have occasionally found it difficult to determine whether a patient was malingering or not; and this is especially so in hospital practice, where it not unfrequently happens that little or no collateral evidence showing the state of the patient previous to his admission into the hospital can be obtained, and we cannot confidently accept the patient's own statements as to his symptoms. Moreover, it may happen, as in this case, that the symptoms are so odd, so unlike the recognised symptoms of disease, and so manifestly under the patient's will, that we are led to conclude that the patient is feigning. As regards the patient in question, the rapid movements of his head and arms, from side to side and backwards and forwards, were totally unlike the convulsive movements of epileptiform seizures, the movements of chorea, or other well-recognised disease. It was, moreover, noticed by several of us that he could execute these movements when requested to do so. One day I said to him 'Now let us see the movements,' and at once his head was thrown in a rapid manner from side to side and in various other directions, and the action continued for some minutes. He did not seem to be mentally affected; day by day, when spoken to, he answered questions rationally, and gave an intelligible account of his health and doings. His statements, his manner of speaking, and his conduct in the ward until just before his death, did not lead us to regard him as insane; in fact, it was the opinion of several persons that he was malingering, and this opinion was further strengthened when it transpired that he had seemingly an end to gain in deceiving us. He said that he had received an injury whilst working in the dock, and he had in consequence claimed compensation from the dock company. It was true that he had made a claim on the company, for one of their inspectors called to make inquiries respecting his condition. His conduct a day or two before, and the manner of his death, at once suggested that he was insane; and, on making inquiries, the Catholic priest who had known him said that 'some time before the patient came into the Hospital he had noticed him loitering about his church in a singular manner, and he asked the patient why he did so; he replied that he had seen the devil, who had told him that he was to have a fit.' The priest's statement, tending to show that this patient had delusions, taken together with the act of self-destruction, would probably convince many persons that he was insane; and the case is instructive, as showing that there may be suicidal tendencies and at the same time no noticeable mental disturbance, at least whilst the patient is under medical observation, and the only indication of disease may be extraordinary spasmodic movements. In all cases of supposed malingering we have to inquire if the patient be healthy—simply feigning illness to obtain something he desires—or if he has cerebral disease with disordered ideas (may be delusions), and his actions therefore be simply the expressions and attendants of his ideational disturbance. At first sight, these two classes might seem to be totally different, and, so to speak, completely separated from one another, especially if we regard this question from an abstract or metaphysical point of view. If, however, we consider it from a physiological basis, then it is evident that the difference is one of degree only. For the mere fact of a patient feigning disease evidences that his conduct and ideas are so unlike those of mankind at large that they are abnormal, and must be the result of abnormal cerebral action. This abnormal cerebro-mental action, with its attendant symptoms, may be consequent on impressions the brain has received from circumstances which occurred a few days, weeks, or years before, or it may depend upon some inherited defect in the brain itself. Nevertheless, in such a case the absence of the objective signs of disease, the history of the patient, and his conduct, are such that no one would regard him as insane or suffering from other disease. In the other class of cases not only does the one act feigning disease betray mental disorder, but other actions of the patient denote cerebro-mental disorder. It may be, as with this patient, that there are spasmodic movements and delusions, and these denote that there is great cerebro-mental disturbance. It is, however, to be recognised that the mental disorder is much greater in the one class of case than in the other, and a medical man is called upon to estimate the degree of disorder. Experience shows that there are various degrees of difference. Some persons feign disease, and their actions are such that perhaps no one would regard them as suffering from disease; others seemingly feign disease, and opinions differ as to whether the patient is mentally unsound or not. This occurs in not a few hysterics. In other cases the patient is urged by some hallucination to perform certain acts, and state things which seemingly are intended to mislead: such a person is considered to be insane. Persons, therefore, disagree in opinion because they begin by looking at the case from different standpoints—each observer having his own mental conception as to what is a diseased and what is a healthy mind; and we disagree because we cannot look at the case from each other's standpoint. And, again, we fail to satisfy some persons because they expect us to make broad lines of separation and difference between malingering mental disorder and insanity; and we cannot do so, because they do not exist in nature."

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Medical Times and Gazette.

SATURDAY, NOVEMBER 1, 1873.

SIR HENRY HOLLAND.

The public and the profession alike will be pained and surprised to hear of the death of Sir Henry Holland. Only the other day the papers told us that he was present at the trial of Marshal Bazaine; and we have been so accustomed, through a very lengthy series of years, to hear of his long journeys, of his visiting every historical and well-known place, and of his presence at every important scene and event, that we had almost ceased to think of him as mortal; and he is probably one of the very last men one would have expected to hear of as having succumbed to a cold caught on a journey. Yet we learn that his unexpected and almost sudden death was caused "by a cold caught on his journey home from Paris." Distinguished as a physician, a traveller, and an author; known as a man of mark so far back as the early days of the Peninsular War; and wondrously active in mind and body to the last—his death, on his eighty-sixth birthday, will make a blank that will be very widely felt and mourned. His career was, indeed, a very remarkable one. Eminent as was his position as a physician, he was still more distinguished for his knowledge of the world and his rich experience of men and things. He had been brought into close contact with all or almost all the most important events and personages of the century. He may be said to have begun his medical career as travelling physician to the unfortunate and unhappy Caroline of Brunswick, then Princess of Wales, and was the most important and effective of the witnesses for the defence at her trial when Queen Caroline; while for more than twenty years before his death he was one of the Physicians-in-Ordinary to her Majesty Queen Victoria; and he was present, as we have before mentioned, though not in the character of a witness, at the trial of Marshal Bazaine now being carried on at Versailles. He visited the battle-field of Vittoria immediately after Wellington's victory there, and he witnessed the entry of the Allied Armies into Paris; and he was present in America during the Civil War, and rode over the battle-field of Gettysburg. He was well acquainted with Madame de Staël, counted among his personal friends six Presidents of the United States of America, and was the physician and friend of six Prime Ministers of Great Britain. Indeed, when one reads—and who has not read?—the charming and extremely interesting "Recollections of a Life" which Sir Henry Holland gave to the world in his eighty-fourth year, it seems as if he had known as patient and friend almost every person of note and celebrity of the age. Yet he did not attain eminence by such means as are commonly held to be the necessary steps to success in our profession. He never was attached to any hospital in London; he took no active part in, and was rarely if ever seen at, any of our medical societies; and he was not a teacher or lecturer in medicine, nor by any means widely or popularly known as a medical author, though his "Medical Notes and Reflections," published in 1839, and his book "On Mental Physiology," are remarkably able, valuable, and suggestive works. How, then, may his early and remarkable success as a physician be explained? His success was as rapid as it was great and lasting. We must refer our readers to another part of our pages for some details of his life, but it may be worth while to give a few moments to the consideration of the question we have asked above. The first thing to be noticed is, we think, that Sir Henry Holland never knew the pressure and harass of pecuniary anxieties. His father's circumstances and liberality enabled him to spend in constant travelling the years between 1811, when he took his M.D. degree, and 1816, when he settled in London; and protected him when he did so begin to seek practice from all need of care or dread lest expenditure should outrun income. Then comparatively very few men had in those days travelled to such an extent, and with such boldness, active interest, and intelligent purpose as he did; and his reputation as a traveller was so high that it gained him the Fellowship of the Royal Society in the very year (1816) in which he began his professional career in town. Besides the celebrity thus acquired, he had during his travels made the acquaintance of very many able and prominent men, whose friendship was of great service to him. For four years after commencing practice he also annually visited Spa professionally, and these visits, he has himself told us, were of great use in making him known to a host of notabilities, among whom were the Emperor Alexander, the Duke and Duchess of Cumberland, Wellington, Londonderry, and the Prince and Princess of Orange; and his unfailing habit, throughout his life, of devoting two months of every year to foreign travel, did no doubt in some degree help to widen and keep up his professional reputation. But we suspect that the most powerful cause of his success was his connexion with the Whig party. We do not mean to say that he was an active politician, but while at Edinburgh he made the acquaintance of the remarkable circle of great and brilliant men then to be found in the modern Athens, and through them he became connected with the *Edinburgh Review* and the leading Whigs. This connexion probably, at least, helped to procure him his appointment as Physician to the Princess of Wales, and the clearness, honesty, and boldness of his evidence at her trial, when Queen, made him a very prominent and (with "the Queen's party") a very popular man. He very early gained the friendship of Lord Holland, and was a constant and welcome visitor at Holland House, and he married a daughter of Sidney Smith. All these things were undoubtedly of great weight and service in introducing him, at the very outset of his career, to practice of a high class. They gave him the opportunities that most men have to wait much longer and toil much more arduously for. But, we need not say, they did not make him successful, though they put success in his way. He was ready and fitted to grasp and profit by his opportunities. He was a learned, able, and skilful physician, and a man of high culture and fine perception, of varied and extensive acquirements, and of high social

qualities, and a clever and well-known writer, and was endowed with rare bodily as well as mental vigour.

No one can read his "Recollections of a Life" without being convinced that, if his life was exceptionally happy and prosperous, he was a man of exceptional character and qualities. He could not else have gained and kept the friendship and confidence of the crowd of celebrated men and women whose names occur in that remarkable volume. We suppose that no physician "falling upon days like these" will ever reach to eminence through the same influences and by the same paths that Sir Henry Holland did, but like qualities of mind and character will make opportunities and insure success under different circumstances. We fear it would be of little use to recommend to others Sir Henry's restrictions as to work and his long yearly holidays. To very many, or most, these are made impossibilities by those stern necessities of daily bread-winning, of which Sir Henry knew nothing. But undoubtedly his early and faithfully kept determination to limit his professional gains, and to take an annual two months' holiday, very largely helped him to preserve the activity and buoyancy of mind and the bodily vigour that enabled him when more than eighty to write his "Recollections of a Life" and to undertake and enjoy journeys of thousands of miles.

ASPIRATION.

II.

We might fairly divide our subject into two parts—viz., the use of aspiration as a means of diagnosis, and its use, again, as a mode of treatment; but inasmuch as the two processes may very often be combined, it is better to take a different division, and to deal with the medical and surgical uses of aspiration. As far as the medical uses are concerned, perhaps the most important relate to abscess and other fluid accumulations in the liver, to pleuritic effusions, to the rarer forms of excessive pericardial effusion, to ascites, to excessive tympanites of the stomach or alimentary canal, and more doubtfully to hydrocephalus and general anasarca.

As regards the liver, there can be no question of the immense value of aspiration both in abscess and hydatids, and even more so as regards the former than as regards the latter; for in the case of a hydatid cyst it has been shown that simple puncture with a fine trocar or even needle is sometimes enough to insure the death of the parasite. This apparently results from compression of the hydatids by virtue of the elasticity of their surroundings when a portion of fluid has escaped into the peritoneum, from which seemingly no evil results. But in the case of hepatic abscess things are far otherwise; and we do not know that anything can make this clearer than a very striking extract from an article on the subject by Professor Maclean, of Netley, in Reynolds's "System of Medicine." In the last volume of that work, which appeared in 1871, we find the following:—

"If it be true, as I believe it is, that the most favourable route an abscess of the liver can take is through the right lung, and the least favourable—the one giving the smallest number of recoveries—is through the abdominal walls, it appears to me unjustifiable to expose the patient, by a surgical operation, to the risk of admitting air, with its mischievous properties, into the cavity of an abscess tending to a comparatively safe point of discharge."

Next Dr. Maclean alludes to the use of Bowditch's syringe in one case, from which he augured well of it in future cases; but in the very next page is a note so telling that we again beg leave to reproduce it:—

"Since the above was in type, I have used this instrument again and again, and in some instances with the happiest results. In single abscesses tending to the surface I have no hesitation in saying that it affords the best hope of a happy issue."

Can anything be more striking than these two paragraphs?—and yet how brief a space had elapsed between the penning of the two! Surely, were this the only triumph of aspiration, it would be something for which to be proud as well as thankful.

Nor do we think the method less meritorious as regards disease of the pleura, especially in empyema. Who does not remember the wretched history of such cases? A poor patient would appear—emaciated, sweating, and with a hectic flush on the cheek, the side protuberant, the intercostal spaces bulging, and very likely with the fatal pointing about the fifth rib. What was to be done? If left alone, the patient would only die; if the side were perforated, and the pus removed, for a time he would improve, but only to fall back into a worse state than before. When the system of drainage-tubes was introduced, and the consequent ease of keeping the suppurating cavity sweet was made apparent, this was a great step, and in a pronounced case of empyema this probably still offers the best chance of safety; but by aspiration we ought to be able to prevent the formation of such purulent collections, save in such maladies as pyæmia, where they are only a local manifestation of a general condition, and where local treatment is useless. Take such a case as this: A healthy young man is exposed to violent heats in an ironmaker's works; and again, from the exigencies of his employment, is exposed to a pouring rain or heavy frost. He shivers, feels ill, gets a violent pain in his side, and applies for medical relief. In the olden time he would certainly have been bled; nowadays perhaps he has a blister. However, that stays the pleurisy, and again he returns to work, but only to fall back, and this time with a large effusion of fluid in his side. Now, what is to be done in such a case? Are we to leave him alone for a time, and then apply blisters, iodine, and the like to the affected side. True, with such treatment and a sound constitution the patient may get over the effects of his accident in six months—it may be less or more. But even if he does get over this, how is he left? With drooping shoulder and collapsed ribs, with adherent pleura and the risk of invaded lung,—not one of which is pleasant to contemplate. But with aspiration all this is different. You may resolve to tap, and you may remove what you think a moderate quantity of the fluid. All of which is quite possible as soon as the acute inflammatory symptoms have abated; but promptly in all cases after that you can operate—you can remove a given quantity of the fluid, and allow the lung to expand under the diminished pressure. Again you operate, and again allow the lung to expand, until the whole or as much of the fluid as can be with safety removed has been got rid of; and then you can leave the finishing touch to nature, exactly where it begins on the other plan. With such a mode of procedure we have seen patients who have been ill for months, in whom the fluid was getting turbid, and in whom before long we should have had an empyema, recover almost perfectly—not, perhaps, quite perfectly, for when there has been much effusion the lung is collapsed, and takes a long time even if it ever recovers its normal equilibrium; but in these cases it is quite certain never to do so without some extraneous aid. As we take it, a good sound rule for operation is to begin with a small tube, and to go on taking off fluid until the patient begins to cough—a sure sign that the collapsed lung is beginning to recover itself,—and then to leave matters for the time being. A day or two after, most likely, breathing sounds will be heard where previously all was silent; and with care this will go on, but as a rule it is bad policy to empty the pleura at once. It is, under such circumstances, much more likely to refill, especially if the lung has been long collapsed and is bound down, and there is much more risk of injuring the lung. Of this last accident M. Diculafoy makes light; but probably a more extensive acquaintance with the subject will lead him at all events to desire its avoidance.

Of pericarditis with effusion necessitating operation we shall not here speak; cases demanding such interference are rare, but when they do occur should be promptly met. Certainly we should never use an exploring needle for the purpose of emptying this cavity, even though cases are on record where needles have been removed with success from the substance of the heart. Again, as regards ascites, we think this method of aspiration has been far too much neglected; here, too, we think the plan of only withdrawing the peritoneal fluid by degrees is the best. Formerly the formidable character of the operation of paracentesis abdominis—one too often followed by fatal results, chiefly because not taken in hand in time—led to its general avoidance. For, surely enough, too often a day or two after such an operation the abdomen begins to enlarge from tympanites, the tongue to get dry, and the pulse to go up—signs which to one cognisant only of peritonitis in books mean little, but to one who has seen the disease only too often mean much. But, on the other hand, we have the full assurance of practical experience that the fine needles used in aspiration may be used in most states of the system without creating any particular disturbance. Now, here in his work Dieulafoy again errs, as it seems to us, and discredits most unjustly the merits of his invention. He talks of using the aspirator for emptying and cleansing the stomach of a child who had swallowed poison, but surely the ordinary stomach-pump is better suited for such a purpose; whilst, on the other hand, there are cases of cancer of the stomach where there is such enormous dilatation as to interfere with the action of the heart and to threaten a speedy dissolution. Under such circumstances we have seen the fine aspirating needles, introduced without a shadow of risk, bring back the patient from death's door to comparative comfort, and that too under conditions when even the attempt to pass the stomach-pump might have been fatal. So, too, have we seen the use of these fine needles with or without the aspirator bring back a tympanitic patient from agony to peace and rest, and that without any risk of peritonitis.

THE WAR ON THE GOLD COAST.

The overdue mail from the Gold Coast, which had been delayed through the breaking down of the mail steamer, had scarcely come to hand when the one which followed it also arrived. The intelligence received from the seat of the war by both of them contains very little worth recording. Sir Garnet Wolseley and the numerous staff which accompanied him had arrived, all well, on the Coast, but a sufficient time had not elapsed to enable him to form any plans for future operations, a grand palaver with the principal Fantee chiefs having taken place as a preliminary.

One satisfactory item which should not pass unnoticed is to be found in the fact that the general sickness appeared to be decreasing, so far as our own men and our allies were concerned. Amongst the invading horde of Ashantees, small-pox and dysentery, aggravated by starvation, were reported to be still making extensive ravages; and to these causes, aided no doubt by the salutary lesson inculcated by the first real encounter with our troops, may be attributed the want of activity which has characterised the movements of the enemy, although they are doubtless well aware of the slenderness of our garrisons both at Cape Coast Castle and Elmina.

Deputy Surgeon-General Home and the bulk of the medical staff now on the Coast are reported to be standing out bravely against the effects of the climate, and are labouring assiduously at their several posts; but we regret to hear that Surgeons Connellan and Horton are suffering from fever, the former severely. Surgeon-Major Rowe—one well experienced in Coast matters—has been specially appointed to take medical charge of the native force in course of organisation by Captain Glover for operations on the Volta. This contingent already numbers nearly 7000 men, and, as the enrolment of natives is proceeding rapidly in other places, we may be said to have lost no time in providing ourselves with a local corps to assist in the operations to be undertaken. The drilling of these blacks is being rapidly pushed on, but the opinion expressed by those who should be in a position to know is decidedly adverse to undertaking any advance without a strong nucleus of European troops. The native auxiliaries may supplement the efforts of our own regiments, and be made to do much work which will spare our men, but at best, with only two months' drill, they will form little more than an armed rabble, liable at all times to panics of the most demoralising kind.

Dr. Gouldsbury, who is stationed at Axim, appears to have had a very narrow escape; he started with a few native police in a boat to chase some Ashantees who had been discovered in a canoe hovering about the station, and in capturing the canoe his own boat upset, the whole of the rifles belonging to the police going to the bottom. In this defenceless position they were fired at from the shore, and were in great peril until rescued by a party from the fort.

The *Times* correspondent, in a long and interesting letter from the Gold Coast, reiterates the warning which we have already given, that the operations against Coomassie should be commenced not later than December; he states that although previously of opinion that the climate would certainly devastate our troops—the Bush being supposed to be a lair of pestilence and an abode of death,—personal experience has taught him that an inactive life in the jungle is less dangerous than active life on the Coast itself. The experience of all Anglo-Africans with whom he conversed on the subject pointed to the fact that European troops would suffer little if they were marched into the interior immediately on their arrival, kept upon the march until the work in hand was successfully and completely terminated, and then speedily reshipped for this country. We need scarcely remind such of our readers as have followed our remarks since the outbreak of the war that this opinion coincides entirely with what we have always expressed; and knowing the care and forethought which have been bestowed on all the medical arrangements for the expedition, we shall be disappointed if the result fail to establish the correctness of the views we have advanced. An ample supply of medical stores and medical comforts is already on the spot; nearly all the medicines, etc., which went down in the wreck of the mail-steamer *Nigritia* have been recovered, and have been forwarded on to Cape Coast Castle, none the worse for the immersion to which they were subjected, and a further stock is in course of preparation for transit.

The forthcoming campaign bids fair to be one of the most novel which has ever been undertaken by this country: it will be, in fact, a race against time. Once embarked in it, we *must* realise certain results before a given date, or consequences the most disastrous may be expected to follow; but, as everyone at head-quarters is thoroughly imbued with the importance of speed, it only remains to receive a list of Sir Garnet Wolseley's requirements to have them executed with all possible dispatch, and to rest in confidence for the successful result which every unprejudiced person may fairly anticipate.

THE WEEK.

TOPICS OF THE DAY.

The General Medical Council is yet without a home. The building now occupied by the Provident Institution at the corner of St. Martin's-place, which was believed to have been granted by the present Government to the Council, is now offered to that body at the rent of £600 a year, or, if they want a part of it, at £40 a room per annum. We hope Mr.

Lowe will not forget to quote this admirable piece of economy in his next after-dinner speech in defence of the Ministry, and that when Mr. Disraeli writes his next letter he will not omit to compliment the Cabinet on their having added to the functions of the advisers of her Majesty that of letting apartments to public bodies. We are glad to say that at the meeting of the Executive Committee of the Council on October 23 it was resolved to refuse the munificent offer of the Government. The Council therefore must look elsewhere for a home; and the time is short. They will have to leave their present somewhat disreputable surroundings at Christmas, for the premises are let to the "Hospital for Diseases of the Heart"—an institution incompatible under the same roof with the General Medical Council. In the meanwhile, the Treasurer and Registrars are empowered by the Executive Committee of the Council to make such arrangements as they shall find most desirable. With a balance of some £25,000 or £30,000, and a clear income of £5000 a year, we think there cannot be much difficulty in finding the Council a home.

The following members have been re-elected:—Dr. Andrew Wood, by the College of Surgeons of Edinburgh; Dr. Storrar, by the University of London; Dr. Aquilla Smith, by the King and Queen's College of Physicians of Ireland; Dr. Apjohn, by the University of Dublin. Of the re-election of the four Crown nominees—Sir Robert Christison, Dr. Stokes, Dr. Parker, and Dr. Quain—nothing has yet been heard, although it is rumoured that Sir Robert Christison will not desire re-election. The time of service of Dr. Leet, the representative of the Apothecaries' Hall of Dublin, and of Dr. Macrobin, the representative of the Universities of Edinburgh and St. Andrews, has expired, but we believe the official announcement of their re-election has not yet been made public.

We have received from Messrs. Barraud and Jerrard, of Gloucester-place, Portman-square, an admirable photographic portrait of the late Sir Henry Holland. It is one of the portraits contained in the March, 1873, number of their serial, "The Medical Profession in all Countries."

The *Times* of Thursday contains a letter signed "Indicus," appealing to the subscribers to the Royal School for Daughters of Officers in the Army to give their votes in December to Miss Edith Comberbatch Brydon, whose father, Surgeon W. Brydon, served in India for twenty-five years, was severely wounded in the retreat from Cabul in 1842, and was the only survivor of the Cabul army, and brought the news of its destruction into Jellalabad. He served under Sir Robert Sale at Jellalabad, and returned to Cabul with Sir George Pollock's army. In the Indian Mutiny he was shut up in Lucknow, and during the siege received a wound which accelerated his death. Such public services we should have thought should have at least been rewarded by competence for the hero's family.

The man Tuckfield, who brought an action against the Metropolitan Railway Company for injuries received in a collision at the Bishop's-road Station, has been found guilty of perjury at the Central Criminal Court.

The deplorable death of the wife of a medical officer of the Indian army from morphia, which has been made the matter of a coroner's inquiry, seems utterly inexplicable from the evidence that has been adduced. The administration of a grain of morphia (the quantity said to have been given) every half-hour for the purpose of procuring sleep is certainly the act not of a physician but of a madman. As we have said, judgment must be suspended until further evidence is forthcoming.

THE "JOHN MURRAY" MEMORIAL.

The following gentlemen have agreed to act as a committee for the purpose of raising funds to place a bust and memorial tablet of the lamented Dr. John Murray in the scene of his labours, Middlesex Hospital:—Dr. J. Ford Anderson; Dr. Joseph Bell, Edinburgh; G. W. Callender Esq., F.R.S.; Dr. W. Cayley; Campbell de Morgan, Esq., F.R.S.; Dr. Dyce Duckworth; Dr. Arthur W. Edis; Sir William Fergusson, Bart., F.R.S.; Professor W. T. Gairdner, Glasgow; Sir William W. Gull, Bart., F.R.S.; Ernest A. Hart, Esq.; D. Hepburn, Esq.; Dr. George Johnson, F.R.S.; Dr. Robert King; Dr. Robert Liveing; R. H. Lucas, Esq.; Dr. Morell-Mackenzie; Henry Morris, Esq., M.A.; Dr. Charles Murchison, F.R.S.; Dr. Richard Quain, F.R.S.; Professor W. R. Sanders, Edinburgh; Dr. Alexander Silver; George Southam, Esq., Manchester; Dr. A. P. Stewart; Dr. William Stokes, jun., Dublin; Lawson Tait, Esq., Birmingham. Campbell de Morgan, Esq., F.R.S., Treasurer. Arthur W. Edis, M.D., 23, Sackville-street, W., and Henry Morris, F.R.C.S., 19, Bedford-square, W.C., Hon. Secretaries. Any gentlemen desiring to contribute are requested to forward their subscriptions to the honorary treasurer, or either of the honorary secretaries.

THE ROYAL COLLEGE OF PHYSICIANS.

At the Comitia, held on Thursday, October 30, at the College, Dr. Robert Druitt was elected a Fellow of the College. The President announced that the Harveian Oration in the ensuing year would be delivered by Dr. Charles West. The Gulstonian Lectures will be delivered by Dr. J. F. Payne; the Croonian Lectures by Dr. Murchison; the Lumleian by Dr. Sibson.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The half-yearly general meeting of the Society was held on Wednesday, October 22, in the library of the Royal Medical and Chirurgical Society, Berners-street. The chair was taken at half-past eight o'clock by the President, Dr. Burrows. It is much to be regretted members do not evince more interest in the affairs of the Society. At the hour appointed for the general meeting there were only eight members present, not sufficient to form a quorum; business was in consequence postponed for some time. The minutes of the courts of directors held since last general meeting were read. Mr. Edward Tegart was elected a vice-president, Dr. Quain one of the treasurers, and Dr. Fuller and Sir John Fisher directors. From the half-yearly statement of accounts it appeared that fifty-six widows had received £1053, divided in accordance with the urgency of the wants of the applicants; thirty-four children had received £176, including grants to three from the Copeland Fund. The total grants for the half-year had been £1229. The expenses for the same period amounted to £107. A legacy of £500 had been received from the executors of the late Mrs. Jane Lyon. A special grant of £30 was made to a widow of a deceased member, whose case did not come within the description specified by the laws for ordinary grants. A vote of thanks to the chair closed the meeting.

PROTECTION OF INFANT LIFE.

Some correspondence has lately taken place between the Metropolitan Board of Works and the Home Secretary on protection of infant life. The Home Secretary is of opinion that there would be great risk if, in order to prevent occasional crime, the houses of the poor were subjected to any serious amount of intrusion, and that such a result would be fatal to the permanence of any legislation on the subject; that he was not prepared to raise the standard of infancy from one year to seven years; and further, that he did not propose any alteration in the law on the subject, which has not yet been a year in force. It remains to be seen whether the Act at present in force will be sufficient to protect infant life. Great difference of opinion exists on the subject, but we believe that it is generally considered some further legislation may be necessary.

INQUESTS AT ST. PANCRAS WORKHOUSE.

A DISCUSSION arose at the last meeting of the St. Pancras Guardians on a return prepared by Mr. Hill, medical officer of the workhouse, of the number of inquests held at that place during the year and eight months ending September 30 last. This return was ordered at a previous meeting of the guardians, at the instigation of the Rev. W. R. Arrowsmith, who on that occasion strongly objected to an inquest which had recently been held on the body of a woman who died from the effects of a very severe fall in one of the wards. We agree with Mr. Seaton, who remarked at the time that there appeared to be a "dead set" made against the medical officer for merely doing his duty. The return showed that the total deaths were 453; that in sixty-seven of these the coroner had been called upon to make an inquiry, and that the great majority of them had occurred from preventable causes, only eighteen having been due to natural causes. The Rev. W. R. Arrowsmith, remarking upon the return, said the proportion of inquests to the number of deaths had been greater in St. Pancras than in any other parish in the metropolis with the exception of Bethnal-green. He thought Mr. Hill favoured the holding of inquests to an extent which called for the disapprobation of the Board, and he moved a resolution to that effect. The motion was, after some discussion, withdrawn, and an amendment adopted, declaring that the Board "regrets the number of inquests held by Mr. Hill on persons dying in the workhouse, and trusts that he will do his best to reduce the number in future." We trust that Mr. Hill will continue to do his duty. Under the Coroners Act he is bound to give notice to the coroner of any death occurring in the workhouse under circumstances which *primâ facie* appear to call for inquiry. This is a most wholesome regulation, and is at once a protection to the poor and to some extent a preventive to misconduct, if such prevails on the part of the officials. The guardians of St. Pancras must be sadly in want of a subject for discussion when they can find no better one than an attempt to limit a useful inquiry. Usually the discussions in this parish have had reference to parochial expenditure. In this case, however, as the cost of inquests falls upon the county, there is no such excuse for the opposition displayed. For the protection of prisoners, an inquest is held upon every one of them that dies. This system has been found to work beneficially, and we do not remember any instance in which it has been complained of. Surely the proportion of deaths occurring in St. Pancras Workhouse which were due to preventable causes is a sufficient vindication of Mr. Hill's conduct, and a complete answer to the adverse resolution respecting him.

PRESERVED AUSTRALIAN MEAT.

A DIFFERENCE of opinion has, it appears, arisen between the Manchester magistrates and the Home Secretary on Australian preserved meat and fresh meat. The preserved Australian meat has been adopted in the dietary of the City Prison, and a considerable saving has been the consequence. Mr. Powell, Inspector of Prisons, in his report to the Home Office on the subject, states that at least a sixth additional weight ought to be issued with each ration in order to render the preserved meat equal in nutrition to the freshly-killed meat. But the surgeon of the City Gaol appears to be of opinion that Australian meat is preferable to the meat formerly in use, both as to nutrition and economy. The result, however, of the correspondence on the matter is, that the recommendation of the Inspector has been endorsed by the Home Secretary, who withholds his sanction to the use of Australian meat in the prison unless the addition of one-sixth in weight is made to the rations. We think the recommendation of the Inspector was properly adopted by the Home Secretary, as there can be no doubt that the nutritive qualities of the Australian meat as at present preserved are inferior to fresh meat.

DISEASE-DESTROYING TREE.

M. GIMBERT, who has been long engaged in collecting evidence concerning the Australian tree *Eucalyptus globulus*, the growth of which is surprisingly rapid, attaining besides gigantic dimensions, has addressed an interesting communication to the Academy of Sciences. This plant, it now appears, possesses an extraordinary power of destroying miasmatic influence in fever-stricken districts. It has the singular property of absorbing ten times its weight of water from the soil, and of emitting antiseptic camphorous effluvia. When sown in marshy ground it will dry it up in a very short time. The English were the first to try it at the Cape, and within two or three years they completely changed the climatic condition of the unhealthy parts of the colony. A few years later its plantation was undertaken on a large scale in various parts of Algeria. At Pardock, twenty miles from Algiers, a farm situated on the banks of the Hamyze was noted for its extremely pestilential air. In the spring of 1867 about 13,000 of the eucalyptus were planted there. In July of the same year—the time when the fever season used to set in—not a single case occurred; yet the trees were not more than nine feet high. Since then complete immunity from fever has been maintained. In the neighbourhood of Constantine the farm of Ben Machydlin was equally in bad repute. It was covered with marshes both in winter and summer. In five years the whole ground was dried up by 14,000 of these trees, and farmers and children enjoy excellent health. At the factory of the Gue de Constantine, in three years a plantation of eucalyptus has transformed twelve acres of marshy soil into a magnificent park, whence fever has completely disappeared. In the island of Cuba this and all other paludal diseases are fast disappearing from all the unhealthy districts where this tree has been introduced. A station-house at one of the ends of a railway-viaduct in the Department of the Var was so pestilential that the officials could not be kept there longer than a year. Forty of these trees were planted, and it is now as healthy as any other place on the line. We have no information as to whether this beneficent tree will grow in other than hot climates. We hope that experiments will be made to determine this point. It would be a good thing to introduce it on the West Coast of Africa.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A PUBLIC meeting was held last week at the Mansion-house, presided over by the Lord Mayor, for the purpose of settling the preliminary arrangements for appointing a Hospital Sunday for the forthcoming year, and for electing the council and committee of distribution for appropriating the funds realised. The immediate supporters of the movement included gentlemen representing many different forms of religion, and a very unanimous feeling was expressed as to the desirability of perpetuating a movement which had been so auspiciously commenced. The Bishop of London, in proposing the first resolution, took occasion to remark that the present year's result was not nearly what might fairly be anticipated upon future anniversaries; in his own diocese alone, out of 500 churches collections were made in only 270, and although he was not in a position to promise that next year every church or chapel would have a collection, he had no doubt that the number willing to assist such a charitable object would be largely increased. The Lord Mayor elect (Alderman Lusk, M.P.) then proposed, and Bishop Claughton seconded, a resolution that June 14, 1874, be appointed the next Hospital Sunday for the metropolis, which was put and carried unanimously, as was the resolution which followed—namely, that the ministers of all denominations be again invited to co-operate. Some discussion afterwards took place upon the method of distributing the money collected—an adverse opinion being expressed as to the amounts recently presented to dispensaries—

in the course of which the Rev. Canon Miller proposed, and Dr. Glover seconded, a resolution suggesting that a committee be formed to consider and confer with the council as to the relative claims of hospitals and dispensaries on the sympathies of the public, the members to be chosen from representatives of both classes of institutions. A numerous council, with the Lord Mayor elect at their head as president and treasurer, and Sir Sydney Waterlow as chairman, was then elected, Messrs. E. H. Currie and R. B. Martin being reappointed honorary secretaries. The last resolution proposed was to the effect that the system of the next distribution be based upon the last three years' expenditure of each institution admitted to participate, after deducting the income derived by each from endowments, realised property, and legacies exceeding the sum of £100; and that no institution be allowed to receive a grant if it be found that the cost of its management exceeds a reasonable percentage of the whole current expenditure; also that the committee of distribution include at least one member of the medical profession who is not directly connected with the management of any hospital.

A MUNIFICENT SURGEON.

The late Mr. Joseph Taylor Winnard, for many years a surgeon practising in Wigan, has (says the *Manchester Guardian*) by his will bequeathed the residue of his property to the Mayor of Wigan for the time being, for the purpose of purchasing books for the proposed free library. The amount has not yet been stated, but report says it will be £20,000, and may be £30,000.

CHOLERA IN HOLLAND.

Our correspondent at Rotterdam writes:—"The cholera is slowly increasing in our country. A probable cause of infection, especially at Dordrecht, was the barque *Freia*, which came from the East Sea. On board of this ship there occurred three cases of cholera, of which two died in the hospital. The *Staats Courant* states that the mortality from cholera was thus:—From September 21 to 27, three cases; from September 28 to October 4, three; from October 5 to 11, nine; from October 12 to 18, twenty-one; and from October 19 to 25, twenty-four cases, of which five were in Rotterdam. Till now (October 28) there occurred here seventeen cases, of which ten have died."

CHOLERA IN NAPLES.

A correspondent of the *Times*, writing from Naples on the 19th ult. on the outbreak of cholera in that city, says—"Cholera has its duties to perform, and its voice should not be stifled. Every epidemic that visits this city reveals two facts—the existence in the streets and under the streets and in many of the private dwellings of all the elements for the generation and propagation of the disease. It reveals, too, another fact, and it is that the local authorities have in past times from '*incuria*,' and in later times from the spirit of partisanship which takes possession of them, been grossly neglectful of their duties. The bulletin of to-day gives eleven cases and ten deaths from cholera."

FROM ABROAD.—PROFESSOR FORDYCE BARKER ON SORE NIPPLES AND MAMMARY ABSCESS—INJECTIONS INTO THE VEINS IN CHOLERA.

The following is an abstract of an interesting clinical lecture on "Sore Nipples and Mammary Abscess," delivered by Professor Fordyce Barker at Bellevue Hospital Medical College, and reported in the *New York Medical Record* of September 15.

Professor Barker observes that in our text-books there is a great deficiency in the description of the various forms of these affections, and of the appropriate treatment for each of them: various substances are recommended as curative, without any definite rules being given as to the circumstances under which they are applicable.

He recognises three forms of *sore nipple*—1. Inflammation, which generally occurs in those cases in which the nipple is naturally contracted, or in others, which are not at all infrequent, where the nipple is almost absent. The child has great difficulty in getting hold of it, especially when it is still farther contracted through distension of the breast. The irritation produced by the child's efforts leads to inflammation of the nipple, and the propagation of this through the lacteal ducts may give rise to mammary abscess. 2. Fissure or erosion of the nipple, which may exist in two forms, one being the consequence of inflammation. But another form exists at the base of the nipple, causing the most intense pain and suffering at the time of suckling. 3. This is ulceration, as exhibited in the case which gave rise to the delivery of the lecture. The surface of the nipple is red and denuded of cuticle; it is also much retracted; and in this case there was a fissure at the top. The pain caused is very intense. The areolar tissue also around the nipple becomes inflamed, and perhaps a half or two-thirds of its substance may be destroyed during the process. These three forms may be distinctly and easily recognised.

In treating these cases, the first question is as to "drawing the nipple out." Dr. Barker does not approve of the practice of applying the child to the breast immediately after delivery, with a view of securing uterine contraction. He adopted it himself for some years, but has entirely abandoned it. He now believes that the woman should be completely restored after the fatigue of delivery before the child is applied—effectual uterine contraction being easily secured by other procedures. The first stage after parturition is one of exhaustion, owing to the great efforts that have had to be made; and so complete is it that it is very commonly manifested by nervous chills. If the woman is permitted to get a few hours' sleep her exhausted nerve-power is restored, and this is the time when the child should be applied. The breast is not yet distended, and the nipple is drawn out more easily than later. The traction, too, excites the more rapid secretion of the breast, and the first secretions act beneficially on the child. The nipple is now more easily grasped; and if we wait until the secretion of milk has actually taken place before applying the child, the distension of the breast becomes an obstacle to the free flow of the milk through the ducts, and thus a source of irritation. There are cases in which the nipple congenitally is so short that, the child not being able to get hold of it, it requires to be drawn out by mechanical means. Most of the breast-pumps used for this purpose are constructed on principles utterly devoid of common sense, having so small an opening in the part applied to the breast that the nipple is constricted, and the milk is unable to flow after the first two or three exhaustions of the instrument. This is prevented by having a pump with a large bell-shaped extremity; and Mattson's breast-pump is an instrument which fulfils this indication very completely, and is an excellent one.

With regard to the treatment of sore nipples, when the nipple is inflamed a poultice should be applied until this is subdued, after which a solution of nitrate of lead in glycerine (gr. x. ad ℥j.) is to be used. This is also the most complete prophylactic that Dr. Barker knows of. It should be applied immediately after suckling, first washing the nipple perfectly clean, and washing it off again before the child sucks. When properly used it is almost a specific against excoriations and ulcerations. If there is great tendency to sore nipples, the strength may be increased to fifteen or even twenty grains, but as a rule the ten-grain solution suffices. Next, where the cuticle is denuded, leaving a raw surface, or where it becomes so irritated as to threaten abrasion, an artificial

cuticle should be formed which will entirely protect the parts and allow the milk to pass. For this purpose collodion has been extensively used, the objections to which are, that, contracting as it dries, it becomes itself a source of irritation and discomfort, and does not readily permit the flow of milk. The compound tincture of benzoin is a most satisfactory application, four or five coats being applied with a pencil, having wiped the nipple dry after suckling. Under this coating cicatrisation takes place, and the patient is relieved. When there is a fissure at the base of the nipple, very small though it may be, it causes most agonising pain, and its most satisfactory treatment consists in touching it with a fine point of nitrate of silver, and applying the benzoin over this as before. When the inflammation and ulceration have gone on so as to destroy the surface of the nipple, and there is danger of the inflammation extending back to the mammary gland, the patient should not be tortured by the application of the child, which should be at once removed, emptying the breasts by the pump or rubbing. After this, Dr. Barker uses an ointment composed of rose ointment ℥j., carb. magnes. ℈j., calomel gr. xxx. The ingredients, freshly prepared every twenty-four or thirty-six hours, should be rubbed together very carefully. If the child is allowed to suckle at all, it should do so exclusively through a shield; and for this the cow's teat is to be preferred to the indiarubber, which emits an offensive odour and is very apt to render the child's mouth sore. If, however, it becomes necessary to use any of the shields ordinarily on sale, the one with a broad base, termed the L-shaped shield, should be selected. The ordinary shields are simply abominable.

Mammary abscess is a very troublesome complaint. The woman who formed the subject of the lecture had been confined nearly a month before she began to complain of her breast, and in three days suppuration had taken place. This is an important point often overlooked in books. The whole surface of the gland about the nipple was inflamed, and the patient had had chills, fever, etc. The case was probably one of those resulting from the presence of the peculiar poison which developes puerperal fever in some cases, peritonitis in others, and mammary abscess in others.

"There are three forms of mammary abscess—1. Inflammation of the cellular tissue surrounding the nipple, and external to the breast; 2. Inflammation of the substance of the gland itself; and 3. Inflammation of the areolar tissue between the gland and the thorax. The first form may result from irritation, and is nothing more than a purely simple phlegmon; it usually terminates rapidly, is not attended with the constitutional shock which accompanies glandular inflammation, and is to be treated as such inflammation elsewhere. As soon as fluctuation is detected, the question may arise whether the escape of pus should be permitted to take place spontaneously, or whether the breast should be opened by the surgeon. The amount of constitutional disturbance is to decide that; and if it is decided upon to open it, the incision should not be made within the areola, because the retraction which is incident to cicatrisation will spoil the nipple for future use. The sooner the discharge takes place, the sooner the healing process will be completed and the breast be restored to a healthy condition.

"In case the gland itself becomes inflamed, it is attended with more constitutional disturbance. There are headache, chills, fever, full pulse, and high temperature, with even yet greater disturbance if there is a tendency to the formation of multiple abscesses. If these cases are seen at a very early period of their formation, when there is great tenderness, with high temperature, fever, etc., pulse 108—perhaps 120,—it may be well to try to abort the inflammation. For this purpose I give ten grains of Dover's powder, with an alkali, and paint over the surface of the gland with tincture of iodine, covering it with a warm poultice or cotton padding and oil-silk. Empty the breast with a pump, and in most cases you will arrest the whole thing at once. The trouble is that the woman does not see the physician until this period has passed, and then suppuration should be favoured by poultices. Internally, the patient must be ordered as full doses of quinine as she will tolerate. As soon as fluctuation is detected, open the breast at the lowest point, because otherwise pus will burrow between the tissues of the gland, become a source of irritation, and produce another inflammation.

"The third form is called the 'sub-glandular,' and is attended with great constitutional disturbance. It has none of the external redness present in the other forms, being situated between the gland and the thorax. The gland sometimes becomes very prominent. The inflammation is attended with intense pain, rigors, and chills, while on the external surface there may be no special intimation of its existence. The most significant symptoms are that the patient complains of difficulty of breathing on account of the pain produced, and, when present, the prominence of the gland. These cases are generally exceedingly tedious, and sometimes dangerous, because the inflammation is so deep-seated that the pus between the gland and the thorax burrows about, forming sinuses and extensive fistulous tracts, which may be exceedingly troublesome and exhausting from the profuse discharge and constitutional irritation which are produced."

Professor Barker intends resuming the subject in a future lecture.

At a recent meeting of the Paris Hospital Medical Society, Dr. Dujardin-Beaumetz read a paper upon "Injections of Water and Saline Solutions into the Veins in the Algid and Ultimate Period of Cholera." In this he relates three cases from his own practice at the Beaujon, in which, although they all proved fatal, the injection was attended by temporary improvement. This of course has been the result which has attended the experience of most of his predecessors; but he does not think that the practice should be abandoned, but that we should seek to improve upon it. To this end he furnishes a summary of the particulars of eighteen cases of successful injection which he has found on record. We transcribe some of his general observations:—

"The condition of only employing these injections in the gravest cases, when there is a state of complete algidity, should continue to be observed. It is not to be doubted for a moment that much more advantageous results would be obtained were the injections practised at a less advanced stage of the disease, when the patient still retained some of his strength. But, in order to act thus, we ought to be in the possession of a liquid which may offer a complete substitute for the serum of the blood, and such a liquid has yet to be found. We should therefore avail ourselves of all other modes of treatment until the patient would seem to have but this one chance left. But this chance should not be lost to him, and we ought the less to hesitate to perform this small operation, inasmuch as it is always attended with amelioration, fugitive as this may be. . . . It would be very difficult to supply any exact statistics with respect to the results of these injections, and that for several reasons: first, many observers have not published their failures, while others have only signalised their successes; secondly, only desperate cases have been operated on; and thirdly, the injections have only been employed to combat an epiphenomenon of the disease, algidity. We all know that it does not suffice to remove the chill and cyanosis to effect a cure; for how often do we see individuals who, after a more or less complete reaction, succumb none the less after a variable lapse of time with comatose and typhoid symptoms. And if I may be allowed the comparison, it seems to me that injection into the veins has acted in cholera very much like tracheotomy does in croup—it does not cure the disease, but it prolongs the life of the patient. In fact, in all the cases of injection we find that a very notable amelioration is produced. The expiring patient is recalled to life: he recovers consciousness and speech, and recognises those about him; his circulation is re-established; his temperature is raised; the secretions are again, as is absorption, in operation. He feels great relief and a notable amount of comfort; and nothing can be more curious, more striking, I will even say more astonishing, than his resurrection. The amelioration, it is true, is generally temporary; but short though it be, it ought to stimulate us to seek for the means of perfecting this mode of treatment."

THE yellow fever is abating at Memphis, but the city is in a desolate condition.

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S ARMY, NAVAL, AND INDIAN MEDICAL SERVICES.

THE following were the questions in Anatomy and Physiology, Surgery, Medicine, Zoology, Botany, Physics, etc; given at the examinations of candidates for her Majesty's Army, Naval, and Indian Medical Services:—

Anatomy and Physiology.—Monday, August 11.

1. Give the origin, course, relations, and distribution of the glosso-pharyngeal nerve, and describe the dissection required to expose it in its course below the base of the skull.

2. Describe the cartilages and intrinsic muscles of the larynx, and state the nerves by which the latter are supplied, and their actions.

3. Give an account of what is known respecting the structure, nature, and properties of the *red* and of the white corpuscles of the blood.

4. Give the dissection required to expose the posterior interosseous artery of the forearm in the whole of its course; mentioning, in the order in which they occur, the parts that must be removed in order to expose it.

5. State the organs to which the pneumogastric nerves are distributed, and give their special function in each organ.

6. Describe the minute structure of the cornea and of the iris, and state the mode in which it may be best displayed.

Surgery.—Monday, August 11.

1. Describe the local and constitutional symptoms, and causes of acute periostitis; at what period of life it usually occurs; what treatment should be adopted; and what are the usual results on the bone affected.

2. A heavy cart-wheel passed over the middle of the thigh of a man. There being no external wound, by what symptoms would rupture of the femoral artery be diagnosed? and what should be the treatment?

3. Describe the symptoms which would be present if a small foreign body had slipped into the trachea. In what situation would it most probably lodge? and what treatment should be adopted for its removal?

4. Describe the progress of a case of syphilitic iritis, from its commencement, if allowed to continue without treatment; and what should be the treatment of a case in its various stages.

5. By what symptoms may an ovarian cyst be distinguished from ascites dependent on diseased liver, or from a fibrous tumour of the uterus?

6. Describe the symptoms by which cancer of the bladder may be detected, and for what conditions it might be occasionally mistaken.

Medicine.—Tuesday, August 12.

1. What are the views now entertained regarding phthisis and tubercle? Give the physical signs of a case of chronic phthisis, passing through all its stages, and ending in perforation into the pleural cavity.

2. What are the chief causes of anasarca? Describe the symptoms connected with the kidney and heart diseases of the two chief forms.

3. What are the principal causes of severe pain in the loins; and give the distinguishing symptoms of the conditions you enumerate?

4. What are the symptoms of cancer of the liver? Give carefully the after-death appearances.

5. Give an account of the stages of a simple labour, and state what conditions might render it dangerous, and how you would meet them

6. What is the composition of opium? and what is the action and use in medicine of its several ingredients?

Zoology.—Tuesday, August 12.

1. Give the characters and distribution of the principal races of man.

2. What are the principal differences between plants and animals?

3. Describe the structure of the heart in the different classes of vertebrata.

4. Give the principal characters of the class *Aves* and of its orders.

5. What are the chief modifications of the mouth of insects?

Botany.—Tuesday, August 12.

6. Describe the different modes of dehiscence of capsules, giving examples of each.

7. Explain the mode in which pollen is formed, and describe the structure of pollen grains.

8. What part in the vegetable economy is played by carbonic acid?

9. Describe the phenomena of conjugation in algæ and fungi.

10. Give the most important characters of the natural order Cruciferæ, and describe the various modifications of the fruit in that order.

Physics, etc.—Tuesday, August 12.

11. What is the nature of the transit of Venus, and with what object is it to be observed next year?

12. What is an artesian well?

13. Explain the term specific gravity, and describe the mode in which it is determined.

14. What are the physical causes of the circulation of the sap in plants?

15. Describe the structure of a compound achromatic microscope.

REVIEWS.

SOME MODERN WORKS ON CHEMISTRY.

A Manual of Elementary Chemistry, Theoretical and Practical. By GEORGE FOWNES, F.R.S. Eleventh edition, revised and corrected by HENRY WATTS, B.A., F.R.S. Pp. 1026. London. 1873.

Manual of Chemical Analysis, as applied to the Examination of Medical Chemicals. For the use of Pharmaceutists, Physicians, Druggists, and Manufacturing Chemists, and of Pharmaceutical and Medical Students. By FREDERICK HOFFMANN, Ph.D., Pharmaceutist, of New York. Pp. 393. New York. 1873.

A Course of Qualitative Chemical Analysis. By W. G. VALENTIN, F.C.S., Principal Demonstrator of Practical Chemistry in the Royal School of Mines and Science Training Schools, South Kensington. With nineteen engravings on wood. Pp. 226. London. 1873.

Quantitative Chemical Analysis. By T. E. THORPE, Ph.D., F.R.S.E., Professor of Chemistry, Andersonian University, Glasgow. Pp. 387. London. 1873.

THE books which have just appeared under the above titles may be fairly taken as representative of the present condition of the science and practice of chemistry in the present day. The first, although modestly styled "A Manual of Elementary Chemistry," enters pretty deeply into the theory as well as the practical details of this extensive subject; the second, which is strictly medical in its objects, is intended to guide medical men and pharmaceutists in their inquiries as to the quality, identity, and purity of drugs; the third has a wider scope, and treats of the methods adopted for conducting the qualitative analysis, or, in other words, for *testing* inorganic and organic bodies; and the fourth pursues the investigation in another way, and shows how the exact composition of each substance in nature, both by weight and by volume, may be determined.

As "Fownes's Chemistry" embraces, although in a comparatively small compass, the whole range of the science, it necessarily claims the first consideration; but as the general scope and contents of the volume are well known to chemists, it would be an unnecessary task to analyse them at length, and it is sufficient to state in what respects the present edition differs from its predecessors. It may be interesting, therefore, to mention that the third edition was nearly completed by the original author, Dr. Fownes, a short time before his death, in 1849, and was published in the following year under the editorship of the late Dr. H. Bence Jones, whose recent loss the profession has had occasion to deplore. The six following editions were carried through the press by Dr. Bence Jones and Dr. Hofmann, the latter of whom lived for several years in this country, until he was promoted to a professorship in Germany; and during their joint-editorship it was found necessary, in consequence of the rapid advance of the science and the great changes which had taken place in the entire system of chemical philosophy, to make considerable alterations and additions in almost every part of the work. Among other

changes, the chapter on the General Principles of Chemical Philosophy was rewritten, as also the greater part of the Organic Chemistry; the section on Animal Chemistry was entirely revised by Dr. Bence Jones, and the new Atomic Weights were introduced, and the Notation was altered in accordance with them.

In the present edition still further changes have been made. A considerable quantity of new matter has been added, chiefly relating to Organic Chemistry; but in order to avoid increasing the size of the book some parts of the section on Physics in the former volumes have been omitted. The plan adopted by Dr. Fownes in arranging the subjects connected with the non-metallic elements and their compounds has been retained—with, however, some alterations and additions; and in the section on Organic Chemistry, or the chemistry of the carbon-compounds, the same general arrangement is followed as in the last edition, except that these compounds are now divided into two great groups, called *fatty* and *aromatic*—which, however, are names we cannot approve, inasmuch as in many cases they are either erroneous or inapplicable. Surely tartaric acid, and oxalic acid, and acetic acid are not fatty bodies, and, except on purely theoretical grounds, neither are starch, or sugar, or alcohol, or ether; while, although the aromatic group has certainly a greater claim to that designation, it is difficult to perceive why tannic and gallic acids, for instance, should be included in the category.

The section on Animal Chemistry, which was under the supervision of the late Dr. Bence Jones, remains nearly as in the last edition; but it will be found that the weights and measures used are those of the French decimal system, which, although unquestionably more philosophic than that used in Great Britain, will be found a stumbling-block to many English readers; and temperatures are expressed generally on the Centigrade scale.

Dr. Frederick Hoffmann's "Manual of Chemical Analysis" is intended to supply a want which must frequently be felt by dispensing practitioners of medicine, as well as by the druggist and the manufacturing chemist, when engaged in testing the characters of the medicinal chemicals with which they have to deal. Dr. Hoffmann observes that the knowledge they seek to acquire on such matters is widely scattered through chemical, pharmaceutical, and medical manuals and journals, and his object is to furnish a special guide for ready reference in the application of chemical analysis to the subjects of the examinations in question. His book is divided into two parts, the first and shorter being devoted to a brief general description of chemical operations and reagents, and of a few important general tests, together with a very good summary of the principles and practical applications of volumetric analysis; while the second contains a description of the physical and chemical properties and relations of the medicinal chemicals and their preparations, and of the methods employed for establishing their characters and ascertaining their quality and purity. Dr. Hoffmann states that this latter portion has been compiled with special reference to the fifth decennial edition of the United States Pharmacopœia, to the latest British Pharmacopœia, and to the Pharmacopœia Germanica of 1872. The difficulties of chemical notation, now in a transition stage from the new to the old, have been avoided by omitting it altogether —"for want of unanimity," says Dr. Hoffmann, "and absolute certainty in this particular point of chemical philosophy."

Mr. Valentin's "Course of Qualitative Chemical Analysis" is in its nature entirely practical, being prefaced by a few brief remarks, which are illustrated with some well-executed wood engravings, on qualitative analysis in general, and on the usual apparatus by which it is conducted, and on group-reagents and special reagents. The reactions of the different metals and non-metallic bodies and their compounds are then successively described, and a chapter is devoted to the reactions of the organic acids. Some practical exercises are presented for the use of the young analyst towards the end of the volume, which concludes with a series of tables for the qualitative analysis of simple and compound substances both in the dry and wet way, together with some appendices giving lists of reagents, a table of the solubility of salts in water and in acids, and schemes for recording analytical results.

Dr. T. E. Thorpe's "Quantitative Chemical Analysis" is divided into five distinct parts. The first gives a description of that indispensable piece of apparatus in this kind of analysis, namely, the balance,—the mechanical principles involved in its construction, and the mode of using it, together with an account of the operations generally occurring in practical processes, such as filtration, the incineration of filters, etc.; the second consists of a graduated series of examples in simple gravimetric analysis; the third part treats of volumetric analysis, and describes the more important volumetric processes; the fourth contains an account of the methods—gravimetric and volumetric—employed in the analysis or valuation of ores, minerals, and some of the more important industrial products, and the subject of water-analysis is fully considered; and the fifth part treats of the general processes of organic analysis. The decimal system of weights is adopted in this work, and also the new notation, and the temperatures are reckoned on the Centigrade scale; and there is a plentiful supply of well-executed engravings in illustration of the text.

Chemistry—which to many medical readers appeared at one time only a kind of accessory study to medicine, and as such formed one of the subjects taught at the Medical Schools—has now attained to such gigantic dimensions that instead of being compressed into a six months' course of lectures, it might well occupy the thought and labour of a lifetime, which is still too short to comprehend all its applications and ramifications. As a science, it is little more than a hundred years old, if, indeed, the early discovery of the gases by Black, Priestley, and Lavoisier can be said to constitute a science at all. It is probably only since the discovery of potassium and sodium by Sir Humphry Davy, at the very commencement of the present century, together with the ingenious development of the atomic theory by Dalton, and the still more recent researches made by the aid of electro-chemistry by Faraday, that chemistry can be really said to have attained to the dignity of a special and separate science; but as to its claims to that distinction at the present moment there can be no doubt whatever. Its connexion with medicine being in a twofold aspect—as teaching the mode of preparing and analysing therapeutic agents, and as constituting an integral and essential portion of the domain of physiology—renders an acquaintance with its laws and its practical details imperative in the case of all students and practitioners of the healing art; and while we fully and entirely admit this necessity, we cannot but regret that the enormous extension and development which its domain has undergone renders a due amount of attention to all its branches almost impracticable to the average medical reader or learner, who has at the same time many other subjects to claim his allegiance. To say nothing of the encyclopædias of chemistry published in the present day, and the treatises upon it, extending to a score or so of bulky volumes, it will be sufficient to cast our eyes on the contents of one of the books now under notice—namely, "Fownes's Chemistry," to appreciate the labour which the student must undertake who endeavours—especially if he have had no previous training—to master its contents. The difficulty, too, will appear even greater when we compare one of the former editions (as, for instance, the fourth, which is also now lying before us) with the present one; for it almost appears by this comparison that the chemistry of 1852 is entirely a different matter from that of 1873, and thus the conscientious student who may have thought that he had overcome his difficulties in acquiring a knowledge of chemistry twenty years ago, finds that he is still a tyro in the pursuit, and the uncomfortable feeling may steal over him that twenty years hence the chemistry of the future will be equally obscure to the diligent student of the present day.

During the period which has intervened between the first appearance of "Fownes's Chemistry" and the present edition several discoveries have indeed been made; and the researches made by means of spectrum analysis, in particular, have revealed the existence of several elementary bodies previously unknown, while they have proved the presence of many known bodies in greater quantity in nature than was before suspected. But after all it must, we think, be admitted that the discoveries of new *facts* have been by no means so numerous as the development of new *theories* and *hypotheses*, and that the real difficulty of the student of the present day is to unravel the intricacies of the latter two rather than to make himself adequately acquainted with the former. The *facts* of the composition of water, of atmospheric air, of ammonia, etc., are precisely the same now as they were in the time of Lavoisier and Priestley, but the theory of the constitution of many bodies has undergone very considerable changes. Water, the primary ground on which the determination of the atomic or combining weights of substances is established, still consists, as Lavoisier proved, of eight parts by weight of oxygen and one part by weight of hydrogen, and of one volume of oxygen and two volumes

of hydrogen; but the familiar numbers of 8 and 1, making up 9, are now superseded by 16 and 2, making up 18, which is precisely the same proportion, although the numbers are different. As the number 8 of oxygen has been doubled, it became necessary to double some of the other atomic numbers, and accordingly carbon, which was formerly 6, is now 12, sulphur from 16 has become 32, and in like manner calcium, iron, and zinc and others have doubled their former equivalents. We by no means intend to assert, or even to insinuate, that these changes have been arbitrarily made; on the contrary, they are the result of profound investigations, of a theoretical nature, which have at present received the general assent of chemists, and we refer to them only to show the difficulties which the modern student of chemistry is called upon to encounter, the more especially when he reflects that the theories of to-day are totally different from the theories of former years, and that the present theories may be superseded by others as time advances. The atomic theory of Dalton, however, remains essentially the same as in the time of its illustrious discoverer, although, as we have just remarked, the numbers assigned to the elements have in some instances been changed; but the theory of the *molecular* constitution of bodies, as contradistinguished from the *atomic*, is new, and although supported by learned and ingenious reasoning, must be very difficult of comprehension to the beginner; for chemistry partakes of the nature both of a practical art and an abstract science, and an acquaintance with the former is absolutely necessary in order to comprehend the reasonings involved in the latter. Hence it is obviously useless, in any book on chemistry intended for beginners, to commence the volume by an exposition of the theoretical laws which regulate the combinations or separations of atoms or molecules, and it is better to begin it by a general description of the properties of bodies, leaving the reasonings to a somewhat more advanced period. The late Professor Turner, one of the best lecturers on chemistry in his time, and under whom Dr. Fownes held the position of Professor of Practical Chemistry, taught the science in the manner we have just indicated, commencing his course of lectures by a series of striking but familiar experiments, and by explanations of the leading facts connected with the elementary bodies—as hydrogen, oxygen, nitrogen, and the like,—and after the attention of the student was thus gained by the appeal made to his eyes and ears, the theoretical parts of the course were introduced to explain and account for the phenomena exhibited.

In Dr. Fownes's manual the same plan is substantially adopted, and the present very able editor, Mr. Watts, has done well, we think, to adhere to it; and thus after some introductory observations on specific gravity, heat, light, electricity, etc., the reader is introduced *in medias res*, and becomes acquainted with the characters of the non-metallic elementary bodies and the mode of preparing them, his understanding being assisted, through the sense of sight, by well-executed illustrations of different chemical processes. Then, at the end of the section relating to these bodies, and before the description of the metals, the general principles of chemical philosophy are discussed at length, and the knotty questions involved in the mutual relations of atoms and molecules are fully set forth. It would be quite beside the truth, however, to state that the problems thus introduced are all adequately solved; and this unsatisfactory result arises from no fault of any of the distinguished editors of the book, but from the intrinsic difficulty and intricacy of the subject. In short, the *theory* of chemistry, as distinguished from the *facts*, is still in a transition state, and the shifting phases of conjecture and hypothesis, more especially those relating to organic compounds, resemble the ever-changing and brilliant colours and shapes exhibited by a kaleidoscope, where the primary forms are few and constant in their nature, but the varieties in which they combine together or separate from one another are apparently infinite.

Mr. E. M. Grace has been chosen Mayor of Thornbury for the ensuing year.

Lithotomy Instruments.—Mr. Gutteridge, one of the most successful lithotomists of the day, having cut 188 patients with a loss of only eight, will give a demonstration of his instruments and practice at St. Peter's Hospital on Monday next, the 3rd inst., at 3 p.m., when it is expected he will perform the operation of lithotomy also. Members of the profession are invited to attend.

GENERAL CORRESPONDENCE.

THE RECOGNITION OF THE PROVINCIAL SCHOOLS BY EDINBURGH UNIVERSITY.

[To the Editor of the Medical Times and Gazette.]

Sir,—I learn from your pages that there is a considerable development of the provincial medical schools of England, not only as regards numbers of students, but also as to teaching power. I equally learn from your "Students' Number" how small is the recognition of these schools by Edinburgh University. Seeing that many of these provincial students might wish to graduate there if proper facilities were given, is it not a reasonable request that the regulations as to students from these schools should now be reconsidered?

In passing through Edinburgh lately, I was surprised to learn what laxity existed as regards the recognition of extra-academical lecturers there, as compared with the strictness shown towards those of our provincial schools. One lecturer on the Practice of Medicine had been giving a *qualifying* course of lectures to a few ladies in his dining-room. This gentleman, having had only two students to constitute his class when giving his course at the College of Surgeons (or Physicians), had resigned his chair—if chair it may be called. Another lecturer on Surgery in the extra-academical school, having precisely a similar number of students in his class, it was a joke last session to say, when two students entered a surgical ward together, "Here comes Dr. ——'s class!" In truth, so numerous are these lecturers (all recognised by the University), that it is impossible they can have even a moderate class. On reference to your journal of September 13 it will be seen that there are four private lecturers on Surgery, two on Clinical Surgery, three on Practice of Physic, three on Midwifery and Diseases of Women and Children. Now, if small classes held—if the lecturers see fit—in their dining-rooms be recognised by the Edinburgh University authorities, why, in the name of common sense, cannot they recognise like lecturers at Leeds, Liverpool, Manchester, Birmingham, Bristol?

I write this in no hostile spirit towards Edinburgh, but the contrary. It is doubtless needful to take care that teachers be recognised out of the University; but it is just as needful that care be taken that those who are recognised are competent for their duty and have the fitting means and appliances for teaching their respective subjects—otherwise, certificates of courses of lectures are worse than useless.

October 25. I am, &c., M.D.

THE LATE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

[To the Editor of the Medical Times and Gazette.]

Sir,—I find the following in a leading article of the *British Medical Journal* of Saturday last (October 25, page 492):—"It is not quite the fact that all the acknowledged metropolitan leaders of the profession thought it right to make sacrifices to further the success of the meeting [of the British Medical Association in London]. Many did so; they made, indeed, every kind of sacrifice most cheerfully, generously, and even ostentatiously. Their efforts will always be gratefully remembered. There are others who did not think it worth while to postpone their ordinary holiday for a few days to take part in this great professional festival, or even to express regret at being prevented from doing so; and this is much to be regretted, *and will also not easily be forgotten.*"

As a "provincial," I have no idea against whom this spiteful threat (for such it reads to me) is uttered; but no matter who it may be, the utterance is intolerably insolent and presumptuous. It may be that the "acknowledged leaders" referred to experienced no regret; nevertheless, they must utter a lie on penalty of their conduct not being easily forgotten, and say they did. So also because they did "not think it right to make sacrifices of health and strength and time and (least of all) money, neither will that neglect be easily forgotten. I have thrice done my best to entertain the members of the British Medical Association in annual meeting assembled, and can testify that I never performed a more thankless duty. I do not believe that half-a-dozen members have more than a slight remembrance of the "sacrifices" I made. But who

cares for thanks? I was happy to see those I entertained, and that was my sufficient reward. It is alarming, however, to find that if circumstances prevent me enjoying this pleasure, the neglect to avail myself of the pleasant opportunity should be a matter of accusation and punishment, without even the opportunity being afforded one of explanation. Who is responsible for this outrage on propriety—the editor, Mr. E. Hart, a committee, or the Council? I am, &c.,

A Provincial Member of the British
October 27. Medical Association.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 21.

Sir W. Jenner, Bart., M.D., F.R.S., President, in the Chair.

Mr. McCarthy showed a specimen of Traumatic Separation of the Great Trochanter. Such an accident was very rare, and, though often recorded, was generally compound, not simple. A child came in and died of pyæmia following a sacral abscess. At the examination this portion of the bone was found separated. Ten days previously the child had fallen, and began to have swelling of the hip. It was able to walk to the hospital, but soon died, when the condition was discovered. A case in the practice of Mr. Aston Key was somewhat similar. In both instances the child could walk to the hospital.

Mr. Goodhart asked if the separation or the ostitis came first. He had seen a case of acute ostitis ending in separation of the small trochanter.

Mr. McCarthy said the inflammation of bone was secondary. The child died ten days after the accident.

This gentleman also showed a recent Fracture of the Odontoid and Atlas. A man fell into the hold of a ship, and was brought in with no power in his lower extremities. The breathing was diaphragmatic. In twenty-four hours there were signs of returning sensation, but in sixty hours the man died. It was then found that the atlas was in four pieces, and that the odontoid was broken, but kept in position by the ligament. Curiously, in this case there was no interference with the function of the phrenic.

Dr. Dowse exhibited a specimen showing a Foreign Body in the Crico-thyroid Pouch. He thought it a portion of necrosed bone. The patient was a female, the subject of tertiary syphilis, who suffered from spasmodic attacks of dyspnœa. Not much was to be seen with the laryngoscope. Afterwards she suffered from epileptiform convulsions without loss of consciousness. She died in an attack of dyspnœa.

Dr. George Harley suggested the possibility of its being a foreign body swallowed. He had seen something of the kind in a female patient supposed to have phthisis, bringing up large quantities of matter, till one day she spat up a fishbone. Then she remembered having swallowed one long before. The symptoms cleared off.

Mr. L. Brown suggested that it was a portion of one of the arytenoid cartilages.

Dr. Dowse did not think so, but the question was referred to Dr. G. Harley and Dr. Powell.

Dr. Dowse exhibited the Spinal Cord from a man the subject of Paraplegia induced by a fall from a scaffold twelve months before. Not even reflex movements could be induced in the limbs. He died gradually exhausted by sloughing sores. He had had fair respiratory power. The cord was found softened. The whole nervous structures were gone below the neck, where there was red softening. (Referred to Dr. L. Clarke and Mr. Kesteven.)

Dr. Peacock exhibited a specimen of Aneurism of the Aorta, forming a large tumour in the left dorsal region. The preparation was removed from the body of a man 52 years of age, who had served for some years in the navy, and had since followed the occupation of a labourer. About fifteen months before his death he fell on the pavement upon his back, and then was much shaken, and had pain in the left shoulder-blade after. The pain increased, and he had also dyspnœa, and about three months after he felt pulsation in the seat of pain, and after a tumour was noticed there. He continued at his work till two weeks before his admission into St. Thomas's Hospital on February 11. There was then a large pulsating tumour extending from the top of the shoulder to the lower angle of the scapula, and from near the spinous processes of the vertebræ to the anterior fold of the axilla. He experienced great pain in the tumour, and after his admission it steadily increased in size and prominence. Latterly the skin was covered with patches of redness, and these became dark-coloured and threatened to slough, and that result was only prevented by covering the surface with soap-plaster spread on soft wash-leather. The pain was relieved by the hypodermic injection of morphia. There were no signs of cardiac disease. The patient was throughout his residence in the Hospital peculiarly pallid and anæmic-looking, and he died exhausted. On examination the aneurism was found to originate from the posterior side of the descending portion of the arch, at about an inch and a half below the origin of the left subclavian artery. It was biloculate, one portion extending across the bodies of the vertebræ to form a tumour about the size of a large orange on the right side of the spine; the other, and much larger portion, protruding on the left side, and causing the large tumour in the dorsal region. The bodies of the fourth, fifth, sixth, and seventh vertebræ were extensively eroded, and a considerable length of the second, third, fourth, fifth, and sixth ribs were destroyed, so that the aneurism lay immediately beneath the serratus magnus muscle. It contained only fluid blood. The aorta and its branches were not enlarged or apparently diseased, and the heart appeared natural. The tumour had not exercised any permanent pressure on the œsophagus, bronchi, or nerves, and had only somewhat compressed the left lung.

Mr. De Morgan showed a specimen of Hernia of the Vermiform Appendix. The patient had suffered for forty years from a hernia, which he kept up with a truss. It came down every night, and was replaced in the morning; but a fortnight before admission he failed to return a portion. This was left behind, and was hard and doughy, the size of an orange. The neck of the sac was large, and the bowels were regular. There had been no vomiting or sickness. He imagined the tumour omental, but next day the patient was looking more collapsed, and there was more tympanites. He operated, and came down to a thick structure containing matter. This was opened, and he came on a small opening leading into a tract embedded in the dense structure. Congestion of the lungs came on, and the man sank. They then found the opening leading up behind the bowel. It turned out to be the appendix vermiformis, which had come down with the cæcum, forming a hernia behind the peritoneum. It must have been there long, but for some reason pus had been produced, and this had been mistaken for the hernia of the bowel.

Dr. Silver showed a specimen of Obstructed Common Bile-duct giving rise to jaundice and enlargement of the liver. The patient, J. B., a labourer, aged 53, a man of good family history, and enjoying good health up to the time of his fatal illness, came under treatment at Charing-cross Hospital on December 30, 1872. About six months previous to that date his fellow-labourers pointed out to him that he was jaundiced. He continued to work for some weeks, but, becoming too weak, he applied for relief at St. Bartholomew's Hospital, where he was admitted, and remained for three months without benefit. When seen he was of a dirty yellow hue all over, deeper in the face than elsewhere; his urine deeply bile-stained, and his fæces clay-coloured. On examination his liver was found uniformly enlarged, but not to any great extent. There was no indication of any epigastric tumour. He went on sometimes improving, sometimes falling back, exceedingly dull and apathetic, till February 17, when he died somewhat suddenly during the night. Latterly he had become ascitic. After death his liver was found to be large, weighing eighty-seven and a half ounces, the bile-ducts strongly marked on its surface, and seemingly varicose; its substance discoloured from bile. On removal, together with the duodenum, the opening of the common bile-duct was somewhat prominent, and filled with mucus. On tracing it upward it was found normal, but with no stain of bile till near the junction of the cystic and hepatic ducts, where there was a soft, villous-looking mass attached to the wall of the common duct, and thence extending both into the cystic and hepatic ducts. Immediately beyond this the hepatic duct was enormously dilated, even to the size of the duodenum, and containing great quantities of altered bile, which welled out when the protuberant bile-ducts on the surface of the liver were wounded. The cystic duct was slightly dilated, and the gall-bladder filled with a gelatinous mass of mucus stained with the remains of altered bile. This soft,

semi-gelatinous new growth was sharply defined above and below, and there were no adhesions to any surrounding organs nor any apparent tendency on its part to spread. After hardening, this new growth was examined microscopically, and was found to consist of cells of various sizes, tending to group themselves in isolated masses, with indistinctly fibrillated connective tissue between—a structure which could be called nothing but cancer. (Referred to Committee.)

In reply to Dr. Gibbon, Dr. Silver said the obstruction was entirely within the duct.

Dr. Legg said he had come across one other such case in reading. Was the matter retained in the bile-ducts tested for bile acids?

Dr. G. Harley thought the case unique. In long-standing cases the whole of the coloured contents of the gall-bladder might be absorbed, and only a colourless mucus remain.

Dr. Silver said the contents of the gall-bladder did not give the ordinary colour reactions, showing that they were in process of undergoing the change described by Dr. G. Harley. Pettenkofer's test was not tried.

Dr. Silver also showed a specimen of Diseased Liver whose chief interest lay in the difficulty which would attach to the diagnosis of such a case. The patient, a man aged 49, came under treatment at Charing-cross Hospital on February 28, 1873. It was elicited that he had been already a patient under one of the out-patient physicians, but that then he complained of vomiting and pain after food, bringing up also dark grumous matters. When admitted as an in-patient, however, his main complaint was ascites. Deeming it impossible to do any good by the ordinary means for relieving such accumulations, the man was tapped on March 1 by Mr. Hird, and fifteen pints fourteen ounces of fluid removed. From the effects of the operation he speedily recovered, but began to suffer a good deal from flatus, and the vomiting and pain at his stomach were troublesome. About the middle of March he began to swell again, and ultimately died quite suddenly on the 20th. After death there were found signs of recent peritonitis and much fluid in the abdomen. The liver weighed thirteen pounds, and had its right lobe converted into one enormous hydatid cyst, containing hydatids in all stages densely packed and with no fluid between them. The left lobe was large, hard, and in a decidedly cirrhotic condition; it contained no hydatids. The stomach was nearly converted into a cancerous mass, which passed round from side to side and obstructed the passage of digested food. This was ulcerated internally and adherent externally. Behind was a softened mass extending into the interior of the pancreas, which was there adherent to the wall of the viscus.

A third specimen exhibited by Dr. Silver consisted of a Small Aneurism of the Pulmonary from a patient who had died of hæmoptysis. The patient, a male aged 32, a labourer, was admitted on October 9. He stated that about six months ago he began to spit blood, having been troubled with cough and spitting some time before. After that he improved, but just when he was about to return to his work he had another attack of hæmoptysis, since which time he has been permanently invalided. When admitted he had all the signs of phthisis. On October 15 he had another very severe hæmoptysis, and his temperature went up to 102°, whilst his dyspnœa became worse. Again he rallied somewhat, but on the morning of the 20th he suddenly brought up a large quantity of blood, and died. Having had signs of a long-standing cavity in the left apex, and having regard to the nature of the hæmorrhage, which always came in great gushes, it was judged probable that there was some aneurism of the pulmonary in the walls of the cavity, and on tracing the vessel to the margin of the cavity, such an one was discovered, about the size of a pea, and in close proximity to several large vessels which had been obliterated. From it, in all probability, had come the fatal hæmorrhage.

Mr. Wagstaffe showed a portion of a Large Tumour of the Parotid. It had grown slowly till it attained the size of two fists, projecting backwards and upwards, and pressing on the nerves. He removed it without great trouble. It weighed sixteen ounces, and had a honey-combed structure, consisting of cysts, partly degenerated dense connective tissue, with glandular tissue intermixed.

Mr. Godlee exhibited a specimen of Mycloid Disease of the Femur from a patient of Mr. B. Hill. Eighteen months ago this was seen, and supposed to be a white swelling, but it was seen to be entirely in the upper part of the joint. Last year pain was felt, and the swelling rapidly increased. Slight movement was, however, possible. There was only slight pain, and little or no tenderness. Several enlarged glands began to show in the groin, and amputation was resolved on. The cartilage was soft, and the outer condyle was gelatinous, but there was no actual involution of the joint. The shaft of the bone was inflamed, and the parts discoloured with blood. The character of the soft mass was typically myeloid.

Dr. Cayley showed for Mr. Nutt the photograph of a Vesical Calculus, apparently mulberry. No history was given.

OBITUARY.

SIR HENRY HOLLAND, BART., M.D., F.R.S., D.C.L.

On the eighty-sixth anniversary of his birth, died, at his house in Brook-street, this distinguished physician. In this journal in the early part of last year—February 3 and March 30—was given a long and exhaustive review of his work, "Recollections of a Life." It will be unnecessary for us now to give more than a brief sketch of his career. He was born at Knutsford, October 27, 1787, on the very verge of the French Revolution. He was for a year or two at school in that town, and subsequently became a pupil of the Rev. Mr. Turner, Newcastle-on-Tyne. In 1803 he left Newcastle for a year, and was at the school of Dr. Estlin, near Bristol. He there became the head boy, succeeding Sir J. C. Hobhouse, afterwards Lord Broughton; and contracted an intimate friendship with Dr. J. Bright, for many years one of the physicians of Westminster Hospital. At the Christmas vacation he came to London, and passed some time with the celebrated Dr. Aiken, who resided at Stoke Newington. At sixteen years of age he was articled to a Liverpool merchant. He had no liking for mercantile pursuits, and determined to enter the medical profession. He passed two sessions at the Glasgow University, and there became acquainted with the celebrated Sir W. Hamilton. Subsequently he entered at the University of Edinburgh, and there formed acquaintance with most of the leading men who were then connected with that renowned seat of learning. Amongst these were Brougham, Sidney Smith, Walter Scott, Dugald Stewart, Jeffery, Henry Erskine, and others. He became identified with the leading Whigs and the *Edinburgh Review*. To his connexion with the Whig party may be traced the success of his future career. Soon after his graduation he was appointed to accompany the Princess of Wales on her Continental tour. This unfortunate lady was afterwards Queen Caroline, and on the memorable trial against her for "pains and penalties," Holland rendered most important service in her defence by the straightforward and manly evidence which he gave in her favour. It is not too much to say that this evidence had a remarkable influence in obtaining her acquittal. We have gone into the subject at considerable length in the first notice of his "Recollections." In 1816 he established himself in practice in Mount-street, Grosvenor-square, and four years afterwards removed to the house in Brook-street, in which he died. From the first he was a successful practitioner, and his income soon reached £5000 a year. His connexion with the Whigs—though he himself never took any active part in politics—was of great service to him. He numbered even at this early period among his patients most of the distinguished members of the party with which in early life he had been associated. He attended Prime Ministers, Lord Chancellors, judges, and men of eminence in the literary world. He gives in his "Recollections" striking portraits of these men; and we cannot do better than refer our readers to the remarkable volume in question. His chief contribution to medical literature was his "Medical Notes and Reflections"—a book that gave evidence of his highly cultivated and philosophical mind. Sir Henry Holland was so much occupied with his attention to "great personages" that he seldom found the opportunity of attending the gatherings of the members of his own profession. We never recollect seeing him in any medical society during his long life. But as President of the Royal Institution he was seldom or never absent from his post. In person Sir Henry was of the middle height, and of a spare and active figure. To the last he maintained his physical and mental activity and freshness. Within a few months of his death we met him in Grosvenor-square, walking—or almost running—with his accustomed agility. To the question of how he felt, the answer returned was "Never better in my life!" His appearance and manner justified the truth of this rejoinder. His face was not indicative of great power, but it denoted

sagacity and perfect self-possession. As a practitioner he was of the old school, and had less faith in medicines than those who had to administer them. Greater physicians than Sir Henry have flourished in his day, but no one can be named superior to him as combining literature and medicine. If he did nothing to raise the political influence of our profession, he did much by his personal character to elevate it in the eyes of the public. J. F. C.

ROBERT WILLIAM SMITH, M.D., Vice-President R.C.S. Irel.

With deep regret we have to record the death of this most distinguished surgeon and pathologist. The melancholy event occurred on Wednesday, October 28, and was caused by an illness which, though of old standing, assumed formidable proportions only at the close of last July. We have already referred to it in our columns. Dr. Smith's fame as a surgical pathologist has scarcely ever been equalled, certainly has never been surpassed. But not alone in this branch of the profession did he hold a foremost place, although its superior charms led him to a great extent to forego the advantages and emoluments of private practice, and to devote himself almost wholly to the theory and science of surgery. His worth was early recognised, and for very many years he was Surgeon to the Richmond Hospital, an institution with the history of which his name will ever be inseparably united. To his untiring industry the splendid museum of that Hospital owes its existence; and strangers from all countries, when visiting Dublin, have always made it a point to see perhaps the finest collection of drawings, casts, and preparations illustrative of surgical pathology which it has ever fallen to the lot of one man to accumulate.

In 1849 Dr. Smith was appointed first Professor of Surgery to Trinity College, Dublin, and he held this important chair until his death. His professorial lectures were unique for the clear and brilliant style of their delivery, and for the inimitable manner in which their subject-matter was dealt with. Many generations of students have hung on the words which fell from his lips from year to year, and they were not slow to recognise the intrinsic value of his lectures. The writer of this notice has often and often listened with pleasure to the wonderful "word-painting" of surgical lesion or disease which was so characteristic a feature in Professor Smith's discourses. There never was a better-read man or a more learned member of the profession. He seemed to know the works of the first surgeons of France and Germany almost literally off by heart, and how great he was on authorities (to use a student phrase) was but too well known to many a candidate Master in Surgery. As a classical writer, also, Dr. Smith will always be remembered. His "Treatise on Fractures and Dislocations," which first saw the light in 1847, has won a world-wide reputation, and the same may be said of his magnificent work on "Neuroma," which appeared some two years later.

One more sphere of usefulness in which he shone must be mentioned. In 1838 the Dublin Pathological Society was instituted, mainly owing to the earnest efforts of Dr. Smith and some of his most intimate friends. He was appointed secretary, and for the thirty-five years during which the Society has existed he held this annual office. What further proof is needed of the care and ability with which he watched over the interests of the Society?

So far we have spoken of Dr. Smith as a surgeon; it remains but to say that as a man he was thoroughly upright. He never truckled to any sect or party, but throughout his career he was ever ready to defend right against wrong, to vindicate the principle of impartiality, and to oppose to the utmost of his power whatever appeared to him to savour of injustice or of error.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, October 23:—

Clunn, Thomas Robert Hood, Mauntile, Pembroke.
Denton, Thomas John, Bridlington, Yorkshire.
Ransford, Thomas Davis, Guy's Hospital.
Rigley, James Arthur, Preston, Lancashire.
Twort, William Henry, Tunbridge Wells.

The following gentleman also on the same day passed his Primary Professional Examination:—

Hopgood, William Charles, University College.

The Apothecaries' Hall, Dublin.—At the Professional Examinations held in October, 1873, the following gentlemen received the licence to practise Medicine and Pharmacy:—

Fisher, John Baptist.
Foy, George Mahood.
Lyon, Richard N.
O'Sullivan, John Joseph.
Spence, Robert.

The following candidates passed the Preliminary Examination in Arts:—

Donaldson, Ebenezer.
Fryer, William Francis.
Greany, Hugh Joseph.
Hallowell, Joseph James.
Helihoy, David J. Daniel.
Kidd, Thomas.
Maguire, James.
Myles, Zachary George.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Gray, John H., M.B., M.R.C.S. Eng.—House-Surgeon to the Hospital for Sick Children, Bristol, *vice* Dr. Eliza Walker, resigned.

James, Wm. Dale, M.R.C.S. Eng.—House-Surgeon to the Royal Cornwall Infirmary, Truro, *vice* Mr. Salmon, resigned.

Yeld, Henry John, M.D., M.R.C.S. Eng., L.S.A.—Medical Officer of Health for the Borough and Port of Sunderland.

MILITARY APPOINTMENTS.

War Office.—Medical Department.—Surgeon-Major William Ferguson retires upon temporary half-pay. Surgeon-Major Joseph Richard Kehoe retires upon temporary half-pay. Surgeon John Montgomery Fiddes, M.B., to be Surgeon-Major, *vice* Ralph Robert Scott, retired upon temporary half-pay. Surgeon Charles Frederick Richards, M.B., from half-pay, to be Surgeon, *vice* George Scott Davie, M.D., promoted.

Army Hospital Corps.—Apothecary to the Forces Frederick Philpot to be Captain of Orderlies.

Brevet.—Honorary Surgeon J. R. Deane, Civil Medical Officer, Bhawlapore State, to have the local and honorary rank of Surgeon-Major.

BIRTHS.

Annesley.—On October 23, at Cheltenham, the wife of Surgeon-Major J. C. Annesley, Bengal Army, of a daughter.

Gogarty.—On October 19, at Winchester, the wife of H. A. Gogarty, M.B., L.R.C.S.I., Rifle Brigade, of a daughter.

Sutton.—On October 22, at the Norwich Borough Asylum, the wife of Frederick Sutton, M.R.C.S. Eng., L.S.A., Resident Medical Superintendent, of a son.

Ward.—On October 16, at Montagu-place, Russell-square, the wife of J. Ward, M.R.C.S. Eng., of a daughter.

MARRIAGES.

Edwards—Laing.—On September 18, at St. John's, Hackney, Thomas Edwards, Esq., to Susanna, widow of John Laing, M.A., M.D.

Leslie—Elder.—On October 22, at Trinity Episcopal Church, Deanbridge, Edinburgh, Louis Gordon Leslie, M.R.C.S., L.R.C.P., Arundel, Sussex, to Janie, only surviving daughter of the late John Elder, Esq., Writer to the Signet, Edinburgh.

Miall—Collings.—On October 22, at the Church of Our Lady and St. Joseph, Hanwell, Eugene Henry Miall, L.R.C.P. Edin., L.R.C.S., to Charlotte Matilda Alice, youngest daughter of the late Thomas Collings, Esq., of Hampton Wick.

DEATHS.

Fawcus, Annette, widow of the late James Fawcus, M.D., of the Bengal Medical Service, at Anerley, on October 20, aged 43.

Dalby, William, T.M.D., M.R.C.S. Eng., L.S.A., J.P. for the county of Surrey, of 169, Kennington-park-road, suddenly, at Shrewsbury House, Plashet, the residence of G. Gregory, Esq., on October 26, aged 60.

Garthon, James Slapp, M.R.C.S., late of Norwich, on October 20, after a lingering illness, aged 74.

Harrison, Amelia Eckford, wife of the late John Harrison, M.D., of Highgate, at Hampstead-lane, on October 16.

Holland, Sir Henry, Bart., M.D., F.R.C.P., F.R.S., D.C.L., L.L.D., on October 27, his 86th birthday.

Lewis, D. E., L.S.A., formerly of Liverpool and Bath, at Plumstead, on October 18, aged 77.

Macdonald, Patricia, youngest daughter of the late Alexander Macdonald, M.D., of Inverness, at 2, Ardross-street, Inverness, on October 22.

Mathew, Margaret, widow of the late P. Mathew, M.D., H.E.I.C.S., at 13, Marshall-place, Perth, on October 27, aged 90.

Torrie, James, M.D., at 19, Union-place, Aberdeen, on October 26, in the 83rd year of his age.

Vallance, Mary Ann, widow of James Thomas Vallance, M.D., F.R.C.S., late of The Grove, Stratford, Essex, and Villette, Broadstairs, Kent, at Cambria House, Primrose-hill-road, N.W., on October 25, aged 64.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be Members of one of the Colleges of Surgeons of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Committee, on or before November 15.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CHERTSEY, EPSOM, REIGATE, AND DORKING.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials, to Mr. Francis H. Beaumont, Buckland Lodge, Reigate, on or before November 1.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.—Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before November 12.

HOUSE OF CORRECTION, WANDSWORTH-COMMON, SURREY.—Surgeon. Candidates must be duly qualified. Personal applications to the Governor between November 8 and 11, between 11 a.m. and 2 p.m.

LEEDS PUBLIC DISPENSARY.—Senior Resident Medical Officer. Candidates must be duly registered. Applications, with testimonials, to Mr. John Horsfall, 31, Albion-street, Leeds, on or before November 6.

METROPOLITAN DISPENSARY AND CHARITABLE FUND.—Physician. Candidates must possess a Diploma from a British University, and also be Fellows or Members of the Royal College of Physicians, London, or undertake to become so within six months after election. Applications, with testimonials, to the Secretary, before November 15.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer. Candidates must be doubly qualified and registered. Applications, with testimonials, to the Secretary, 13, Cavendish-street, Ramsgate, on or before November 9.

ROYAL FREE HOSPITAL.—Junior House-Surgeon. Candidates must possess a medical or surgical qualification from one of the Examining Boards of the United Kingdom and be registered under the Medical Act. Applications, with testimonials, to the Secretary, on or before November 4.

SWANSEA UNION.—Medical Officer of Health for the Rural Parishes in the Union. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to G. B. Haynes, Clerk, 5, Fisher-street, Swansea, on or before November 1.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Candidates must be F.R.C.S. Eng., and must attend at the Hospital with their testimonials on November 11, at 1 o'clock p.m.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Clifton Union.—Mr. D. E. Barnard has resigned the Workhouse; salary £130 per annum.

Dursley Union.—The Second District is vacant; area 10,120; population 5755; salary £90 per annum.

Rothbury Union.—Mr. James M. Pringle has resigned the Whittingham District; area 25,697; population 1451; salary £10 per annum.

APPOINTMENTS.

Andover Union.—Wm. J. H. Lush, M.R.C.S. Eng., L.R.C.P. Edin., to the Fifth District.

Metropolitan Asylum District.—Wm. G. Balfour, L.R.C.P. Edin., L.R.C.S. Edin., as Superintendent of the Asylum at Hampstead.

Pontypridd Union.—Rees Hopkins, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Workhouse and Pontypridd District.

DR. R. FOWLER, of Bishopsgate-street, has been appointed Medical Officer of the C division of the Fire Brigade in the place of Dr. Woodforde, resigned. There were eighteen candidates.

HOSPITAL SUNDAY FUND in Manchester this year amounted to £8666, against £6971 in 1872.

THE Lambeth Vestry has very properly decided that in future the inspectors under the Adulteration Act shall be under the control and direction of the Medical Officer.

WE regret to state that Dr. Anderson, aged 50 years, who formerly held a good position professionally, was found drowned on the 24th ult. in the Temple Locks of the Forth and Clyde Canal.

THE German Imperial Chancellory have issued an official return of the cases of cholera which occurred in the eight eastern provinces of Prussia between May 22 and the 7th ult., which shows the number to be 38,624, and of these 19,655 were fatal.

AN outbreak of typhoid fever is reported in the neighbourhood of Wellington. Thirty cases have been traced to impure water. Dr. Sandford describes the contamination by sewage as "something fearful to contemplate." It appears the district is almost without drainage.

SCHOOL OF SURGERY, ROYAL COLLEGE OF SURGEONS IN IRELAND.—On Friday, October 24, 1873, J. Emerson Reynolds, M.D., Professor of Chemistry, and Keeper of the Minerals, Royal Dublin Society, was elected Professor of Chemistry in the School, in room of the late William Barker, M.D.

GOING WITH THE TIMES.—An advance to 3½d. a quart has been announced by the milk dealers of Bradford, and, in the event of a public analyst being appointed, it is their intention to charge 4d. a quart.

ON this day (Saturday, November 1) the Board of Trinity College, Dublin, will appoint examiners in Arts (Classics, Mathematics, and English), who shall be members of the Conjoint Examining Board for Ireland under the Medical Act, 1858.

MR. THOS. HARPER WHITAKER, surgeon, Kirkby Lonsdale, took the oath and qualified as a magistrate for the county of Westmoreland, at the last quarter sessions held at Kendal.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Henry Marais, Honfleur.—1. We know none such. 2. The abbreviations stand for Doctor of Medicine and Fellow of the Royal College of Physicians.

S. B.—Pitman's—from any bookseller.

A Provincial Teacher.—Dr. Ogle has not yet received the returns respecting the provincial schools, in consequence of the delay of the Birmingham authorities, who for some years past have omitted to send the returns in time. The other schools have complied with the regulations.

M.B.—The treatment is not new; it was recommended by the late Mr. Skey. It is, however, a valuable mode of managing the disease.

G. B., Wales.—A new note on Magnetism, by M. J. M. Gaujain, was read at the *séance* of the Académie des Sciences on September 29 last.

Charity.—Hospital Sunday Fund in London has been fixed for June 14 next year.

A. B. E.—The Excise duty on medicine vendors was last year £7285 15s. This is in addition to the stamp duty on patent medicines.

Inquisitive.—Dr. Lankester's account for inquests held in Middlesex from August 7 to the 3rd ult.—251 inquests—amounted to £649 1s. 6d.

Arts Examinations.—The list of successful candidates was published exclusively in this journal. Your letter should be addressed to the publishers, 11, New Burlington-street.

Observer.—We gladly reproduce the following from the *Army and Navy Gazette*:—"The medical authorities at Whitehall-yard have been untiring in their exertions to render the sanitary and medical success of the Ashantee expedition certain. All that science and experience can suggest is being freely made use of. The heads of the sanitary and medical branches deserve the highest praise for the way they have acted for the health and comfort of the troops."

A Metropolitan Teacher.—The session 1860 was the *annus mirabilis* for new entries of students, both in the metropolitan and provincial schools, caused by the desire to escape the preliminary examination in arts, etc., about to be required by the regulations of the Royal College of Surgeons of all students commencing the study of the profession. In this year the entries at the metropolitan schools amounted to 1228, and at the provincial schools to 333, making a total of 1561.

L.S.A., Fowey, Cornwall.—The Apothecaries Act received the Royal assent on July 12, 1815. In the case of the Company against Mr. Roby, it was held that, although the party had been in practice before and upon July 12, 1815, he was not entitled to resume his practice after August 1 if he had discontinued it before that day. Your neighbour (deceased) on the opposite side of the river could not, from his age, have been "in practice prior to 1815."

Mr. Edward Forbes Lankester has been the successful competitor for the exhibition of £120 a year given at St. Paul's School to the first scholar for the year after competition. He has also obtained, after examination, a scholarship worth £80 a year at Lincoln College, Oxford, where he is now pursuing his studies. Mr. E. F. Lankester is the son of the Coroner for Middlesex, and brother of Mr. E. Ray Lankester, Fellow of Exeter College, and Deputy of the Linacre Professor of Physiology, Oxford.

F.R.C.S. (exam.), Southampton.—After a careful examination of the last published Calendar of the College of Surgeons, we find that the following gentlemen passed for Fellowship and Membership on the same day—viz., Messrs. William Mitchell Banks, Liverpool, December 9, 1869; Timothy Holmes, Cumberland-place, Hyde-park, May 12, 1853; Thomas K. Hornidge, Charles-street, Westbourne-terrace, May 11, 1854; Athol A. W. Johnstone, Brighton, August 12, 1847; Joseph Lister, F.R.S., Edinburgh, December 9, 1852; George May, jun., Reading, December 11, 1851; Edwin Rickards, Birmingham, June 9, 1870; and Wm. Frederic Teevan, Portman-square, June 10, 1858.

Specs.—"Human Longevity, its Facts and its Fictions, &c.," by William S. Thoms, F.S.A. (London, Murray, Albemarle-street).

Psychologist.—The quotation to which you allude is by Milton, viz.—

"The mind is its own place, and in itself
Can make a heaven of hell, and hell of heaven."

Homo.—The costs of the recent action brought by the women students against the University of Edinburgh amount, we understand, to upwards of £850.

COMMUNICATIONS have been received from—

Mr. J. H. Gray; Dr. Vinen; Mr. Borchert; Mr. Sellars; S. B.; Mr. A. Harvey; Mr. L. Kidd; Dr. Farre; Dr. G. B. Halford; Mr. Blackett; Mr. W. W. Reeves; Mr. Searson; Mr. G. Eastes; Mr. T. H. Whitaker; Mr. N. Alcock; M.B.; Mr. A. Haviland; Dr. Phillips; Mr. A. L. Mease; Mr. T. M. Stone; Dr. George Scott; Mr. F. A. Mahomed; Dr. Fayrer: Mr. Lawson Tait; Professor Erichsen; Mr. J. Chatto; Mr. Balmanno Squire; Mr. W. D. James; Mr. Kershaw.

BOOKS RECEIVED—

James's Introductory Lecture on "The Progress of Medicine," delivered at the London Hospital—Sellars's "Chemistianity"—Blanc's Cholera, How to Avoid and Treat it—Die Anfänge der Lehensweisheit, von Dr. F. A. v. Hartsen—Statistical Report on the Health of the Navy for the year 1871—Nachrichten über die Gesundheitszustände in verschiedenen Hafenplätzen, von Dr. Max Leudesdorf—Lawson's Diseases and Injuries of the Eye, second edition.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—Lancet—British Medical Journal—Allgemeine Wiener Medizinische Zeitung—Derbyshire Advertiser—Gazette Hebdomadaire—Pharmaceutical Journal—Le Progrès Médical—The Students' Journal and Hospital Gazette—Le Mouvement Médical—The Grocer—La Tribune Médicale—Gazette des Hôpitaux—La France Médicale—The New York Druggist—Philadelphia Medical Journal, October 4 and 11—Exeter and Plymouth Gazette—Manchester Daily Examiner and Times—Medical Press and Circular—London Medical Record.

APPOINTMENTS FOR THE WEEK.

November 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

3. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. General Meeting. Dr. Routh, "A Case of Stone impacted in the Kidney." Dr. Purcell, "A Specimen of Calculus in the Pelvis of Kidney." Dr. E. Symes Thompson, "A Case of Scrofulous Kidney." Dr. Berkart, "On the Nature of so-called Bronchial Asthma."

Royal Institution, 2 p.m. General Monthly Meeting.

4. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8 p.m. Dr. Greenhow—Large Hydatid Cyst of Liver. Dr. W. Legg—Gall-stones, with Abscess of the Liver, perforating the Pericardium and Pleura. Dr. Goodhart—Mediastinal Tumour in Exophthalmic Goître. Mr. Nunn—Pistol-shot Fracture of the Skull. Dr. Liveing—Human Hearts showing the Moderator Band. Dr. Henry Green—Fibroid Induration of the Heart. Mr. Potts—Osseous Deposit within the Arachnoid. Mr. H. Arnott—Sarcoma of the Omentum in a Child. Dr. Cayley—Psammoma of the Cerebral Dura Mater.

5. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Dr. Wiltshire, "On the Common Skin Diseases of Children." Mr. Tapson, "Note on the Removal of Intra-uterine Tumours." Dr. McCallum, "A Case of Extra-uterine Fœtation." And other Communications.

Royal Microscopical Society, 8 p.m. Mr. S. J. McIntire, "Notes on Acarellus." Rev. W. H. Dollinger and Dr. Drysdale, "Further Researches into the Life-History of the Monads."

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Harveian Society, 8 p.m. Mr. Cripps Lawrence, "A Case of Congenital Umbilical Hernia." Dr. Hughlings-Jackson, "On a Case of Apoplexy."

7. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Medical Society of London, 8 p.m. Meeting of Council.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 25.

BIRTHS.

Births of Boys, 1101; Girls, 1075; Total, 2176.
Average of 10 corresponding years 1863-72, 2140·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	694	710	1404
Average of the ten years 1863-72	691·6	671·7	1363·3
Average corrected to increased population	...	...	1500
Deaths of people aged 80 and upwards	...	...	37

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	7	2	...	...	1	5	...	5
North	751729	...	18	1	...	5	2	15	1	5
Central ...	334369	...	2	2	...	3	1	2	2	2
East	639111	...	30	11	3	10	1	7	1	5
South	967692	...	19	2	1	9	...	12	5	12
Total	3254260	...	76	18	4	27	5	41	9	29

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·386 in.
Mean temperature	44·8°
Highest point of thermometer	58·5°
Lowest point of thermometer	31·2°
Mean dew-point temperature	41·4°
General direction of wind	W.S.W. & N.E.
Whole amount of rain in the week	0·71 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 25, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Oct. 25.	Deaths Registered during the week ending Oct. 25.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain-Fall. In Inches.	In Centimetres.
London	3356073	43·0	2176	1404	58·5	31·2	44·8	7·11	0·71	1·80
Portsmouth ...	118280	12·4	59	42	62·2	37·0	49·1	9·50	1·20	3·05
Norwich	81677	10·9	53	27	56·5	33·0	42·8	6·00	0·67	1·70
Bristol	189648	40·4	131	98	55·4	35·4	45.3	7·94	2·18	5·54
Wolverhampton ...	70084	20·7	54	32	60·4	30·1	43·4	6·33	1·19	3·02
Birmingham ...	355540	45·4	251	197	59·2	32·8	43·1	6·17	0·83	2·11
Leicester	102694	32·0	59	42	57·7	29·2	42·5	5·84	0·93	2·36
Nottingham ...	89557	44·9	61	37	60·6	25·7	42·2	5·67	0·62	1·57
Liverpool	505274	98·9	326	235	56·7	33·5	43·5	6·39	0·88	2·24
Manchester ...	354057	78·9	236	171	...	...	...	...	...	...
Salford	130468	25·2	125	59	54·9	31·7	43·5	6·39	1·41	3·58
Oldham	85141	20·4	76	39	50·0	...	...	...	1·89	4·80
Bradford	156609	23·8	131	93	57·8	32·8	43·5	6·39	1·13	2·87
Leeds	272619	12·6	131	168	58·0	31·0	43·3	6·28	1·11	2·82
Sheffield	254352	11·1	193	106	60·0	28·5	43·2	6·22	0·90	2·29
Hull	128125	35·9	85	56	55·0	28·9	42·1	5·62	0·69	1·75
Sunderland ...	102450	31·0	77	42	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	94	87	...	...	...	...	...	...
Edinburgh	208553	47·1	109	85	...	...	...	...	...	...
Glasgow	498462	98·5	339	257	52·7	28·3	40·0	4·44	1·71	4·34
Dublin	314666	31·3	137	128	59·5	27·0	42·9	6·06	1·65	4·19
Total of 21 Towns in United Kingd'm	7507575	34·5	4913	3405	62·2	25·7	43·5	6·39	1·16	2·95

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·39 in. The highest was 30·06 in. on Sunday, the 19th inst., at noon, and the lowest 28·76 in. on Thursday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

ON METHOD IN SURGICAL DIAGNOSIS.

A Lecture delivered at University College Hospital.

By PROFESSOR ERICHSEN,

Senior Surgeon to the Hospital, and Holme Professor of Clinical Surgery in the College.

(*Concluded from page* 427.)

The symptoms presented by the patient are, as I have already said, subjective—they must be described by the patient himself; and here the surgeon gets upon totally different ground, and has to exercise a considerable amount of caution in effecting his diagnosis, because patients will very frequently do one of three things. They may unconsciously exaggerate their symptoms—that is a condition that is extremely common in nervous and hysterical people; they exaggerate not only the actual existence of any symptom, but its relative importance to others. One symptom has chiefly attracted their attention, and on that they dwell. They employ exaggerated language in describing it; they will tell you that they have got an "agonising" pain, a "distracting" pain; they will use the strongest expletives in that way in connexion with their symptoms, often unconsciously exaggerating the importance of one particular symptom. Then, again, they will sometimes, and for various reasons, consciously and designedly either exaggerate or conceal symptoms. They will do both; and it is very important for the surgeon not to be misled in these respects, and to use his utmost powers of cross-examination and of searching inquiry in order to elicit whether symptoms in reality exist which are pretended, or whether symptoms which in reality do exist are designedly kept in the background. Here the difficulties of diagnosis become great, but fortunately it is but rarely that the surgeon has to deal with cases in which the phenomena presented to him are purely subjective, and in which the subjective phenomena cannot be supplemented or corrected by those objective phenomena to which I have already directed attention as being so infinitely more important.

Now let me say a few words about the method of effecting the diagnosis itself. You will find that by adopting a definite given method you will be able to arrive much more quickly, with far greater simplicity, with much less trouble to yourself and to the patient, and with infinitely more certainty, at the true nature of his condition, than you can by not following a definite rule.

In the first place, if you have to do with an injury, always ascertain the way in which that injury has been occasioned. That of itself will often throw great light upon the injury itself. For instance, an old person is walking across the room, the foot is caught in the rug, he falls to the ground and is unable to get up again. That condition of itself will almost explain to the surgeon what has happened,—an intra-captural fracture of the neck of the femur. The same accident would not happen from that cause at an early period of life. A person falls from a height, alights upon his vertex, and is bleeding from the ear. The bleeding from the ear, coupled with the fall from the height, will infallibly lead you to the true conclusion that he has a fracture of the base of the skull, with a fissure through the petrous portion of the temporal bone. Always therefore ascertain the cause that has led to the accident, and that will often throw great light on the very nature of the injury sustained.

When you have to do with a surgical disease, try to learn something about the constitutional condition of the patient, both as to his previous condition of disease and his acquired or hereditary diseases. You will see at once whether he is strumous, whether he is cachectic, or whether he is healthy. You will ascertain by inquiry whether he has had syphilis, or—so far as you can ascertain—whether there is an hereditary tendency to cancer, to gout perhaps, or to consumption. But do not attach undue importance to hereditary tendencies. An hereditary tendency only involves the presumption of the existence of a given disease. It renders the chances greater of the development of disease in the offspring of a similar nature to that which is known to have existed in the progenitor. It proves nothing. But let me warn you with regard to this point of hereditariness. There is an immense fallacy often connected with the determination of the hereditary tendency of disease. By far the greater number of people with whom one has to do surgically, know no other members of their ancestry than their fathers and their mothers, and many do not even know them. In some parts of this country—so far as we can rely on statistics—it would appear that in one case out of every ten only one parent can be absolutely determined. But whether a patient knows anything about one or both of his parents, he very commonly knows very little or nothing about their diseases; and when you go a step further back in his genealogy, and recollect that every individual has four grandparents, from any one of whom he may acquire an hereditary disposition or tendency to disease, how little does he know of the condition of the health of any one of his grandparents beyond the disease possibly of which he died,—and still less of the whole number. If we go one step further back—to the third line of ancestry only—and reflect that there are eight great-grandparents to every individual, we get into a haze of ignorance and confusion with regard to hereditariness out of which it is perfectly impossible to extricate oneself. But yet there can be little doubt that many hereditary tendencies are transmitted from grandparents and even great-grandparents nearly as readily as from the parents themselves. Go into any great family picture-gallery, and you see the same nose, the same form of countenance, the same expression of the eye, transmitted to and recognisable in the present generation, from an ancestor who lived, perhaps, one or two centuries ago. From a comparatively remote ancestry in this way you will find the same physical lineaments transmitted. The same physical constitution and tendencies necessarily follow the transmission of those physical characteristics, and yet how little do we know, in the greater number of cases, of this not very remote transmitter of those features and those tendencies. Hence that question of hereditariness, as a rule, is utterly valueless in estimating the probability even of the nature of any given disease.

And now let us see how the diagnosis is at last to be effected. There are three distinct methods by which you may make a diagnosis, and by attention to these methods you will be able to make your diagnosis absolutely and certainly with very little trouble to yourselves. It is the employment of these methods, often unconsciously, the result of long habit, that gives a surgeon what is called experience. Experience, in point of fact, is nothing more than prolonged observation, the results of which have been analysed, stored up, and are daily utilised by the possessor. Experience is not gained by merely seeing a large number of things, but by observing what is seen accurately and well—observing them minutely, and reasoning upon the phenomena presented by them. You will see in social and domestic life how many individuals go through the world without gaining the slightest real experience of it.

As I have already said, there are three methods that you may employ. The first and simplest method—and, happily, in surgery we have very simple methods of diagnosis—is by finding one pathognomonic sign. By "pathognomonic" is meant a thing which of itself indicates the nature of a condition. For instance, a person complains of dimness of vision. You look into his eye, and you see an opacity of the lens. That of itself determines at once the nature of his disease—cataract. You need not ask him a single question or go a step further. Again, a person complains of trouble about the bladder. You introduce a sound, and you feel a calculus and hear it struck. Thus at once a single sign—and that sign a pathognomonic one—is determinative in itself and by itself, not only of the existence of a malady, but of the very nature of that malady. You determine by that single sign, not only the existence, but the very nature of the malady that exists. Well, in surgery always seek for the pathognomonic sign, and endeavour to determine, if you possibly can, at once and by a single sign, what the patient's lesion may be.

Now, the second method in surgery consists in getting what may be termed a "pathognomonic group" of signs—that is to say, a set of signs which singly and individually are not indicative of any one given disease or injury, but which, taken collectively as a group, indicate incontestably the nature of some given injury or disease. Take, for instance, the case to which I have already alluded—of an elderly person being tripped up upon the floor and being unable to rise. You look at the limb and find that it is somewhat shortened, that it is everted, that the patient is unable to raise it off the ground, that he complains of considerable pain, and that you feel crepitus about the region of the hip. Now, any one of these signs—

shortening of the limb, eversion of it, inability to move it, and crepitus—any one of these signs is common to a variety of different injuries and diseases of the lower extremity; but the group, taking them collectively, is indicative of only one single condition, and that condition is fracture of the neck of the femur. Hence, although the individual signs may be untrue in themselves so far as the determination of any given injury is concerned, they are absolutely true, and incontestably so when grouped together, in determining the nature of a particular injury. That is the second method, then, of effecting a surgical diagnosis, by getting a pathognomonic group of signs or symptoms, for it will do for either.

The third method is a very important one, and it is the method that was greatly employed in the French school of surgery, and the employment of which undoubtedly led to the high position that it occupied, and does occupy, as a diagnostic school. It is what may be termed the negative method, or what is termed by French surgeons the "method by exclusion." By this method you first of all ascertain what a thing is not, and then by excluding everything that is not, you arrive at last at what it is. It seems a roundabout way of arriving at the truth, but in point of practice it is an exceedingly simple way. Let me give you an illustration. A patient comes to you with a tumour in the scrotum. You are in doubt as to what it is. You examine it first of all by transmitted light. You find that it is not translucent; therefore it is not a hydrocele. You examine the upper part; you find there is no impulse on coughing, and that the cord is not covered; therefore it is not a hernia. You find that the cord itself is not enlarged, is not tortuous, and vermiform in its feel; therefore it is not a varicocele. Having removed hydrocele, hernia, varicocele from any possible tumour of the scrotum, what have you left? Why, two conditions—hæmatocele and sarcocele. You find that it has not followed a blow, that it is not globular and uniform, that the scrotum is not discoloured; therefore it is not a hæmatocele—*ergo*, it must be the last of these conditions, and that is a tumour of the testicle: a sarcocele. In that way, by determining what a thing is not, you speedily arrive at what it is; and this determination in the hand and in the mind of a practised surgeon is so rapid as to be almost instantaneous. The whole process is gone through in his mind with such rapidity that as he lays his hand upon the part he feels for everything, and he finds that four out of five conditions are absent; and his diagnosis is made almost instantaneously, although it is made by that process of negation or exclusion, and though the steps that lead to it are apparently complicated.

Those, then, gentlemen, are the three methods by which surgical diagnosis may be effected; and you will find that by the employment of any one of these methods, sometimes varying them according to the different cases, you will be able to arrive easily and satisfactorily, and usually with certainty, at a correct knowledge of the nature of the case before you.

ON THE RIGHT USE OF DISINFECTANTS.(a)

By H. LETHEBY, M.B., M.A., etc.,

Professor of Chemistry in the College of the London Hospital; Medical Officer of Health and Public Analyst for the City of London; and President of the Society of Medical Officers of Health.

(*Concluded from page* 489.)

8. Charcoal and other Porous Substances are powerful oxidising agents, and they owe their action to their property which they possess of condensing upon their surface and within their pores large quantities of vaporous and gaseous matter, which by the very force of condensation they bring into contact with atmospheric oxygen, and thus by a process of slow combustion burn up organic miasms almost as thoroughly as if they were passed through the ignited coals of a furnace. In the case of wood charcoal it will absorb about nine times its volume of oxygen, and ninety times its volume of ammonia.

This property of absorbing offensive effluvia was described by Löwitz, a German chemist, at the close of the last century, and in 1805 Giraud proposed to use it as a means of disinfecting night-soil. In 1814 the subject was further investigated by Theodore de Saussure, who ascertained the exact volumes of different gases and vapours which wood charcoal would absorb. Since then the question has been further explored by Figuier, Bussy, Thenard, Allen, and Pepys, Count Morozzo, and others; but it was not until the year 1853 that the facts of the inquiry began to acquire practical importance. In that year Dr. Stenhouse, pursuing an experiment of Mr. John Turnbull, of Glasgow, found that putrid organic matters, when covered with a layer of charcoal, were free from offensive smell, notwithstanding that they putrified and decayed with more than usual activity.

Let me give you some experimental illustrations of this.

Now, the sole condition which is necessary to this is the free access of atmospheric air, which the charcoal uses in oxidising the putrid miasms. It is useless therefore to expect a beneficial action of the charcoal unless it can obtain oxygen; but getting this it will carry on its *eremacausing* power for an indefinite time. The applications which have been made of this power are numerous:—1. There is the respirator of Dr. Stenhouse, which arrests putrid miasms, and enables us, as I know from experience, to work comfortably in the most filthy atmospheres. 2. There is the air-filter, which I shall presently describe as applicable to the purification of the air of sewers, etc. 3. There is the charcoal water-filter, which, with water containing oxygen or worked intermittently, will purify water from the foulest matters. Other applications of it will occur to us presently, but I beg of you to remember that as the action is entirely dependent on the free access of oxygen, it is folly to expect that charcoal will act as a deodoriser or disinfector when this agent is shut out. It has therefore failed to disinfect sewage when used continuously as a filter for that purpose.

Again, everyone is familiar with the purifying power of common earth; the graveyards, indeed, of every large city, testify to the enormous quantity of organic matter which may be disposed of through its agency; and looking at the magnitude of the subsoil filth of this city, it is surprising how little it has affected the virgin gravel a few feet below the surface. All this is referable to the catalytic action of the porous soil, whereby the countless tons of decomposing matters have been oxidised and converted into harmless nitrates, which abound in the city wells, and which might, in case of an invasion, furnish our volunteers with abundance of "villanous saltpetre."

9. Air and Water are likewise powerful agents of destruction, and show their beneficial action in the one case in the effect of good ventilation, and in the other in the disintegration of organic substances as they flow along in our polluted rivers—thus giving them the means of rapid self-purification. A heavy storm of rain, too, is a great purifier of the air, and is often the turning-point in the progress of an epidemic; but besides this, water, by reason of its endosmic action, is inimical to the corpuscular structures of many specific contagia, and, by bursting their cell-like envelopes, destroys their vitality.

10. Disinfection by Heat.—The power of fire as a disinfectant is well-known, and has been recognised from the remotest time. The sacrificial altars of early nations were the rude methods by which this agent was employed; and so fully did the ancients believe in its salutary effects, that in time of pestilence it was often resorted to as the only effective means of purifying the air. Caius, in his "Boke of Counseill against the Disease commonly called the Sweate or Sweating Sickness," in 1552, advises the use of "fyres either in houses or chambers, or on that side the cities, townes, and houses that lieth toward the infection and wynde commyng together, chefely in mornynges and eueninges, either by burnyng the stubble in the felde or windfallynges in the woodes, or other wyse at pleasure. By which pollicie," he says, "skilful *Aeron* deliuered Athens in *Gretia*, and diuine *Hippocrates abdera in Thratia* frō ye pestilēce, and preserued frō the same other the cities in *Greece*, at diverse times eōying with the wynde frō *Ethiopia*, *Illyria*, and *Pœonia*, by puttyng to the fyres wel smelling garlādes, floures, and odoures, as *Galene* and *Soranus* write. Of the like pollicie for purgyng the aier were the bonfyres made (as I suppose), frō long time hetherto vsed in ye middes of summer, and not onely for vigiles." In the popular mind there has always been a notion that the plague of London was exterminated by the Great Fire.

The temperature at which infectious matter is rendered inert has lately been a subject of keen controversy, chiefly in relation to the temperature at which the vitality of living germs and minute infusorial creatures is destroyed. The late Dr. Henry, of Manchester, demonstrated experimentally that the vitality of vaccine matter is destroyed at a temperature of

(a) Read at the meeting of the Society of Medical Officers of Health on Saturday, October 18, 1873.

140° Fahr., and that the virus of scarlet fever is inert after being exposed to a heat of 204° Fahr.; but some of the lower organisms appear to be more tenacious of life, for, according to Dr. Crace Calvert, the common vibrio will bear a temperature of nearly 300°, and his black vibrio, which appears to be a very salamander of animalcules, is not killed by a heat of less than 400° Fahr. After a long investigation, however, before the Académie des Sciences of Paris, it was unanimously agreed by all parties to the controversy of spontaneous genesis that none of the lower organisms or their germs would resist in air a temperature of 130° C. (= 266° Fahr.), and in liquid a temperature of 110° C. (= 230° Fahr.). This, indeed, was the temperature fixed by Pasteur himself, although many of the members thought that 100° C. (= 212° Fahr.) was sufficiently high to destroy all vitality. In most cases, in fact, a temperature of 180° Fahr. is sufficient to destroy infusorial life, for that will coagulate albumen, of which they are made. Assuming, however, that it is desirable to use as high a temperature as possible for disinfection, it is important to know what is the effect of heat on textile fabrics. Up to a temperature of 250° Fahr. most of these fabrics are unchanged, unless the exposure is maintained for many hours, when they become discoloured and slightly brittle. Above this temperature the change is more marked, and with a dry heat of 300° Fahr. cotton fabrics are slightly charred, and therefore spoilt. At 400° they become dark brown, and crumble into powder when rubbed. At 500° gaseous hydrocarbons are produced, and at 600° all vegetable and animal tissues are converted into charcoal, with the evolution of empyreumatic oil and gas. It would seem therefore that for practical purposes a heat of 250°, aided by a jet of steam, for the purpose of diffusing the temperature and helping its action, may be safely applied to textile fabrics.

In the case of noxious vapours, however, as the fetid effluvia from tallow-melting, bone-boiling, soap-making, etc., the organic miasms must be destroyed by actual combustion, and to this end they must be conveyed into and through a large body of fire. In many cases it is necessary to remove aqueous vapour from the miasms by means of a scrubber or condenser before they pass to the fire, and in all cases the products of their combustion should be conveyed into a tall chimney-shaft, in order that a good draught may be secured for their delivery to the fire.

The employment of heat for disinfecting purposes should be taken advantage of on all possible occasions. Foul linen from the sick-chamber should be immediately boiled in water or steeped in boiling water. Milk, whether tainted or not, should always be boiled before using; and in cases of suspicion as to the contamination of drinking-water, it should be boiled and filtered through animal charcoal, for there is no reliable evidence that any of the common agents of infection will resist a temperature of 212° Fahr. applied for a few minutes. Lastly, meat should be thoroughly cooked, so as to destroy parasitic and other infection.

And now, having broadly examined the several powers and modes of action of the leading disinfectants, we will briefly consider the way in which they may be most advantageously applied, taking as examples the common cases which present themselves in actual sanitary practice.

First and foremost of these cases is *the disinfection of the sick-chamber and of the articles contained therein.* This is avowedly a difficult matter, for the presence of the sick person and his attendants prevents the use of volatile or aërial disinfectants in such quantity as to be of undoubted service; chlorine, for example, or hypochlorous acid, or sulphurous acid, or carbolic acid vapour, must be present in the atmosphere in the proportion of at least one part per 1000 to be effective, and in this proportion they are so irritating as to be irrespirable. While, therefore, the room is occupied by the living, we must rely on other means of disinfection and the immediate destruction of tainted articles. Matters discharged from the body should be received in a vessel containing active disinfectants, as about half a pint of either of the following solutions, namely:—A solution of two pounds sulphate of iron (green copperas) in a gallon of water (= 20 per cent., specific gravity 1096); or a solution of one quart of chloride of zinc (Sir William Burnett's fluid) to three quarts of water (= about 8 per cent. solid chloride, specific gravity 1077); or a solution of four fluid ounces of carbolic acid (Calvert's No. 5) to a gallon of water (= 2·5 per cent.). All articles of clothing, bedding, etc., should be boiled in water or plunged into boiling water before they are taken from the room, and in addition to this they should be steeped in a solution of carbolic acid of the above-mentioned strength. Special agents of infection—as the desquamated cuticle in scarlet fever, and the phagedenic discharges of ulcers and foul wounds or sores—should be the subjects of constant attention; pomades and other matters being freely employed to the surface of the body in the former case, and antiseptics and disinfectants in the latter. Besides this, all superfluous articles of furniture, as carpets, curtains, etc., should be removed from the room early in the case, and free ventilation and the utmost cleanliness should be always practised—everything like soiled rags, dressing, etc., being immediately burnt. As regards the use of aërial disinfectants, I am inclined to think that acid vapours are the most effective—as chlorine, or chloride of lime, or acetic acid,—for these only are capable of destroying the vitality of vaccine lymph, and therefore, by inference, of other contagia; besides which, they sweeten the atmosphere, and render it more pleasant for respiration.

When, however, the room is vacated, disinfection of it may be practised with the most perfect success. In the first place, all the articles contained in it should be spread out, so as to receive freely the sulphurous acid fumes which are to be generated therein; and, having closed the windows and stopped up as completely as possible every aperture and outlet from the room, measures should be taken for producing the needful quantity of sulphurous acid. This should not be less than 1 per cent. of the air of the apartment. Now, as a cubic foot of sulphurous acid is produced from 603 grains of burning sulphur, it is evident that every 100 cubic feet of space will require at least this quantity of sulphur for disinfection. To be certain of the results, however, it is advisable to use the sulphur in slight excess—say an ounce and a half for every 100 cubic feet of space. The sulphur may be safely burnt in a shallow pipkin or coarse earthenware saucer containing some live coals or a little bisulphide of carbon; in fact, this latter compound, if accessible, is the best form in which the combustion of sulphur can be effected, for it contains about 84 per cent. of sulphur, and is very combustible. The pipkin or saucer should be supported upon a pair of tongs laid across a pail of water, so that in case of accident the burning sulphur may fall into the water and do no injury. After a period of six or eight hours the room may be opened for ventilation and the several articles be spread out for an airing, or taken to the disinfecting chambers for still greater safety. The floor and painted parts of the room should be then thoroughly cleansed and the ceiling treated with limewash.

2. *Infected Clothing and Bedding* should be subjected to a further process of disinfection in the chambers provided by the local authorities for that purpose. These are a room or chamber for exposure to the concentrated fumes of burning sulphur (from 4 to 5 per cent. of them in the air); and next a chamber for disinfecting and for killing parasites by heat. This should be so constructed as that its temperature can be well regulated and maintained (as from 240° to 250° Fahr.) for four or five hours. It should be self-regulating and self-registering in this respect, and, therefore, be easily managed. The apparatus in use in the City of London for this purpose was constructed by Mr. Leoni, and it is very effective in its action, for during the last two years we have disinfected 2583 articles of clothing, bedding, etc., with the most perfect success. In fact, during the recent epidemic of small-pox, nearly 2000 articles were thus treated, and I am not aware of a single case in which it was not successful. This accords with the experience at the several small-pox and fever hospitals of London, and shows that, whatever may be the effect of such treatment with Dr. Crace Calvert's black vibrio, it is abundantly efficacious in the case of common contagia, be the virus what it may.

3. *Treatment of Dead Bodies.*—This is a matter which frequently demands attention, as when bodies are kept in rooms occupied by the poor, or are brought to the mortuary for safe custody. I have already told you that carbolic acid has been most successfully employed by Dr. Devergie at the Morgue in Paris for the preservation of the dead. As little as one part of the acid in 2000 of water, freely applied to the corpse, will prevent putrefaction. A sheet, therefore, saturated with a solution of one per 1000 of the acid and applied to the body will preserve it. So also will a couple of pounds of good carbolate powder, containing 15 per cent. of carbolic acid, placed in the bottom of the coffin. Metallic salts also will preserve the dead, and in some cases they are preferable to carbolic acid, as they are without odour; thus

sawdust, nearly saturated with a solution of chloride or sulphate of zinc (specific gravity 1077), may be placed around and over the corpse when in the coffin, and in this manner decomposition will be arrested.

I might here mention that the diseased and putrid meat seized in the City, amounting to nearly two tons per week, is disinfected with crude carbolic acid before it is sent away from the markets; and this not only prevents decomposition, but it also prevents the use of the meat for improper purposes.

In the case of old burial-grounds which are offensive, as well as church vaults, the best means of disinfection is the covering of the ground with fresh earth to the depth of several inches, and the planting of trees and sowing of grass. In this way we have dealt successfully with the city grave-yards, twenty-six in number, and covering a superficial area of about 48,000 square yards, in which, according to a moderate computation, there are at least 48,000 tons of human remains. Church vaults should be disinfected by first opening the vaults, exposing them freely to the external air, and throwing into them a quantity of quicklime. The coffins should then be rearranged crosswise like bricks in a building, and filled in with dry earth or mason's rubbish, with which about 5 or 10 per cent. of vegetable charcoal has been mixed. Ventilation should then be brought into connexion with the vaults by means of an upcast and downcast shaft of the size of a rain-water pipe, and the whole closed in. In this manner in 1860 the late Mr. Grainger and myself proceeded to disinfect all the vaults, amounting to 250 in number, of the seventy-one City churches. These vaults contained the coffins and remains of many thousand dead bodies—at least 11,000—in a very offensive condition; and the effect of it has been most successful. When bodies are removed from the vaults to other places of burial they should be enclosed, coffins and all, in cases containing carbolate of lime powder in good quantity.

4. *Sewage and Sewer Gases.*—The best disinfectants of sewage are the mineral salts, as the salts of iron and alumina in conjunction with lime. Ordinary sewage subjected to the action of from one to two parts of each of these agents per 7000 of sewage is immediately disinfected, the flocculent matters being rapidly precipitated, leaving a clear supernatant water which may be safely distributed upon land, or allowed to flow into a running stream of moderate volume—as from ten to twelve times that of the defæcated sewage. So effective is this operation that it ought to be universally applied to the sewage of towns when it is not discharged into the sea. The matters of cess-pools and privies require the application of large quantities of metallic salts—the best being sulphate of iron (green copperas) or chloride of zinc—either of which should be used of the specific gravity of about 1100.

Sewer gases are easily disinfected by vegetable charcoal in the manner already explained—the charcoal being placed upon trays in boxes which are situated in the course of the ventilating shafts from the sewers or drains. Many years ago I advised the adoption of this plan in the City of London, and there is a large district, eastward of Bishopsgate-street, where all the sewer ventilators are fitted with charcoal air-filters. The district is in the filthiest quarter of the City; it contains 1700 houses, occupied by about 14,000 inhabitants, and the total length of the sewers of the district is about 25,587 feet. Along these there are 104 air-shafts fitted with these ventilators, 265 trapped gullies, fifteen flushing tanks, and twenty-six side entrances. The air-filters consist of an iron box eighteen inches deep and fourteen inches square, containing a movable frame of six trays or sieves, upon each of which there is a layer of wood charcoal, in pieces as large as filberts, about two inches deep. Our experiments were commenced in 1860, and they have been maintained with perfect success until the present time, for they are still in action. I have repeatedly submitted the charcoal from the ventilators to chemical examination, and have always found that it contains abundance of nitrate, together with a peculiar alkaline salt of a nitrogenous nature with associated hydrocarbon. These ventilators are best fixed where they are protected from actual wet, as against the sides of houses, or in the course of a shaft or pipe carried up from the soil-pipe of the closet. In such situations their action is continuous for many years, and they should always be thus used where foul gases escape from the soil-pipe, the drain, or the closet of a house. Air-filters of this description have been adopted and applied with more or less success by Mr. Rawlinson, Mr. Baldwin Latham, and Mr. Bazalgette.

5. *The Offensive Gases and Infected Air* of noxious and unwholesome trades are easily destroyed by fire—there being contrivances for conveying the foul gases first through scrubbers or condensers and then into the back part of the ash-pit of the furnace fire. In this way moisture and other condensable matters are removed, and the residual gases and vapours are consumed by the glowing fire through which they must pass before they reach the chimney-shaft. By carrying the vapours to the back of the ash-pit of the furnace we insure their combustion, for when the ash-pit door is closed (as it ought to be) the draught is so powerful that it draws the vapours from the chambers or boilers in which they are generated, and forces them through the furnace fire.

In some cases the air becomes so loaded with minute particles of dust, etc., as to be extremely irritating. This is so in cotton mills, and with flock workers, feather cleaners, stone and steel grinders, chloride of lime makers, millers, firemen, etc. The remedy for this is easy, for a pocket-handkerchief over the face or a respirator packed with cotton-wool will shut out all noxious solid particles—in fact, the power of cotton-wool is so great in arresting the minute particles of matter, germs and others, which float in the atmosphere, that, according to Professor Tyndall, it is capable of producing an atmosphere absolutely free from dust, which will bear the severe test of his electric beam. Schroeder and Pasteur say that air filtered through cotton-wool is deprived of the power of producing infusorial life. Here is an experiment which is very striking in this particular: In these flasks I have a super-saturated solution of sulphate of soda, which, while in a state of active ebullition, was closed with a plug of cotton-wool, and in this state it has been allowed to cool. Atmospheric air, of course, has entered the flasks to take the place of the condensed steam, but in so doing it has been strained by the wool, and the solution has failed to crystallise. When, however, I remove the plug of cotton-wool, you will remark that the liquid instantly becomes solid, in consequence of the rapid formation of a mass of crystals. This is no doubt due to the falling in of a few particles of atmospheric dust, which were floating by at the time of withdrawing the cotton plug, and which immediately became nuclei for the growth of the crystals.

A still better respirator than cotton-wool is that of Dr. Stenhouse, which consists, as I have said, of a layer of granulated charcoal. Here is one of them, which I have used successfully on many occasions when conducting analyses of putrid matters in cases of suspected poisoning. Attempts have been made to keep down the dust of the public thoroughfares by means of deliquescent salts put into the water-carts; but such contrivances are exceedingly dangerous to tradesmen's goods, when in certain states of the atmosphere they become dry, and are blown with the dust into the shops, and settle upon the goods, for, at the outset of damp weather, they absorb moisture from the air, and spoil the goods. Cooper's patent in this country, and Marcus's in America, are illustrations of this. They are solutions of common salt and chloride of calcium in water, the gravity being from 1040 to 1085. They have been tried in America and on the Continent, but have failed.

6. *Shambles, Slaughter-houses, Cattle-layers, etc.*, should be kept sweet and wholesome by strict attention to cleanliness, and by the frequent use of cream of lime, with a little chloride of lime as whitewash.

7. *Breweries, Brewing Utensils, and Distillers' Vats* are easily and effectively cleansed and disinfected by means of sulphurous acid or a strong solution of bisulphite of lime, aided in the case of fungoid casks by a jet of steam.

Lastly, the purification of *Water* is insured by a few drops of permanganate of potash solution (Condy's fluid) or of chlorozone—leaving them to act for a few hours, and taking care that the pink colour is distinctly maintained to the very end of the process. Boiling the water for several minutes, and, after allowing it to cool, filtering it through animal charcoal, is also a safe method of disinfection. The filters of the London and General Water Purifying Company are admirably adapted for this purpose, as they contain a large volume of charcoal, which can be aërated by intermittent filtration. I find, indeed, that water thus filtered is absolutely free from organic taint, looking blue like distilled water when examined in large volume, as in a glass tube two feet in length; and the action of the filter is so enduring that it is maintained in the case of ordinary water for more than a year.

And now, gentlemen, in leaving the subject and inviting you to a discussion of it, I have only to say that I have care-

fully avoided a controversial treatment of it, not merely in respect of the possible or even probable causes of contagion, but also in respect of the many kinds of disinfectants which are daily advertised for public use. It is true that most if not all of these have come under my observation, and have been the subjects of experiment; but I have not dwelt on this, for my principal object has been to show you what, in my individual experience, I have found to be the most effective means of dealing with the several kinds of infection which almost daily occur in our sanitary practice.

ORIGINAL COMMUNICATIONS.

GLEANINGS IN WAR SANITATION

FROM N. PIROGOFF'S "BESICHTIGUNG DER MILITAIR-SANITÄTS-ANSTALTEN IN DEUTSCHLAND, LOTHRINGEN, UND ELSASS."

By NATHANIEL ALCOCK, L.K.Q.C.P., A.M.D.

(*Concluded from page* 432.)

To the honour of modern surgery must it be added that very few amputations of the upper extremity were performed, this operation being superseded by the conservative method. At the same time it appeared strange that disarticulation of the shoulder should have been so seldom practised, since this was one of the commonest operations within Sebastopol, and at the beginning of the siege yielded good results. Yet in the late war but three or four such patients were seen, and it was said that of eight operated on in Strasburg only one recovered. This disparity may, however, be in part explained by the fact that in the Crimea most wounds were caused by large shot, leaving no alternative but amputation, whereas with the Germans most wounds were produced by bullets.

Of amputation at a point between the anatomical and surgical necks of the humerus, Dr. Pirogoff found but one instance; yet from his own experience in the Caucasus he has been led to prefer this to disarticulation at the shoulder-joint. Of ten so treated by him all recovered, whereas of nine disarticulations four died, and of ten amputations in the middle third of the bone two were lost.

Disarticulation of the forearm was not done, having been probably replaced by resection. Amputations of the upper extremity had in general not bad results, and the conservative method was equally successful in the same part. On the other hand, amputation of the lower extremity increased in danger with every succeeding inch from the leg upwards.

As regards the mode of operation in thigh amputations, no one plan seemed less fatal than another. Professor von Langenbeck was most satisfied with the results of a large anterior skin-flap; but Dr. Pirogoff had previously practised the large anterior flap, including the muscles with the skin, in ten cases at Sebastopol without achieving a single recovery.

Of the leg amputations noticed, in one-half the ridge of the tibia protruded through the ulcerated skin, and this arose from the oblique direction of the incision to which the German surgeons so obstinately adhere, whereas by the vertical cut the formation of abscesses, the perforation of the skin, and the protracted cicatrisation of the wound could be avoided.

In conclusion, Dr. Pirogoff alludes to the cases of his own osteo-plastic operation on the foot, of which he counted eight. Of these three were in a satisfactory condition except that the under flap containing the piece of the os calcis was not brought sufficiently forward; and this was caused by its shortness, by too little of the bone having been removed, and by the neglecting to apply a permanent bandage after the operation. With regard to the five other cases—in one the flap became gangrenous, necessitating leg amputation; in another the bone necrosed; and in the third death occurred from some unrecognised cause; the remaining two were convalescent. Thus, of eight cases five had a successful issue.

Of the diseases which usually attend external injuries and operations, pyæmia showed itself most frequently, bringing in its train hæmorrhage—since, doubtless, all secondary bleedings after amputation are due more or less to pyæmic taint; and this opinion is testified by the fact that the majority of hæmorrhages, notwithstanding repeated ligature of the vessels, terminated in death. The autopsies in the Karlsrühe hospitals on pyæmic subjects showed the presence of thrombi either in the neighbourhood of the wound or in distant vessels, thus, in the latter case, opposing the "mechanical theory" of the disease; for if the vessels adjoining the wound be free and permeable, whence arise the outlying thrombi? Is it not more feasible to attribute their formation to the intrinsic action of the pus-infected blood? And if their independent production be thus conceded, must not their existence in the internal organs—the lungs, liver, etc.—be similarly explained?

One circumstance, however, in favour of the mechanical theory is that the form of pyæmia characterised by metastatic abscesses occurs almost exclusively among wounded, and seldom arises among those affected with internal suppuration from organic causes.

The mechanical theory asserts that wounds are invariably followed by the development of clots in the injured vessels, especially the veins, that therefore the possibility exists of a detached fragment being at any moment carried by the circulation into the capillaries of the lung or liver, and there becoming the nucleus of an abscess. Dr. Pirogoff formerly upheld this doctrine, but, while still admitting that many cases of traumatic pyæmia may owe their origin to thrombi, he is now further convinced that these thrombi are not the main source of the disease, but only the bases which the ferments prepare for subsequent pus-fermentation in the body; that only those clots originated under the influence of pus and other ferments contribute to the production of metastatic abscesses and pyæmia, since these abscesses never make their appearance until suppuration has been established in the wound; that pyæmia is induced above all things by the congregation of suppurating wounds in an enclosed space; that it not unfrequently presents itself in the form of external depôts of pus without any evidence of thrombi; that the pus sometimes collects in the liver to an extent out of all proportion to the extent of the thrombosis; and finally, that pyæmia with enormous liver abscesses now and then follows a most insignificant surface-abrasion without any evidence of thrombosis round the wound.

With great interest Dr. Pirogoff sought for instances of suddenly arising and rapidly increasing tumefaction of stumps accompanied by burning pain, and followed by speedy death, such as he had observed after the second bombardment of Sebastopol, and has described under the name of "local sclerosis of stumps," and which were in his opinion due to septicæmia; but none had been noted in the last war, although sometimes after thigh amputation early death from unknown cause was recorded.

Hospital gangrene assumed the diphtheritic character, never presenting the hæmorrhagic or fungous form as seen in the Crimea. Hospital erysipelas appeared periodically, attacking at once many wounds on the introduction of one erysipelas patient into a hospital. In this disease some of the Leipzig surgeons used with success Dr. Pirogoff's mode of treatment by camphor. Acute purulent infiltration of wounded limbs, which produced such horrible results in the hospitals at Sebastopol, was unknown among the Germans. Tetanus, however, was more frequent than in the Crimea, and seemed to invade the hospitals periodically, since while weeks would elapse without a case, suddenly many would come on together. The disease evinced a like fickleness with regard to the effects of treatment, being at times amenable and again intractable, although all were dealt with in the same manner. The duration of some cases for weeks, and their subsequent cure, was not a little surprising, but whether the malady was chronic from the beginning, or became so after treatment, was difficult to decide. The remedies most extolled were vapour-baths, opium, and chloral; and two instances of recovery from chronic tetanus under the use of one-drachm doses of chloral were seen. Obstinate traumatic neuralgia was best relieved by alternate subcutaneous injections of strong atropine and morphia solutions. Chronic diarrhœa of the wounded was not infrequent in the hospitals about Metz, and prevailed especially in districts subject to epidemic influences, thus rendering it difficult to determine how far it depended on the protracted and unwholesome suppuration of wounds, and how far it possessed an epidemic character. Occasionally it ran into dysentery, and this was most usually coincident with the arrival of a dysenteric patient in the hospital. Yet, notwithstanding the many forms of bowel complaints that prevailed, no instances of true cholera ever occurred. Scurvy, too, was remarkable by its absence. With regard to the effects of syphilis on the healing of wounds, no accurate observations have been made, and Dr. Pirogoff would earnestly commend the investigation of this subject as worthy of universal attention to all his colleagues, foreign and domestic.

In reviewing the foregoing experiences, Dr. Pirogoff considers that the most serious consideration for the future is to establish means for the quickest possible removal of the wounded from under fire and from off the battle-field. To accomplish this the organisation of sanitary detachments must be rendered much more complete. Omitting the claims of humanity, the actual interests of the fighting power has to be given up for the formation of a sanitary force, yet this will be even numerically more than compensated by the number of recovered combatants returned to the ranks, by the diminution of mortality, and above all by the maintenance of a high *morale* from the fixed conviction that through the provisions of Government immediate succour awaits the sufferer.

It has been previously shown that 400 trained stretcher-bearers are required for 1000 helpless men. Supposing, then, the rate of such casualties be at 10 per cent., 4000 would be needed for an army of 100,000 strong. But this apparently large demand upon the fighting element could be materially lessened by the formation, in conjunction with the private-help societies, of a mixed carrying corps, the military members of which would bear the wounded to the outskirts of the battle, from whence the civilians could remove them to the nearest ambulance; and by this means the inconvenience of undisciplined volunteers mingling with the troops in action could be avoided.

As a further step towards prompt assistance to the wounded, not only the sanitary detachments, but also the rank and file, should be instructed how to control bleeding by pressure, and how to apply the first simple bandages.

Another rule bearing most weightily on the prospects of the wounded is, that all crowding at the bandage-places near the battle-field should be strenuously guarded against; but this cannot be fulfilled without a complete reform in the relations of the War Administration and the Medical Department. The latter must be made much more independent, and at the same time entirely responsible for the suitable disposition of its members.

The most important measure would doubtless be that military surgeons should not accompany the troops under fire, but be assembled in readiness at the nearest bandage-places and movable hospitals. Again, when the order of battle had been arranged by the military chiefs, the selection, distribution, and equipment of the bandage-places should be in the uncontrolled power of the Medical Department, and the most experienced surgeons of all should be told off to the sorting of the wounded into the classes before enumerated. This above everything expedites the first disposal of them, avoids overcrowding, and prevents the chaos and confusion which must otherwise inevitably ensue.

The first line of bandage-places must not be confounded with the ambulances, which have movable, or even temporary, hospitals. In these bandage-places those beyond hope must not be allowed to accumulate. Those needing immediate help must be attended to (amputations, however, being undertaken only in cases of complete destruction of limbs from large shot), and such minor operations as sawing off the projecting bones, etc., being alone carried out. Those capable of transport must be furnished with immovable bandages, and all spare time should be assiduously devoted to filling up the diagnosis tickets, which will obviate further handling. Such rules of duty at the first depôts are no doubt contrary to the received opinions of immediate help in war; but anyone who has realised even once in a lifetime a methodless attempt to deal with a hundred wounded, while many hundred more are awaiting assistance, can testify that in the first line of bandage-places the diagnosis, the classification, and the distribution of the wounded are the most important duties.

With regard to the proportion of military surgeons to be enrolled, however considerable their number may be, it can never be held sufficient but that at some time the unforeseen accidents of war may paralyse even the very best allotment of professional services, in anticipation of which the Government should put itself in communication with the private-help societies on the one hand, and should on the other, as the Germans did, invite the leading professors of the medical universities and faculties to act as consultants at the bandage-places and hospitals, entrusting to them the final diagnosis, the classification of the wounded, the deciding on operations, and the carrying out of the most difficult, with, at the same time, a voice in the Military Medical Council at each head-quarters.

Yet it must be remarked that, notwithstanding the great good done by the German professors, still, by forgetting their position as consultants, and journeying from place to place as operators merely, they not only lessened their own usefulness, but caused bitter murmurings among the younger surgeons, who were thereby deprived of the opportunity of performing even the most common-place operations.

Persons deserving of such authority ought to act more as administrators, and to be able, by their influence, to strengthen the working of the whole ambulance system, as well as to assume the position of mediators between the private help and the Government staff, where the proposals of the former have to be carried out by the latter. As regards the young surgeons, praiseworthy though their efforts are, still they could be made much more serviceable under the direction of experienced teachers, and for this purpose the professors would be of infinitely more value than the military surgeons of long service. It is not advisable for the juniors to hurry to the ambulances, for, even though under guidance their hands may be useful, there is little for their heads to do. To them the ambulance is a kind of kaleidoscope into which they gaze to weariness, but from which they carry away nothing save a vague and confused impression of the things seen; whereas at the hospitals, at the bedside of the sick, they gain an accurate and fruitful experience.

Alluding briefly to the various adaptations of railway-vans for the conveyance of wounded, Dr. Pirogoff gives the preference to the American System. Particular stress is, however, laid on the necessity of adopting the Prussian device of Evacuation Commissions, which, consisting of a commandant, three surgeons, a transport company of sixty to eighty men with their officer, and some students, were charged with the fulfilment of all duties towards the sick from the time when they were despatched by train from the seat of war till they had been located in the various distant hospitals in which vacancies could be provided for them.

Passing, in conclusion, to the subject of international philanthrophy, Dr. Pirogoff recalls the obstacles which the difficulties of neutrality oppose to its success, and, earnestly exhorting his fellow-countrymen to the fullest development of their own national private help, forcibly adds that, "without possessing power, without concentrating this power on the establishment of national help, and thus learning to assist themselves, they cannot think of a participation in the international aid."

A constant penny collection throughout the country, under the advocacy of able and zealous delegates who would interest and educate the people in the nature of the undertaking, is the means proposed for attracting subscriptions; while railway accidents, manufactory accidents, and epidemics are suggested as occasions for displaying the vitality of the society in time of peace by supplying gratuitous aid to the sufferers.

For this purpose a staff could be enrolled, its members taught and exercised in the various regimental hospitals, and at the same time money might be advantageously spent in accumulating imperishable articles, while a surplus was reserved for the immediate provision of the less durable articles when required; and *apropos* of these is mentioned the removal from the list of the Russian Commissariat of Liebig's extract, which, from its deficiency in sugar, starch, and fat, is held to be not a complete nutriment, but, by reason of its creatin and other meat extracts, to be an adjunct merely to digestion, assisting in the assimilation of albumen and the other elements of nutrition.

Again, with his closing words, Dr. Pirogoff entreats his country not, at first, to devote its attention to international help, but to strain every nerve in the foundation of a solid national aid society, equipped with every requirement that patriotism and money can procure, and ready at any moment for the sudden emergency of war.

GUINEA-PIGS AS ARTICLES OF FOOD.—This little animal, so clean and plump, should be made an object of alimentation. Many persons feel a repugnance at this because they wrongly believe it to belong to the rat kind. This is a mistake, which should be at once rectified. Nor is it of a porcine nature. It is timid, incapable of mischief, and lives on vegetable substances. Its flesh is delicate and nutritive. As it can be reared without much difficulty, is very fertile and economical to feed, living as it does on cabbages, grapes, or pickings, it ought to find a ready reception in our markets.—*Union Méd.*, October 11.

OUTLINE OF OBSERVATIONS AND INVESTIGATIONS ON YELLOW FEVER.

By JOSEPH JONES, M.D.,
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No. I.—Notes upon the Early History of Yellow Fever.

The first question of importance which presents itself in this inquiry, is whether yellow fever had ever prevailed amongst the aboriginal inhabitants of North and South America and of the West Indies, previous to the discovery of America by Columbus and the explorations and conquests of the Spanish adventurers, and the establishment of the Spanish, French, and English Colonies?

The West India Islands, and certain limited portions of North and South America, as Mexico, Central America and Peru, appear to have been at the time of their discovery by Europeans covered with a sufficiently dense population for the establishment of those conditions upon which the origin and spread of certain diseases are supposed to depend. The medical historian, however, has only imperfect and doubtful data upon which to found any opinion as to the nature of the epidemic and contagious diseases which afflicted the aborigines previous to the discovery of the Western Hemisphere. That the more populous nations of America were not exempt from diseases of an epidemic and pestilential nature has been well established.

The pestilence called by the Mexicans "Matlazahuatl" desolated the cities of the Toltecs in the eleventh century, and forced them to abandon Mexico, and to continue their migrations southward, and to the west and north-west; it invaded the populous cities of Central America, and a similar disease committed great ravages amongst the Indian tribes which occupied the country between the mountains and the Atlantic coast a few years before the landing of the Pilgrim Fathers.

The Matlazahuatl, a disease closely resembling yellow fever, but which is said to be peculiar to the Indian race of America, has seldom appeared more than once in a century; it raged in the eleventh century amongst the Toltics, it made great ravages amongst the Mexicans in 1545, 1576, 1736, 1737, 1761, and 1763, and amongst the Indians of the Atlantic coast in 1618 and 1619.

According to Alexander Humboldt, the Matlazahuatl, although pestilential in its nature, and attended with hæmorrhage from the nose and stomach, was distinct from the Vomito Prieto, and was peculiar to the aborigines of America. The Spanish authors call this disease a plague. The following passage from Humboldt's "Political Essay on New Spain" appears to embody all that is known with reference to the nature of the Matlazahuatl of the Mexicans:—

"The Matlazahuatl, a disease peculiar to the Indian race, seldom appears more than once in a century. It raged in a particular manner in 1545, 1576, and 1736. It is called a plague by the Spanish authors. As the latest epidemic took place at a time when medicine was not considered as a science, even in the capital, we have no exact data as to the Matlazahuatl. It bears certainly some analogy to the yellow fever or black vomiting; but it never attacks white people, whether Europeans or descendants from the natives. The individuals of the race of Caucasus do not appear subject to this mortal typhus, while, on the other hand, the yellow fever or black vomiting very seldom attacks the Mexican Indians. The principal site of the Vomito Prieto is the maritime region, of which the climate is excessively warm and humid; but the Matlazahuatl carries terror and destruction into the very interior of the country, to the central table-land, and the coldest and the most arid regions of the kingdom.

"Father Forribio, a Franciscan, better known by his Mexican name of Motolina, asserts that the small-pox at its introduction in 1520, by a negro slave of Narvaez, carried off half the inhabitants of Mexico. Torquemada advances the hazardous opinion that in the two Matlazahuatl epidemics of 1545 and 1576, 800,000 Indians died in the former, and 2,000,000 in the latter. But when we reflect on the difficulty with which we can at this day estimate in the eastern parts of Europe the number of those who fall victims to the plague, we shall very reasonably be inclined to doubt if the Viceroys Mendoza and Almanza, governors of a recently conquered country, were able to procure an enumeration of the Indians cut off by the Matlazahuatl. I do not accuse the two monkish historians of want of veracity, but there is very little probability that their calculation is founded on exact data.

"A very interesting problem remains to be resolved. Was the pest which is said to have desolated from time to time the Atlantic regions of the United States before the arrival of the Europeans, and which the celebrated Rush and his followers look upon as the principle of the yellow fever, identical with the Matlazahuatl of the Mexican Indians? We may hope that this last disease, should it ever reappear in New Spain, will be hereafter carefully observed by the physicians."—"Political Essay on the Kingdom of New Spain," vol. i., pp. 117, 118.

"Long before the arrival of Cortez there has almost periodically prevailed in New Spain an epidemical disease called by the natives Matlazahuatl, which several authors have confounded with the Vomito or yellow fever. This plague is probably the same as that which in the eleventh century forced the Toltecs to continue their emigrations southwards. It made great ravages amongst the Mexicans in 1545, 1576, 1736, 1737, 1761, and 1763; but as we have already observed, it differs essentially from the Vomito of Vera Cruz. It attacked few except the Indians or copper-coloured race, and raged in the interior of the country on the central table-land, at twelve or thirteen hundred toises above the level of the sea. It is true, no doubt, that the Indians of the valley of Mexico who perished by thousands in 1761 of the Matlazahuatl, vomited blood at the nose and mouth; but these hæmatemeses frequently occur under the tropics, accompanying bilious ataxical (*ataxiques*) fevers; and they were also observed in the epidemical disease which in 1759 prevailed over all South America, from Potosi and Oraso to Quito and Popazan, and which, from the incomplete description of Ulloa, was a typhus peculiar to the elevated regions of the Cordilleras. The physicians of the United States who adopt the opinion that yellow fever originated in the country itself, think they discover the disease in the pests which prevailed in 1535 and 1612 among the red men of Canada and New England. From the little which we know of the Matlazahuatl of the Mexicans, we might be inclined to believe that in both Americas, from the remotest periods, the copper-coloured race has been subject to a disease which in its complications resembles in several respects the yellow fever of Vera Cruz and Philadelphia, but which differs essentially from it by the facility with which it is propagated in a cold zone, where the thermometer during the day remains at ten or twelve Centigrade degrees (50° and 58° Fahrenheit)."—"Political Essay on the Kingdom of New Spain," vol. iv., pp. 135-137.

During the four centuries in which the monarchy of the Toltics lasted, they multiplied considerably, extending their population in every direction and founding numerous and large cities, and building those great pyramids and monuments which required the united efforts of multitudes for their completion; but the calamities which happened to them in the first years of the reign of Topillzia—A.D. 1131-52—gave a fatal shock to their prosperity and power. For several years their country was afflicted with such a severe drought that their fields failed to yield them their necessary fruits; the air, infected with mortal contagion, filled their graves with the dead, and the minds of the survivors with consternation: a great part of the nation died by famine and sickness, and the wretched remains of the nation, in order to save themselves from the common calamity and from utter destruction, deserted Mexico, and sought relief from their misfortunes in other countries. There was therefore in this desolating plague of the Toltecs the usual association of famine and pestilence; and it is probable, that as in the history of many other nations, the former was the cause of the latter, and that the disease probably partook of the nature of the typhus and typhoid fevers of the present day. Humboldt, however, does not appear to be fully sustained in resting his opinion as to the absolute difference between the Matlazahuatl of the Mexicans and yellow fever (*vomito prieto*), upon the fact that the former prevailed at high latitudes and elevations.

The stereotyped expressions of systematic writers as to the limitation of yellow fever to certain elevations, must in the light of certain facts be abandoned. It has been supposed that yellow fever was confined to the sea-shore, either because persons who bring that disease disembark there, and goods supposed to be impregnated with deleterious miasms are there accumulated, or because on the seaside gaseous emanations of a peculiar nature are formed. It is certain, however, that yellow fever has prevailed in the elevated table-land of Caracas,

3000 feet above the level of the sea, upon more than one occasion. In 1696, a bishop of Venezuela, Diego de Banos, dedicated a church to Santa Rosalia of Palermo, for having delivered the capital from the scourge of the black vomit (*vomito nigro*), which is said to have raged for the space of sixteen months. A mass celebrated every year in the Cathedral, in the beginning of September, perpetuates the remembrance of this epidemic. The year 1696 was very remarkable for the yellow fever which raged with violence in all the West India Islands, where it had begun to gain an ascendency in 1688. This disease also carried off in Caracas a great number of European soldiers in 1802.

In the remarkable epidemic of yellow fever which prevailed in Peru in 1855 and 1856, the disease passed even the barrier of the Andes, committing fearful ravages in Andine and Transandine regions, at elevations of 14,000 feet above the level of the sea. Even the ancient capital of the Peruvian empire, Cuzco, at the elevation of 11,378 feet above the level of the sea, was not exempt from the ravages of yellow fever. No authentic records exist, from which may be gathered any facts illustrating the nature of the pestilence which, according to the "Gentleman of Elvas," desolated certain Indian nations a short time before the invasion of De Sorto; it is supposed, however to have been similar to the Matlazahuatl of the Mexicans.

The terrible pestilence which wasted the American Indians in 1618 and 1619, a short time before the Pilgrim Fathers landed in Massachusetts, has been supposed by Noah Webster and others to have been yellow fever. This supposition cannot be maintained because, the disease prevailed with the greatest severity during the winter and in extremely cold weather. We are not justified in adopting the conclusion of Webster simply because there was a general yellowness of the skin attended with hæmorrhages from the nose.

About 1750, a malignant epidemic disease prevailed amongst the Indians of the Atlantic coast, but did not afflict the whites, and which, in like manner, Webster considered as the "infectious yellow fever." The patients were said to have first complained of a severe pain in the head and back, which was followed by fever; in three or four days the skin turned yellow as gold, a vomiting of black matter took place, and generally a bleeding at the nose and mouth, which continued until the patient died. These symptoms resemble to a certain extent those of the disease known to the Mexicans as Matlazahuatl; and also those which characterise the malarial hæmaturia, which, since the recent war for the establishment of the independence of the Southern States, has prevailed to a considerable extent, and has been attended with a high rate of mortality.

The American Indians, in common with the whites, were subject to the various forms of malarial fever (intermittent, remittent, and congestive or pernicious, and malarial hæmaturia), and it is well-known that in the first settlements of both North and South America, the Spanish, French, and English colonists suffered terribly from these diseases. Many of the most flourishing and populous settlements were in a few years almost depopulated by these fevers, which committed the greatest ravages in those towns and colonies which were located near the mouths of large rivers in low marshy regions. Entire armies were destroyed by these fevers; and the pioneers who cleared the forests and drained the low lands, were either suddenly cut off by these "high grades" of bilious fever, which were often attended with a yellowness of the skin (jaundice), incessant vomiting of bilious matter, which was sometimes mixed with blood (black vomit), or were slowly poisoned by the malaria of the swamps and marshes, and dragged out a miserable existence, rendered almost intolerable by enlargements of the spleen and liver, derangements of the blood and nervous system, neuralgias, and dropsies.

In that form of paroxysmal malarial fever characterised by complete jaundice, intense vomiting, nausea, and hæmorrhage from the kidneys, which has received different names at different times and in different countries, and which is no "new disease," even in the United States of America, the hæmorrhage from the kidneys is preceded by capillary congestion of these organs and is attended by desquamation of the excretory cells and tubuli uriniferi.

Malarial hæmaturia (*hæmogastric malarial fever*), as a general rule, occurs only in those who have suffered from repeated attacks of intermittent fever, or who have been enfeebled by a prolonged attack of remittent fever, or whose constitutions have been impaired by bad diet, excessive labour, and frequent exposure to cold and wet and the exhalations of swamps and marshes. And whilst some of the symptoms—as the nausea, incessant vomiting (and in extreme cases black vomit), deep jaundice, and the impeded capillary circulation—resemble those of yellow fever, yet there are marked differences between this disease and yellow fever. The presence of albumen in the urine of this so-called malarial hæmaturia is attended also with the presence of coloured blood-corpuscles, excretory cells of the kidney and of the tubuli uriniferi. The excretory tubes of the kidney appearing in the urine are often impacted with coloured blood-corpuscles, and deeply stained by the colouring matters of the blood. As a general rule in yellow fever, the tubuli uriniferi are loaded with yellow, granular, albuminoid, and fibroid matter. In some cases immense quantities of green biliary fluid, or liquid tinged with bile, were vomited, and the patients died in a state of collapse, with blue mottled and purplish extremities, and sunken, pinched features. As a general rule, suppression of the functions of the kidneys was a fatal sign, and, as in yellow fever, was sometimes attended with convulsions, coma, and delirium. Careful examination of the blood revealed a marked decrease in the fibrin and coloured blood-corpuscles; in fact, this change in the blood was characteristic of all cases of this disease which have come under my observation. The pathological changes which I have observed after death from malarial hæmaturia are characteristic of paroxysmal malarial fever, and not of yellow fever—viz., enlarged slate-and-bronze-coloured liver, loaded with dark pigment granules, deposited in greatest numbers in the portal capillary network; gall-bladder distended with thick, ropy bile, presenting, when seen *en masse*, a greenish-black colour, and in thin layers a deep yellow. As much as 1000 grains of bile of high specific gravity has been obtained from the gall-bladder, whilst in yellow fever not more than 120 grains of bile are, as a general rule, contained in the gall-bladder.

As it is well established that malarial hæmaturia, and the severe and most fatal forms of malarial fever, prevail only in certain years, and appear to be dependent to a large extent upon the degree of heat and moisture, as well as upon the amount of organic matter in the soil, and as these epidemics in the tropical and temperate regions of America are often of the widest extent and severest character, and as the Indians suffered from these diseases to an almost equal degree with the whites, and as they were in North America without the most important remedies—bark and quinine,—it is not unreasonable to suppose that at certain seasons large numbers perished by these diseases. And were it not for the free use of quinine in the treatment of paroxysmal fevers, many of the cities of the Southern States, surrounded with swamps and marshes, would have been depopulated; and even in the more elevated regions of the country, as in the rich valleys of the Cumberland and Allegheny mountains, and along the rivers flowing into the Atlantic and Gulf of Mexico, the mortality from paroxysmal malarial fever would in certain seasons be very great but for the free use and powerful antiperiodic virtues of quinine.

(*To be continued.*)

London Anthropological Society.—At a meeting of this Society held at 37, Arundel-street, Strand, Dr. Charnock, F.S.A., in the chair, the election of several new Fellows was announced, and the following papers were read:—1. "Report of Meeting of British Association at Bradford," by Dr. John Beddoe, F.R.S., President of the Department of Anthropology at Bradford. 2. "On the Pretended Identification of the English Nation with the Lost House of Israel," by A. L. Lewis, Hon. Sec., L.A.S., showing the absurdities involved in this theory, which has of late been extensively propagated. 3. "On Primitive Marriage," by C. Staniland Wake, V.P.L.A.S. The paper showed that there is no direct evidence of the former existence of a general condition of promiscuous intercourse between the sexes, and that the indirect evidence arising from the practice of polyandry and exogamy, and the use of the classificatory system of relationship is insufficient to establish such a custom, the existence of which is inconsistent with the habit among primitive peoples of tracing descent from a common ancestor. Drs. Kaines and Carter Blake, Mr. Staniland Wake, Mr. J. G. Tipper, Mr. Buckley, Mr. Carpenter, Mr. Tomkins, and the President joined in the discussion which ensued. It was intimated that the first number of *Anthropologia*, containing the proceedings of the Society, may now be had.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. PETER'S HOSPITAL.

STONE IN THE BLADDER—LITHOTRITY—CURE.

(Under the care of Mr. TEEVAN.)

E. B., AGED 20, single, barber, was admitted into the Hospital on April 2, 1873, having been put under Mr. Teevan's care by Mr. G. F. White, of Kingston-upon-Thames.

History.—The patient states that so long as he can remember he has suffered from pain in the back, affecting chiefly the right loin. Every now and then the pain was very severe, and attended with difficult micturition. Has noticed for a long time past that his urine has been very red, and that there was often a brickdust-looking sediment in his *pôt-de-chambre*. Last winter commenced to suffer from frequent desire to urinate, with much pain at the end of the penis at the conclusion of the act. During the past month a few drops of blood have generally trickled from the urethra just before he had finished making water. A fortnight ago the increase in the severity of his symptoms obliged him to apply for relief. No history of stone in family. Patient was born in London, his father in Woolwich, and mother somewhere in Kent. Has never suffered from gout or rheumatism, and has no recollection that his parents ever had those complaints.

Present Condition.—Patient is a small man, of pale aspect, fairly nourished, but with a very depressed and anxious-looking countenance. When quiet he is quite comfortable, but if he attempts to walk only a few yards he is seized with an urgent desire to urinate, and can only accomplish the act by going on his hands and knees. The urine is slightly bloody, and only passes with pain. There is some albumen in his water, but probably not more than could be accounted for by the blood and mucus.

Mr. Teevan examined the patient with a lithotrite, and, finding the stone to be little more than one inch in diameter, he determined to crush it.

April 7.—To-day Mr. Teevan introduced a lithotrite-scoop, and broke the stone. Very little *débris* passed after the operation.

14th.—Three pieces of the calculus were crushed to-day, and a considerable amount of *débris* came away the next day.

19th.—Two small fragments were pulverised with a smaller lithotrite than used on the former occasion. Two days afterwards patient's right testicle began to swell, with much pain and tenderness. His tongue was foul, pulse quick, urine cloudy, and skin hot and moist. The testicle continued to enlarge for three more days. Ice was applied externally, and henbane and potash internally, the bowels being kept well open.

25th.—Six leeches were applied to the external abdominal ring, as the testicle was no better. Much relief, attended with diminution of swelling, followed their application.

30th.—The constitutional disturbance having all gone, the testicle was strapped, but in the course of a few hours the plaster had to be removed, as the patient could not bear the pain of the pressure. The iodide of lead ointment was ordered to be rubbed into the testicle, and the iodide of potash to be taken internally.

June 5.—As the testicle had but slightly improved, and as the patient was complaining of much pain at the end of the penis when making water, Mr. Teevan came to the conclusion that the irritation caused by the presence of the fragments of stone was keeping up the orchitis, and he accordingly passed a small olivary elastic bougie to ascertain the state of the parts. No increase of inflammation attended the introduction of the instrument, though its passage was painful, and on June 11 and 13 Mr. Teevan again passed the bougie, in order to lessen the sensibility of the urethra, and prepare it for the lithotrite.

16th.—To-day a delicate lithotrite was used to crush two fragments. Much *débris* came away for two days afterwards, and the patient was greatly relieved by the operation, which was repeated on June 23, and again on the 30th, when there was a slight rigor the same evening.

July 7.—Another crushing took place, and the patient was attacked with rigors the same evening. Three days later the bladder appeared to be freed of all stone.

14th.—A small fragment was found to-day and crushed.

18th.—The patient, who says he is now quite well, was ordered to take a long ride in an omnibus. Not the slightest annoyance followed the jolting, and on July 25 the patient left the Hospital cured.

October 6.—To-day the patient called at the Hospital to say he remained well. The urine was acid and contained no albumen; specific gravity 1015.

Remarks.—Mr. Teevan observed that there were two points of interest in the case. In the first place, the treatment had been interrupted by an attack of orchitis; and, secondly, the patient suffered from rigors on two occasions. Now orchitis, during a well-conducted course of lithotrity, was extremely rare. He had operated on twenty-three patients by lithotrity, and in one other case only was the testicle affected. In the present instance it would appear that the inflammation had been caused by the irritation of the fragments of the calculus rather than by the lithotrite, for the attack came on after the use of a slender instrument, and amelioration followed the re-employment of the lithotrite. Rigors also were unusual, and, when they occurred, generally made their appearance very early in the treatment of the case. In all probability the constitutional disturbance caused by the orchitis, aided by the character of the calculus, which was of oxalate of lime, predisposed to their occurrence. Notwithstanding the drawbacks experienced in the course of the treatment, the result was all that could be desired, and the patient remains perfectly well.

ROYAL PORTSMOUTH HOSPITAL.

STONE IN THE BLADDER — RETENTION OF URINE FROM VESICAL ATONY—LITHOTOMY—RECOVERY.

(Under the care of J. WARD COUSINS, M.D. Lond., F.R.C.S.)

J. C., AGED 9 years, had suffered more or less for three years with symptoms of calculus. He was admitted in February, 1872. His mother stated that the vesical distress had increased during the last few months. The patient was much emaciated, his countenance expressed protracted suffering, and he was constantly straining and crying with severe pain. The urine was ammoniacal, and contained a little blood with much muco-purulent matter. On examining the abdomen the bladder was found enormously distended, even reaching to the epigastric region. The constitutional symptoms were severe. He frequently vomited; pulse very small and feeble; tongue coated and dry down the centre. The bladder was at once emptied with the catheter, and a stone readily detected. He was ordered fluid nourishment and wine, and a draught containing nitro-muriatic acid with belladonna every four hours. In a few days the constitutional symptoms improved, and, as the vesical trouble urgently demanded relief, the lateral operation was performed on the 24th. The stone weighed eighty grains, and its external surface presented a phosphatic coating. The patient rapidly recovered, and three weeks after the operation left the Hospital.

STONE IN THE BLADDER—LITHOTOMY—RECOVERY.

(Under the care of J. WARD COUSINS, M.D. Lond., F.R.C.S.)

J. D., aged 8 years, was admitted in January, 1873, labouring under calculus. He was brought to the Hospital by his grandmother, who stated that his parents were both dead, and that, when only a few months old, he had suffered from pain and difficulty in passing water. For the last three years his sufferings had been constant and intense; lately his urine had dribbled away from him night and day. The lateral operation was performed a week after his admission, and he recovered without a bad symptom. At the time of the operation some difficulty was experienced in passing the sound in consequence of a false passage which existed between the bladder and the rectum—the result of former explorations. Still more difficulty, however, was found in extracting the stone, from the high and contracted condition of the bladder, which did not contain a drop of urine. The stone was composed of lithic acid, and it weighed seventy grains.

STONE IN THE BLADDER, ELEVEN OUNCES IN WEIGHT—ABSCESS OF KIDNEY—DEATH—AUTOPSY.

(Under the care of J. WARD COUSINS, M.D. Lond., F.R.C.S.)

E. W., aged 55, was admitted on May 3, 1873. There was no history of gout or rheumatism. He stated that for twenty

years he had suffered a great deal from gravel and stricture, and that his distress had much increased during the last three or four weeks. He looked pale and haggard, and his countenance clearly expressed prolonged suffering. Recently he had lost flesh, and his urine had occasionally contained blood. He appeared often in extreme pain, and made frequent efforts to pass water, which constantly dribbled away, and was collected with great difficulty for examination. The urine was alkaline, fetid, and full of muco-pus. On exploring the bladder it was found literally filled with a large calculus. The prostate gland and urethra were quite healthy. The patient had no idea that he was suffering from stone, and at once expressed his willingness to submit to an operation. A few days, however, after his admission he refused his food, and complained of tenderness over the abdomen. Delirium supervened, and he sank into a typhoid condition, and died on the 31st.

Autopsy.—The lateral operation was performed after death, but the stone could not be extracted even with a very free division of the prostate. It was readily removed by the supra-pubic method. The calculus completely filled the bladder. It was oblong and regular in form, and weighed eleven ounces. The long diameter measured three inches and a half, the short diameter three inches, and the circumference corresponding to the long diameter ten inches. On opening the abdomen the peritoneum presented many recent adhesions, and its surfaces were smeared with purulent secretion. The right kidney was wholly disorganised, and converted into an abscess; the left was large and flabby. The ureters were dilated. The bladder was much thickened in every part, the average thickness of the wall being about one-third of an inch. The mucous membrane was superficially ulcerated and covered with phosphatic deposit. About an inch behind the orifice of either ureter the internal surface of the bladder was marked with a rounded opening leading into a large sacculus. These sacculi were equal in size, and were each capable of holding three or four ounces of fluid. Their structure was thin, and they appeared to be simple protrusions of the mucous and serous coats of the bladder.

Remarks.—The retention which occurred in the first case was caused by vesical atony. The bladder had lost its expulsive power, but the paralysis was only temporary, and probably it was caused by accidental distension of the organ. The patient suffered much in the act of passing water, and very probably he voluntarily retained his urine to avoid pain. On the other hand, the retention may have been caused by the accidental position of the calculus. Atony of the bladder is, in my experience, a condition rarely seen in children. It, however, often happens to old people associated with disease of the prostate and chronic cystitis. In children the presence of a stone generally excites great irritability of the bladder, and causes frequent micturition. In the second case the difficulty of the operation arose from the high and contracted condition of the bladder. If that viscus had been previously injected with a few ounces of water, it would have greatly facilitated the discovery and extraction of the stone. The third case is a remarkable one. The patient had been the subject of calculus for many years, but at the time of his admission he had no idea of the nature of his disorder. Here the severity of the symptoms was certainly not in proportion to the size of the calculus. On looking at the case it appears marvellous that the patient could have endured for so long a time the pain and irritation produced by such a concretion, but the bladder seems in these chronic cases to get accustomed to the presence of a foreign body. The stone, moreover, was fixed within that organ, and occupied the whole of its cavity, and this absence of mobility must have considerably lessened the urgency of the symptoms. The stone could not have been extracted with safety by any perineal operation. If the patient had applied earlier for assistance, the supra-pubic operation would have given him the best chance of relief. Such extreme calculi are fortunately very rare. The urine had dribbled away for years, the function of the bladder was completely destroyed, and the sacculi situated beneath it, together with the dilated ureters, were the only receptacles for the urine. The patient in all probability had laboured under secondary disease of the kidney for a considerable period, and at his advanced age this complication would have rendered any surgical operation particularly dangerous.

THE salary of the Surgeon of the Birmingham Prison has just been increased to £200 a year.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 8, 1873.

THE ARMY MEDICAL WARRANT OF MARCH, 1873.

IT will be a matter of general satisfaction to the medical officers of the army to learn that the pressure brought to bear upon the authorities in connexion with the new Army Medical Warrant has not been without result, in proof of which we quote the following extract from a circular dated November 1, 1873:—

"Our will and pleasure is that from the date of our said Warrant (March 1, 1873) the following rule shall govern the pay of Surgeons after fifteen years' service, and that the provisions of Article 6 of our said Warrant shall not be applicable to officers who before March 1, 1873, were entitled to forage in virtue of their several ranks.

1. The pay of Surgeons after fifteen years' service in that rank shall be seventeen shillings and sixpence per diem.

2. Officers of the Army Medical Department who, prior to March 1, 1873, were in receipt of forage or forage allowance in virtue of their several ranks, shall continue to receive forage or forage allowance for the number of horses to which they were entitled before that date in accordance with the regulations then in force."

It will thus be seen that at least two of the grievances complained of have been removed, and the unanimity on the subject which prevailed all through the service, and, indeed, all through the profession,—as evidenced by the opinions expressed in the leading medical journals—has not been without its effect upon her Majesty's advisers. It will be remembered that the new Warrant made no provision for increase of pay to Surgeons after a period of more than ten years' service, whereas the Warrant it superseded provided for a further increase after fifteen years. The argument by which this innovation was sought to be justified referred to the fact that under the new scheme it was hoped that promotion would in every case take place before fifteen years' service was reached, and had this argument been irrefutable there would have been no cause for complaint; but experience pointed to a far different result, and it was urged with some justice that if the War Office authorities had had so much faith in an increased rate of promotion, there was but little necessity to have done

away with the maximum rate of pay allotted to Surgeons, when so few would ever remain in that rank to claim it.

The question of the forage allowance, again, was one on which we have constantly expressed a very strong opinion. Even given the most parsimonious Government, we failed to see how any arrangement could be looked upon as equitable which sought to deprive medical officers of many years' standing of advantages which had been enjoyed by them from the date of their entering the service: and without speculating on the wisdom of the course hereafter to be adopted to the medical branch of the service in the matter of forage, we heartily concur in the amendment we now publish, which makes the new law prospective instead of retrospective.

If we are to consider the concessions now made as a first step towards emendating the clauses in the Warrant of March last most obnoxious to the Army Medical Service, we may fairly assume that the Warrant itself, though received with so much coldness and dissatisfaction in the outset, will eventually become popular amongst all ranks. There are, as we before observed, many good points in it; and so long as the Secretary of State for War (as in the present instance) consents to be guided by the advice of the heads of the Medical Department, medical officers may rest assured that their interests will be carefully studied, and all reasonable grievances placed in course of removal.

We published some few weeks since a letter from an Army Medical Officer serving in India, complaining that the Government of that country had declined to ratify the conditions of the new Warrant, and stating that he and several other officers, though gazetted Surgeons-Major in the large batch of promotions which took place in April last, had been refused the increase of pay attaching to their superior rank. We have every reason to believe that the difficulties on the subject which arose between the home authorities and those in India have now been removed; and we have no doubt that by this time the gentleman in question and all others concerned have found themselves on a similar footing, as regards rank and pay, with medical officers of the same grade doing duty at home.

Whether the anticipations will be realised that promotion under the operation of the new Warrant must be more rapid, time alone will show. We cannot leave this portion of the subject without again expressing a belief that one of the best methods of preventing stagnation would be to give the right of retirement after twenty years' full-pay service, instead of after twenty-five. If it were not considered expedient to grant this boon generally, it might be conceded in the case of those medical officers who could show a proportion of say ten years' foreign service, and who should thereby acquire the right of retirement upon £1 per diem. Many officers would doubtless be inclined to accept such conditions, and the small extra expense thereby accruing to the country would be amply repaid by the increased popularity which would be conferred on the medical service of the army.

ASPIRATION.

III.

The surgical uses of aspiration are equally important with the applications of the same appliance in medicine. Thus, in retention of urine from enlarged prostate, where that organ acts as a valve to the urethra, and where there is less chance of getting an instrument passed with a full bladder than an empty one, the plan offers great hope of success, and experience shows that it may be without detriment performed again and again. As to the rectal operation, surgeons differ greatly in their estimate of its value; and it is precisely where, under any circumstances, puncturing the bladder in this way is most difficult, that aspiration is best adapted for the case. On the whole, most surgeons would say that if the retention depended on an impermeable stricture it were better to deal with that at once, but with enlarged prostate such procedure is not so easy. However, the operation being resolved on, we must see that the needle is long enough to reach the interior of the bladder, making due allowance for its contraction as emptied. The needle should be about four and a half or five inches in length, fine, and its permeability should be tested previous to use; otherwise the bladder may be reached and no urine flow. The vacuum should then be made before introducing the needle, and that should be thrust in just over the pubes in the median line, and thence pushed very slowly downwards towards the bladder; the urine rising in the aspirator shows that the organ has been reached. Still it should be pushed a little farther than this, for the reason above mentioned, and then the distended bladder should be carefully and cautiously emptied, no manipulation whatever being allowed; after which the needle should be quickly withdrawn. The alteration in the condition of the patient is marvellous, but it is quite true that this is no step in the way of cure. In one case occurring under M. Guyon's care the bladder was so punctured twenty-three times.

Again, in certain accumulations of fluid in joints, particularly the knee, aspiration offers great hopes of success; but, like any other method, it is liable to abuses. The cases for its application should be as carefully selected as for any other method of treatment, and the measure should not be condemned because in its indiscriminate application a certain proportion of cases have been failures. It has been proved by clinical experience that in the greater number of instances fluids of any kind may be thus withdrawn; but it seems to us that it is best suited for those chronic collections of fluid which have resisted ordinary remedies. We are too well accustomed to see small collections of fluid in joints clear off speedily to be anxious to aspirate all that come under our care; but for many of the sub-acute forms of hydrarthrosis the process seems to us invaluable, for it is exactly in these we have been accustomed to see remedy after remedy applied, and yet the condition remain unchanged. Here, as before, the rule is to use a fine needle, to see that it is not choked with rust, and to permit of no kind of manipulation other than aspiration. Should the fluid reaccumulate, as it is apt to do, it must be again withdrawn with like precautions.

In another group of cases aspiration has been surgically employed, but of these we can say little of our own knowledge—that is, in strangulated hernia. The practice is founded on the belief that in a majority of cases the hernia cannot be returned on account of accumulations of fluid and gas in the loop of intestine. Of course such a procedure is not in the slightest degree adapted to an omental hernia, nor to a hernia of the cæcum behind the peritoneum, nor to one or two other kinds we could mention. Nevertheless, it has been tried and has succeeded, and is therefore well worth bearing in mind. It is true it may be insufficient, but it does no harm, and the ordinary operation may be equally well, or even better, undertaken after it than before.

There is still another application of the method which promises to be very successful. Anyone who has had to deal with a case of hydrorachis from spina bifida must have felt how unsatisfactory were the resources of his art. True, you may puncture the swelling and withdraw the fluid, but then the patient dies; sometimes we hear of a success, but failure is the general experience. Now here aspiration, especially if the integuments are not thinned, holds out hope of cure if cautiously pursued and assisted by other means. Then, too, injections of iodine may or may not be employed; successes in both ways are reported. By the way, we should remind our readers that iodine and other injections should never be made with the aspirator. In the instrument as now made that is impossible; but with the older instrument (and that which we prefer) it is

quite possible, but should be avoided, as such a practice speedily destroys the air-tight valves.

Of other applications of aspiration—to hydrocephalus, to ovarian cysts, to serous cysts, to hydrocele, and to various forms of abscess—we shall not here speak. In some of these its value is clear, in others much more doubtful; but we may expect still greater developments of the method than even these amount to. In one case where we had some hopes of its success, it proved in our hands a failure. More than once the introduction of tubes into anasarcous limbs has been followed by a copious discharge of fluid, and we had hoped that by applying to such tubes a permanent vacuum we might facilitate the flow of fluid and increase the quantity discharged. The patient we selected for the trial seemed in every way suitable, and a fair-sized trocar was introduced into the loose tissue of the popliteal space, but only a small quantity of fluid—not more than a few drops—appeared, and the experiment had to be abandoned, though it is quite possible that the plan may succeed better in other cases. In conclusion we may say that Dr. Dieulafoy's book(a) might have been written in better English, but its contents amply compensate for the mode in which they are set forth.

THE FEMALE MEDICAL STUDENT QUESTION AT EDINBURGH.

At the statutory half-yearly meeting of the General Medical Council of the University of Edinburgh, held on Friday last, a short debate occurred on matters relating to the medical education of women. The tone of the debate was such as to justify the remark that it strongly resembled a funeral service over the remains of the female medical agitation in Edinburgh. The discussion arose upon the submission to the Council of a measure taken by the University Court consequent on the recent decision of the Court of Session determining finally that the admission of women to degrees in medicine was beyond the powers of the University of Edinburgh. The Secretary read the following extract from the minutes of the University Court:—

"The University Court, having considered the action at the instance of Miss Jex-Blake and others against the Senatus Academicus and the Chancellor of the University, and the judgment of the Court of Session thereon, resolve—'That it is expedient that the regulations of the University Court for the education of women in medicine in the University of Edinburgh, contained in their minute of November 10, 1869, and approved of by the Chancellor of the University on November 12, 1869, should be suspended *in hoc statu*; and with the view of carrying out the necessary procedure for having such regulations suspended, the Court, in terms of the Universities (Scotland) Act, sec. xii., 2, direct the Secretary to communicate this resolution of the Senatus Academicus of the University for consideration.'"

It appeared from statements made during the debate that the University Court had come to the determination to suspend the regulations for the education of women in medicine, and that, further, the Senatus had taken action upon that resolution that in the present state of affairs it was undesirable to admit women to the medical preliminary examinations in arts. At the Council meeting the supporters of the ladies were unwilling to admit of this summary suppression of their favourite agitation, and endeavoured to raise a discussion on the merits of the procedure adopted by the University Court and the Senatus. One gentleman, who, if we are not mistaken, acted as demonstrator of anatomy to the ladies when their presence in the anatomical class-room gave rise to a disgraceful disturbance, appeared as the censor of the University Court and Senatus, and hurled a series of denunciations at the higher authorities of the University. With the assistance of the Principal he controlled his feelings sufficiently to permit him to bring his speech to a close by proposing a motion, the measured terms and heroic spirit of which must have sent a pleasant thrill through the ranks of his supporters. Beyond, this, however, the motion seems to have led to no particular result.

Subsequently a Free Church theological professor proposed that the Council should acknowledge receipt of the communication from the University Court, and regard it as unnecessary to express at that time any opinion upon the step taken by that Court. This motion he propounded with expressions of dissatisfaction, and a threat to bring up the matter at a subsequent meeting.

It was clearly shown that the Council had no voice in the matter at all, and that the Court had only acted in a spirit of official politeness in acquainting the Council with what it had done. In all cases it is necessary that proposed changes should be submitted to the Council for their consideration; but in this special instance it was demonstrated that the suspension of the regulations for female medical education was not a proposed change, but a step rendered imperatively necessary by the decision of the Court of Session. We hope that the supporters of female medical education will take this view of the case, and permit the bones of this distasteful contention to rest in peace after this burial service in Queen-street Hall. By adopting this suggestion they will remove a cause of social and domestic dissension, which for several years has been to Edinburgh society as active an excitant of discord as the Tichborne trial has been to the people of the English metropolis.

THE WEEK.

TOPICS OF THE DAY.

Dr. Sieveking has received the appointment of Physician Extraordinary to the Queen. We congratulate Dr. Sieveking on a distinction which rewards a long course of honourable and useful professional work.

We are informed that the authorities of the University of London have selected Dr. Richard Quain, F.R.S., and Mr. Cooper Forster to represent the University on the Committee appointed by the Royal Colleges of Physicians and Surgeons and the Universities of Oxford, Cambridge, and Durham, to complete the scheme for a Conjoint Board of Examination in England. Last Monday there was to have been a meeting of the Committee at the Royal College of Physicians, but there was not a sufficient number of members present to form a quorum.

A correspondence has recently been published between the Secretary of the Society of Arts and the Secretary of the Prime Minister, on the subject of National Museums and Galleries. The Society of Arts sent Mr. Gladstone a letter requesting him to receive a deputation, who would present a memorial signed by 250 Peers, Members of Parliament, and men of eminence in science and art, praying that Parliament would grant greater public aid for the establishing of museums, libraries, and galleries in the great centres of population. Mr. Gladstone refused to receive the deputation, on the ground that the matter was within the province of the Privy Council. The Society of Arts replied to the effect that the matter was of such national interest that they declined to submit it to a mere department of the Government. Thereupon Mr. Gladstone wrote back asking for a statement in writing of their views, which he would lay before his colleagues. The wish of the Society of Arts and of those associated with them in the matter is to obtain larger Parliamentary grants for national and local museums, galleries,

(a) "A Treatise on the Pneumatic Aspiration of Morbid Fluids: a Medico-Chirurgical Method of Diagnosis and Treatment of Cysts and Abscesses of the Liver, Strangulated Hernia, Retention of Urine, Pericarditis, Pleurisy, Hydrarthrosis, etc." By Dr. Georges Dieulafoy, Gold Medallist of the Hospitals of Paris. London: Smith, Elder, and Co. Pp. 394.

and libraries, and to place them under the authority of a Minister of the Crown—a member of the Cabinet with direct responsibility to Parliament,—and thereby to get rid of all unpaid and irresponsible trustees, except trustees under bequests or deeds. Their plan includes all museums and galleries supported or subsidised by Parliament, and their aim is to render them all subservient to national education. We think such a movement will enlist in its favour the support of all scientific men. The matter will no doubt occupy the attention of the Royal Commission on Science.

A letter from Boma, in Western Africa, dated August 12, 1873, contains a statement that Livingstone was a prisoner in a town twenty miles distant, without means to pay his ransom. Assistance, however, had been sent to him, and he would probably be at Boma in a month.

Dr. McLeod, a Surgeon-Major of the Madras Army, has been committed by the Carlisle magistrates on a charge of manslaughter. He is charged with killing his wife by administering a large quantity of morphia. The evidence given before the magistrate showed that Dr. McLeod had acknowledged giving Mrs. McLeod a grain of morphia which he weighed; he afterwards administered an unweighed quantity, probably about two grains, every half hour, until symptoms of poisoning showed themselves, and Dr. Robert Walker was sent for. It is supposed that about seven grains of morphia were administered. When Mrs. McLeod was seen by Dr. Walker, she was lying on the hearth-rug in her drawing-room, insensible, livid, breathing with difficulty, and the pupils of the eyes contracted. Dr. McLeod rendered active assistance in endeavouring to restore his wife, and seems to have been under the impression that it was right to administer morphia in increasing doses "until an effect was produced." The account of his conduct seems hardly to be reconcilable with his sanity. He was admitted to bail.

A chemist, named M'Dermott, residing at 155, Abbey-street, Bermondsey, has been fined £10 and costs by the Southwark magistrates under the Adulteration Act for selling an admixture of citric acid, tartaric acid, carbonate of soda, and sugar as citrate of magnesia. Query: What is the composition of the substance sold as granulated citrate of magnesia in most chemists' shops? According to Squire's "Companion to the British Pharmacopœia," it is an "effervescent citro-tartrate of soda," prepared from seventeen parts of bicarbonate of soda, eight of tartaric acid in powder, and six of citric acid. This preparation is known in France as "Limonade sèche, ou citrate de magnésie"; in England as "effervescent citrate of magnesia." If this be so, we cannot but think the chemist was hardly dealt with. The name is no doubt wrongly given; but if the purchase had been made from the best-known chemist's firm in London, would not the same article have been sold?

UNDERPAID NURSES.

It is to be regretted, although from the cause assigned we are not surprised, that the St. George's, Hanover-square, guardians are constantly losing the nurses to their infirmary. It appears the latter are paid lower wages at St. George's than at Shoreditch and other parishes. This inadequate remuneration, we are informed, is the cause of these frequent changes. There can be no doubt the frequent changing of nurses is troublesome and perplexing to the medical officer having under his care the treatment of the sick poor. A well-trained and efficient nurse ought to be fairly remunerated. It is questionable economy to underpay her. The nurse has duties to fulfil which require experience and skill. Surely the guardians of St. George's, Hanover-square, should blush to find that the poor district of Shoreditch pay their nurses better than one of the richest parishes in London.

PROVINCIAL MEDICAL SCHOOLS.

In the return of students registered at the Royal College of Surgeons, and published in the *Medical Times and Gazette* of the 18th ult., as pursuing their professional studies in the eleven recognised metropolitan hospitals during the present session, a considerable increase over the number of the preceding year was observed. The additions since allowed by the President have augmented the total (inclusive also of those studying for the licence of Dental Surgery) to the unprecedentedly large number of 1650. In the return just completed for Dr. Ogle, the Government Inspector of Provincial Anatomical Schools, there also appears a considerable increase over the number of last year, as will be seen below. Taking them in numerical order, there appear at the—

	No. of Students.
Manchester Royal School of Medicine and Surgery	138
Liverpool Infirmary School of Medicine	84
Birmingham Royal School of Medicine	79
Leeds School of Medicine	46
Cambridge University School	40
Newcastle-upon-Tyne College of Medicine	34
Bristol Old Park Medical School	24
Sheffield Medical Institution	10
Hull and East Riding School of Medicine	(closed)
Total	455

In addition to the above there are of course a great number of students attending only the medical and surgical practice of the above and other provincial hospitals to which no schools are at present attached, although recognised for this particular subject.

The following comparative table will no doubt be read with considerable interest, not only by the metropolitan and provincial teachers, but by the profession generally. It has been compiled with great care, and may be relied on as a fairly correct statement of the past decade.

	Metropolitan Schools.	Provincial Schools.	Total.
1864	995 students	247 students	1242
1865	1013 „	249 „	1262
1866	1027 „	258 „	1285
1867	1125 „	257 „	1382
1868	1194 „	284 „	1478
1869	1241 „	330 „	1571
1870	1298 „	357 „	1655
1871	1475 „	368 „	1843
1872	1496 „	402 „	1898
1873	1650 „	455 „	2105

It will therefore be seen that at our eleven recognised metropolitan hospitals there is an increase of 154 students over the number of last year. At the provincial schools the addition to the classes is also remarkable, as the gross number now pursuing their studies amounts to 455, being an excess of 55 over those of last session, notwithstanding the disappearance of one school as shown above. It is stated that there is also an increase in the number of gentlemen pursuing their studies in the Scotch and Irish schools.

THE ASSAULT CASE AT THE ROTUNDA HOSPITAL, DUBLIN.

Mr. (commonly called "Dr.") Mulvany, perpetrator of the gross assault on Dr. Johnston, the Master of the Rotunda Lying-in Hospital, to which attention was drawn in our Dublin correspondent's letter of the 13th ult. (page 450), was on Thursday week, the 30th ult., sentenced to six months' imprisonment. The prisoner had been recommended to mercy by the jury, acting under the advice of the Court, and consequently penal servitude was omitted. Since this sentence was passed, Dr. William E. Steele, Registrar to the Branch Medical Council for Ireland, has written to the newspapers to say that Mr. Mulvany's name does not appear in the list of medical men registered in accordance with the Medical Act of 1858.

THE ASHANTEE WAR.

If the news brought by the mail recently arrived from the Gold Coast be correct, that the Ashantees were preparing to deliver an attack in force on Cape Coast Castle itself, we may calculate that but a short space will elapse before the requirements of Sir Garnet Wolseley are made known to the authorities in this country—always supposing that the Ashantee threat of driving all the whites into the sea be not carried out. The intelligence is certainly rather grave, and such must have been the opinion of Captain Glover, or he would not have paid a large sum of money to the commander of the mail steamer *Soudan* to put in (out of her course) at Cape Coast Castle for the purpose of warning Sir Garnet Wolseley of the projected attack.

At home the medical preparations for the expedition may be said to be almost complete. The hospital ship, *Victor Emmanuel*, after a narrow escape of being blown up and burnt, through the carelessness of someone who had failed to discover that the powder magazine had not been properly cleansed when the vessel was last put out of commission, is progressing satisfactorily, twelve hundred men being employed upon her to hasten the execution of the necessary alterations. She will, it is expected, take out with her a staff of about forty military medical officers, and over a hundred men of the Army Hospital Corps to wait upon the sick in the capacity of nurses, compounders, cooks, etc., for which purpose the men composing this latter corps undergo a preliminary training at the Royal Victoria Hospital, Netley.

The troops selected to proceed to the seat of operations have been carefully inspected, man by man, by experienced medical officers, with a view of allowing none to embark but those whose state of health is such as to permit their undertaking the fatigues and dangers likely to be encountered in a campaign of this description.

Surgeon-Major Gore, late of the 34th Regiment, has been appointed Sanitary Medical Officer to the expedition, and has already arrived at Cape Coast Castle to commence the onerous duties of such a post. Upon this officer some of the most important work of the campaign will necessarily devolve: to his experience must be confided the choice of the best spots for halting and camping, the testing of water for drinking purposes, and a general vigilance over every detail likely to affect adversely the health of the troops. It is by no means improbable that as the force advances to the neighbourhood of Coomassie some of the wells will be found to have been poisoned, and great care will have to be taken to ascertain the safety of using the water before the men are allowed to partake of it.

The new uniform for the regiments expected to embark has been already prepared at the Royal Army Clothing Depôt, at Pimlico, and is reported to be both light and comfortable, and well adapted for service in the tropics. We trust that, if possible, the issue of new boots will be avoided, as no part of the soldier's equipment is so likely to produce fatigue and straggling; and some long marches may fairly be anticipated if an advance upon the capital of Coomassie is definitely determined on.

The present suspense cannot, at any rate, be expected to last much longer; Sir Garnet Wolseley is not likely, with the stern necessity of speed before his eyes, to delay unnecessarily in making his final arrangements; and any day now may bring to hand the despatches which will set in motion all the resources of the country for hurrying off the little army to re-assert the superiority of our dominion on the Gold Coast.

IMPORTANT DECISION UNDER THE PUBLIC HEALTH ACT.

A case of some importance was last week heard before Sheriff Russell, at Wick, Aberdeen, under the Public Health Act and Privy Council Orders. Dr. Banks, medical officer of the local authority, sued Captain Reid, of Portgordon, for his fee for examining his vessel on her arrival at Wick from Dantzic Captain Reid's liability was denied. It was held that the Privy Council Order committed the examination of vessels to the officers of Customs. On Dr. Banks' behalf it was urged that the duty of inspection was entrusted to the officials of the local authority under section 7 of the Privy Council Order. The Sheriff's decision was that the spirit of the Privy Council Orders was evidently to entrust the duty of inspection to local authorities, so as to secure the protection of their localities. He could not see how it could be made out that the inspection in the first place was entrusted to the officers of Customs. In this case Dr. Banks had been sent by the local authority, and having done the work of inspection, he was entitled to be paid his fee by the defendant. He therefore gave decree with costs.

ROYAL INSTITUTION OF GREAT BRITAIN.

At the general monthly meeting, held on Monday, November 3, George Busk, Esq., F.R.S., Treasurer, in the chair, the Secretary announced the decease of Sir Henry Holland, the President, on October 27. Henry Adolphus Focking, Esq., and Major John Andover Wood were elected members of the Royal Institution. The special thanks of the members were given to Charles Woodward, Esq., F.R.S., for his present of his work on the "Polarisation of Light," and of much valuable apparatus illustrating the subject; and also to William Salmon, Esq., M.R.I., for his donation of £10 for the promotion of scientific research in the Royal Institution.

SANITARY PROCEEDINGS AT RICHMOND.

For some years the drainage of Richmond has been under the consideration of the Vestry, but at length the Vestry have adopted the "tunnel" scheme for the drainage of the town. A vestryman has, however, since given notice that he will convene a meeting to set aside the resolution on the subject. It is simply disgraceful that one of the most beautiful towns in the neighbourhood of the metropolis should be rendered unhealthy by preventable causes. Of course the amendment of which the "vestryman" has given notice will be defeated.

A HEALTHY VILLAGE.

Mr. John Saville, the registrar of Howden, in the East Riding of Yorkshire, which has a population of 2300 persons, states that no death has occurred there since August 17, to present date October 25—more than nine weeks. Only thirty-one deaths were registered during the past twelve months ending September 30, or at the rate of 13·47 per 1000. Eleven of the deceased persons attained upwards of seventy years.

ADMINISTRATION OF SANITARY LAWS IN WALES.

The *Cambrian News and Aberystwith Times* says—"Our readers will probably be astonished to hear that at Aberystwith the offence of selling meat unfit for human food is only punished by a fine of 10s. inclusive of costs. At Aberystwith the offence of spreading disease is considered to be of so trivial a nature that a merely nominal fine is quite sufficient. The sooner more magistrates are appointed, the better it will be for the people."

RESIGNATION OF DR. STRANGE.

On the resignation of Dr. Strange, Physician to the Worcester Dispensary, the Committee unanimously resolved—"That this Committee receives the resignation of Dr. Strange with regret, and directs the secretary to convey to him their high appreciation of the long and valuable services which he has rendered to the institution."

BREAD AND MILK IN PADDINGTON.

Dr. Hardwicke, the Medical Officer of Health for Paddington, in his quarterly report presented to the Vestry on Tuesday last, states, *inter alia*, that of seventeen samples of bread he found ten to contain alum, and in three cases in excessive quantity. The practice, he stated, of using alum appeared still very common, and indicates an inferior quality of flour used for bread. This, he had no hesitation in saying, was dangerous to health, especially to old people. The milk supply of the parish had been vastly improved since the previous examination; but although all the milk-sellers charged 5d. per quart, some of the milk was inferior, and Dr. Hardwicke recommended that it should be tested as brought up by the Great Western Railway before delivery to the retail dealer.

SPURIOUS TEA.

The City of London Commissioners of Sewers on Tuesday adopted the recommendation of the Sanitary Committee on the subject of spurious tea, to apply to the Government to introduce a Bill into Parliament early in the next session to empower all local authorities throughout the kingdom to enter on shipboard and in all bonded warehouses and other places within their respective districts, to examine, and, if necessary, to seize such teas as, in the judgment of the duly authorised officer appointed for such purposes, were adulterated or unfit for human food, and to destroy such as should be legally condemned.

ANTI-VACCINATION PROCEEDINGS.

Several members of the Anti-Vaccination Society were last week fined by the Marylebone magistrate 15s. each and costs for neglecting to have their children vaccinated. All the fines were paid by an agent of the Society, who attended for the purpose. This proceeding shows that the Act must be carried out with the utmost vigour, in order to defeat the organisation which has been formed against it. In the end the law must prevail.

DWELLINGS OF THE POOR.

At the weekly meeting of the Council, on Monday, of the Charity Organisation Society, the report of the special committee on the dwellings of the poor was presented, which recommended that extensive and effectual powers of purchase, demolition, and direct or delegated reconstruction should be vested in the chief existing municipal authorities of London—the Corporation and the Metropolitan Board of Works; and that the Corporation and the Metropolitan Board should be urged to use those powers, when obtained, in a bold and comprehensive manner.

THE EPIDEMIOLOGICAL SOCIETY.

The Epidemiological Society holds its first meeting for the coming session on Wednesday next, the 12th inst. Inspector-General Lawson retires from the presidency, and will be succeeded by Inspector-General Smart, M.D., C.B., R.N., who will open the session by an address. Dr. Corfield also retires from the secretaryship, and he is succeeded by Dr. W. Squire, of 6, Orchard-street, Portman-square.

TESTIMONIAL TO DR. BOND.

A testimonial in appreciation of his valuable services as Principal of the Hartley Institution, during eleven years, has been presented by friends at Southampton to Dr. Bond, who was lately appointed Sanitary Medical Officer for the County of Gloucester. The testimonial consisted of a large compound binocular microscope, together with an ebonised pillar-table cabinet complete.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The following gentlemen were duly admitted Fellows of the College on October 30:—Dr. William Coverdale Beaty Eatwell; Dr. Thomas Beath Christie, of the Royal India Asylum, Ealing; Dr. Henry Moon, of Brighton.

MR. GUTTERIDGE'S OPERATION FOR LITHOTOMY.

On Monday last Mr. Gutteridge operated for stone on a boy in St. Peter's Hospital. In some points this operation differs from that usually performed. We reserve our account of it until next week.

FROM ABROAD.—SMALL-POX IN BOSTON—JONAH AND THE WHALE IN THE BELGIAN ACADEMY.

Dr. M. E. Webb read before the Massachusetts Medical Society a paper on the "Small-pox Epidemic in Boston in 1872-73" (reported in the *Boston Journal*), the chief facts of which we transcribe. He laments the great additional loss of life that was incurred owing to the utterly inefficient sanitary provisions of the civic authorities: and when these were reformed, through the pressure of public opinion, amendment soon followed. For the same reason he is unable to give any details of the cases treated out of hospitals, the number seized and dying being all that has been recorded.

The epidemic commenced January, 1872, and terminated at the end of April, 1873. The number of cases reported amounted to 3722, and the deaths to 1026, a percentage of 27·56, exceeding that of Philadelphia or New York. The great virulence of the disease was further proved by the number of *hæmorrhagic cases*. Of 1232 cases in the hospitals, 97 (or 7·58 per cent.) were of this form, all proving fatal. Supposing the same fatality to have attended the cases not removed to hospitals (but which was in reality greater), there would be 282 deaths from this form. It occurred most frequently in vitiated constitutions, syphilitics, drunkards, prostitutes, etc.,—males and females suffering equally. Extreme prostration came on rapidly, followed by a lobster-red erythema over the whole body. The conjunctivæ were injected with blood, and here and there papules or vesicles were filled with bloody serum. Usually on the second day there occurred hæmorrhages from the mucous surface of the mouth, fauces, bladder, and rectum, and in females invariably from the uterus. It was attended by a peculiar odour, but was not so contagious as the milder forms of the disease. Its early diagnosis was sometimes difficult, resembling as it did other exanthemata, while its characteristic appearances were only seen when the patient was dying or dead, and sometimes only after diligent search.

A further proof of the intensity of the epidemic was seen in the unprecedented number of *recurrent cases*, Dr. Webb having personally witnessed thirty-eight cases with scars from former recoveries, three of these having had the disease twice within three months. He has also seen three instances of a third attack, there being in two of these marks of vaccination performed before either attack.

With respect to the effects of *vaccination*, it is stated that while of 113 non-vaccinated 55 (or 48·76 per cent.) died, only 130 out of 690 (19·55) vaccinated died, and of 84 revaccinated 15 (17·85) died. The number of deaths was considerably less in those who had more than one scar than in those who only had one. Various facts occurring during the epidemic, however, have shown Dr. Webb that vaccination may yet give efficient protection when there is no external mark whatever. He refers also to a paper by Dr. Cotting in the *Boston Journal*, April 25, 1872, giving an account of a hypodermic injection of vaccine virus, so performed as to produce no external scar. He prefers "animal" to "humanised" virus, both because there is no danger of introducing syphilis (a danger undoubtedly existing, though not so frequent as supposed), and because it is more protective. Among thousands thus vacci-

nated, he is not aware of a single case of variola having occurred.

Besides the ordinary *complications* of the disease, he has observed two conditions not noticed by writers on the disease:

"1. In females, if the disease had been in any way severe, they have invariably menstruated during the primary fever. In girls, the first period came on, and in women near the climacteric the catamenia reappeared, when perhaps menstruation had been delayed for a year. So common has this been, that a diagnosis has been made from this fact alone that there was a flow of blood from the uterus occurring out of its regular time. In some way the poison seems to affect the uterus, and to exert a special action upon its functions. 2. In several cases, and always where the disease has been mild, and had passed regularly into the desquamative stage, suddenly, without warning or perceptible cause, patients would have convulsions—inflammation of the brain or cord—followed by paralysis either complete or partial, and death in twenty-four or forty-eight hours. In three instances paralysis commenced in one leg; then the arm of the same side was affected; then the other leg and arm; then complete paralysis—the mind of the patient remaining clear to the last. There were two cases that had paralysis without the first symptoms of inflammation, and both died. The urine in these cases was heavily loaded with albumen. All the cases (some eight in number) that we have seen proved fatal."

Dr. Webb's account of the treatment pursued during the epidemic, which seems to have been highly judicious, does not call for notice.

The *Révue Scientifique* relates an incident which has just occurred in the Belgian Academy of Sciences.

M. Edouard van Beneden, Professor of the University of Liège, read at the Academy an account of a zoological voyage which he has recently made to Brazil, where he collected many interesting facts. Among other things he observed that he had great difficulty in obtaining a dolphin, owing to the superstitious respect entertained by the Brazilian fishermen for this animal. "An ancient belief, also spread throughout Europe, attributes to dolphins the habit of bringing to shore human bodies, which their instincts have led them to discover. The fable of Jonas is a reproduction of this popular belief." M. Henry, Professor of Chemistry, and M. Gilbert, Professor of Mathematics in the Catholic University of Louvain, immediately took umbrage at this passage, and addressed to the President of the Academy a violent protest, declaring that to characterise the story of Jonas and the whale as a "fable" was an attack upon the religious convictions of the Catholic members, and demanding that the Academy should censure the author of the expression, in order to prevent a repetition of such a scandal. It is to be observed that M. E. van Beneden made use of the expression with no critical or jocular intention; and so far from any disposition of this kind being congenial to him, he was appointed himself to his present post of Professor of Zoology at Liège by the Catholic ministry now in power, and his father is the well-known Professor of Zoology in the Catholic University of Louvain. M. Quetelet, the venerable Secretary of the Academy, whose moderation is so well known, believing the writers of the protest had made a mistake which they would one day wish to be forgotten, passed over the letter in silence. Professor Gilbert, however, one of the writers, insisted on its being read. M. E. van Beneden at once rose to explain, but M. Quetelet stopped him, saying that the Academicians were quite at liberty, under their own responsibility, to express their opinions upon any subject, and that it was an absurdity to attribute to M. van Beneden any intention to annoy others, who in fact had no right to feel hurt at an opinion or statement merely because they did not agree with it. It was a primary duty of the Academy to protect the intellectual liberty of its members, and for it to accede to the pretensions now made would be to excite the ridicule of entire Europe. The Academy at once passed to the order of the day, and the two Catholic professors, in imitation of Bishop Dupanloup, who refused to sit by the side of M. Littré at the Institute, sent in their resignations of membership.

CONSTIPATION IN PNEUMONIA.

By PROFESSOR SKODA.

Under the above title the *Allg. Wiener Med. Zeitung* of September 30 publishes an interesting clinical lecture by Professor Skoda, of which the following is an abstract:—

In cases of pneumonia (he observes) the practitioner not infrequently meets with obstinate constipation, which lasts for a long time; and the question arises, whether, for the relief of this, he should or should not resort to active measures. Before replying to this, however, the point may be first considered of within what limits of time defæcation may occur normally during a state of health, in order to judge how far constipation arising in disease is a disadvantage. And we find at once that great differences exist in this respect among persons in an entirely normal condition; for while in the great majority of men a daily stool takes place, in a not inconsiderable number this happens only every second or third day, and in some even more than three days elapse. On the other hand, there are other individuals whose normal condition it is to have more than one stool a day—a circumstance not to be overlooked in delivering a prognosis in such subjects when they become the subjects of diarrhœa. Again, there are persons, chiefly females, in which constipation lasts, not only for days, but even for weeks. While such prolonged constipation continues, the subject of it is still able to eat with a good appetite, no especial or remarkable effects being produced by the food taken. This, of course, is not considerable in quantity, yet it remains inexplicable how during the continuance of such a constipation anything can be eaten. The question arises, whether such constipation does not lead to alterations in the person's state of health. Upon this point it is to be observed that the fæces discharged by such persons are not different to those of individuals who have a daily stool. And there is good evidence to show that the fæcal residua of nutrients may long remain within the canal without any corresponding damage being done to the economy, the fæces undergoing no change during a prolonged retention which can injuriously influence it; so that the differences in the production of stools are attended with no corresponding differences in health of the individuals concerned. This position, which experience has rendered irrefragable, is unfortunately continually sinned against in practice; and Professor Skoda warmly protests against the unwarrantable manner in which purgatives are sometimes resorted to, running risks which might be easily avoided by bearing the above considerations in mind.

With respect to the gases which are developed within the intestinal canal, they are retained as well as the fæces; but in long-continued constipation, if this be not caused by a strictured condition of the canal, in the majority of cases no gases are present. It is well known that the presence of gases in the intestinal canal is essential for procuring the expulsion of its contents, and that they facilitate this by preventing the friction of the fæcal masses against the walls of the intestine. Another important office which they fulfil is that they facilitate the movements of the diaphragm, following or receding before these; and if they were not present, the movements of the abdominal parietes consequent upon those of the diaphragm must be much more considerable. That the gases developed within the canal do exert a great influence upon its evacuation, may be inferred also from the fact that in all cases where they are not present such evacuation is attended with very great difficulty. Of this influence of the gases we

have further proof in the fact that, in individuals in whom the evacuation of fæces is very difficult, this is rendered much easier by the employment of articles of diet which favour the generation of these gases. To this end the use of brown bread is especially to be recommended. Leguminous vegetables do this to a still greater extent, but their employment is not suitable for all persons, as in many they give rise to a troublesome amount of flatulence. But in order to render the evacuation of fæces easy, not only is it necessary that gases should be present in the canal, but liquids also. We should therefore endeavour to supply these by ordering such as will not be completely absorbed in the canal. Ordinary soup is not suited for this purpose, as it is too rapidly absorbed. Acid substances should be preferred, for most acids cannot be at once absorbed in the canal, because they require first to become combined with alkalies—a process that requires some time for its accomplishment. Meanwhile they produce an irritating effect upon the canal, and contribute essentially to its easier evacuation. When constipation has lasted for weeks, and is dependent upon diseased conditions, such means are of no avail. The peristaltic movements are entirely arrested, and for such a state of things different measures must be adopted. While increasing the quantity of gases and liquids in the canal, we must attempt to reproduce the peristaltic movements, the cessation of which is sometimes dependent on the spinal cord. Quinine should be given, while friction of the abdominal parietes with aromatic oils and the use of electricity should be resorted to. In many such cases faradisation of the abdominal parietes has proved of marked utility. In obstinate cases hydropathic treatment may be of service, as also may warm baths; and Oppolzer used to apply cold applications to the abdomen with frequent success.

Applying the foregoing observations to the case in question, it is therefore to be observed that the mere occurrence of constipation in pneumonia should cause no anxiety; and Professor Skoda has frequently insisted that while it is requisite to keep the patient in a state of quietude, we should avoid administering purgatives merely because constipation is present. Of course the accumulation of fæces may be such as to become troublesome, or the gases and fluids may be in such quantity as to impede respiration, so that, when the abdomen becomes distended, interference is not only justified but imperative. And in those cases where there are constant and irritating attempts at passing stools without any evacuation taking place, the practitioner must also intervene in order to obtain actual evacuations. But Professor Skoda insists strongly that if constipation has persisted for several days, and is unaccompanied by distension of the abdomen, it is not to be regarded as a disadvantageous circumstance, but, on the contrary, is a far more favourable symptom than a frequent passing of stools would be. Further, he declares that it is entirely an error to suppose that the pneumonia is favourably influenced by exciting a diarrhœa; in fact, it is only to add a new ailment in the shape of an abdominal catarrh, increasing the patient's sufferings, and rendering his condition worse than it was. In no case where diarrhœa has occurred during pneumonia has this afforded any relief to the respiration. If, for the reasons already given, it becomes necessary for the practitioner to interfere during the pneumonia, he should do so by means of enemata. The internal use of purgatives is almost always attended by a certain amount of irritation, even when there is no pain produced in the abdomen; and this additional irritation is not a matter of indifference in a patient already suffering from a serious disease. It is the same with the action of purgatives as with that of emetics, as set forth by Oppolzer. There does not result from their use, as is so generally supposed, any real improvement or relief in the condition of the patient, whose original malady is much oftener rendered worse in consequence. It is only when the aggravation which they have caused has subsided, and the patient has reverted to his original condition, that he feels himself apparently better. Such apparent improvement is not to be ascribed to the action of the purgatives or emetics that have been administered, but to the ease which is felt at the cessation of the irritation which they give rise to, although this may leave the patient in the same state in which he was before these irritants were prescribed.

ST. VINCENT'S HOSPITAL, STEPHEN'S-GREEN, DUBLIN.

The medical session was opened by the inaugural address, which was delivered in the theatre of the Hospital by Professor Quinlan, M.D., Physician to the Hospital, in the presence of a large number of the friends and of the medical students of the Hospital.

After some preliminary remarks, he said: In his immortal treatise on "The Orator," Cicero proved that perfect oratory is shown in the application to the purposes of eloquence of every branch of classical learning. So, in like manner, we may affirm that scientific medicine consists in the application to the investigation or relief of human suffering and disease of almost every branch of natural and experimental science. Chemistry and Botany are the ancient handmaids of Medicine; but in latter days the sciences of electricity, of optics, of heat, of sound, of fluids, and of practical mechanics, have taken their share either in physiological investigations or else in the examination or treatment of diseased conditions. All these departments of science have, within the lifetime of the present generation, made immense strides; and have, in fact, like astronomy, become departments of applied mathematics—foremost among them electricity, which is now so exact a science that the electrician is able to point out, in an Atlantic cable, the exact position of a flaw which is situated hundreds of miles from the shore and hundreds of fathoms beneath the sea! The other sciences are worthily keeping pace; but when we come to medicine, we find that her scientific progress is not equal, and that, although a splendid and carefully cultivated art, she has not yet attained the degree of an exact science. And yet medicine has, within the last quarter of a century, accomplished some great discoveries which will stand the test of time and experience, and which are worthy of being placed upon the same pedestal as those of the circulation of the blood or of vaccination. Foremost among those I would place the introduction of the method of producing insensibility to pain in surgical operations, which it would not be too much to say has completely revolutionised operative practice. Formerly the great aim of the surgeon was to accomplish his awful but necessary duty to his agonised patient as rapidly as possible, and a clinical clerk, with a watch, always stood by to note the time so occupied. Mr. Herbert Mayo performed amputation at the hip-joint in ninety seconds. Mr. Edward Hutton, whose resident pupil I had the honour of being, amputated at the middle of the thigh in seventy-eight seconds; and I have heard M. Jobert de Lamballe pronounce not very slowly the words *un, deux, trois* while he with lightning speed removed an arm at the shoulder. We have changed all this. We operate, like the sculptor, upon an insensible mass; we go carefully through our work; and, although accomplishing it as quickly as we can, we do not count the seconds. A new class of operations, under the title of conservative surgery, has, to the great benefit of humanity, sprung up, in which we endeavour to carefully remove the precise site of disease or injury, and to leave for future use the surrounding structures—for instance, in incurable disease of the knee, instead of amputating the thigh, the surgeon now removes the actual diseased joint, and leaves the sufferer with a whole limb, stiff at the knee, but as good for walking as ever. This operation, like the old revolving pistol of the time of Henry VIII. contained in the Tower Museum, is an example of a discovery made long since, but abandoned because it could not be put into practice. It was first performed in Liverpool towards the end of the last century by Mr. Parkes under the following circumstances:—A sailor presented himself with an incurable knee, and Mr. Parkes proposed, according to the practice of the time, to amputate the thigh. This the sailor refused, saying that the loss of his limb would consign him to pauperism, and that he would

sooner die; adding, however, that he would submit to any operation, however painful, which would leave him the limb. Mr. Parkes conceived the great idea, and successfully carried it out. The man recovered, and afterwards went many voyages to the West Indies, mounting the rigging, and doing with facility all the duties of his craft. Although well known and imitated successfully in Paris the following year, this operation fell into disuse for nearly half a century, for the simple reason that it was too slow and painful, and that ordinary human endurance could not bear it. Its successful performance is now a matter of the most ordinary routine practice; and no surgeon thinks of amputation in such a case unless in military practice, where the necessary after-treatment cannot be accomplished. In the late Franco-Prussian War, however, even this difficulty was overcome. This resection of the knee, as it is called, is but the type of a host of operations which anæsthetic practice has introduced, in which, the element of pain being eliminated, and that of shock to the system much diminished, we proceed to our work with the calmness and accuracy of an anatomical dissection. I speak of this subject with peculiar pleasure, for in it the Dublin School of Medicine has worthily held its own. Both in chloroform and ether Dublin practice has been distinguished for efficacy, and, above all, for safety beyond many neighbouring capitals; and our ratio of fatal cases has been amazingly low. This has been solely attributed to the complete knowledge on the part of the Dublin faculty of the conditions of safety in anæsthetics and to their care and caution in using them. Notwithstanding our favourable experience of chloroform, it has occurred to Dublin surgeons that perhaps the original though disused agent—ether—might prove the safer of the two. On this question being ventilated a committee was appointed in our College of Surgeons to consider it; and I refer to that committee with pride, because in this matter medicine will assume the attitude of an exact science. All the hospitals of Dublin are associated together in the great work. Every case of ether or of chloroform occurring in them is carefully tabulated on a fixed uniform schedule. All the facts will thus be ranged into a focus, and by a process of scientific induction a really correct result will be obtained.

REVIEWS.

A New Operation for Anchylosis of the Elbow-Joint resulting from Fracture, and Rigidity the Result of Unreduced Dislocation. By Patrick Heron Watson, M.D., F.R.S., F.R.C.S., Lecturer on Surgery and Clinical Surgery, Senior Surgeon Royal Infirmary; Surgeon to the Chalmers Hospital for Sick and Hurt, Edinburgh. Edinburgh: Printed by Oliver and Boyd, Tweeddale-court. 1873.

Excision of the elbow-joint for anchylosis, partial or complete, the result of injury, has long been recognised as sound surgical treatment. In Dr. Watson's experience, however, the resulting limb has not been so satisfactory as in those cases in which the operation has been done for disease; in some cases too great a degree, in others too small a degree of mobility has resulted. The first modification attempted of the simple operation of resection of the articular surfaces of the humerus, radius, and ulna, was to save the insertion of the triceps muscle. The method now proposed is one which, while it preserves muscular attachments, at the same time effects the removal of as much of the osseous textures as is necessary. The operation is thus described by the author:—"1. A linear incision to be made over the ulnar nerve to the inner side of the olecranon process, rather longer than that usually employed in the ordinary excision of the elbow by linear excision. 2. The ulnar nerve to be turned over the inner condyle by careful dissection. 3. A probe-pointed bistoury to be introduced into the elbow-joint in front of the humerus, and then behind that bone, and carried upwards, so as to divide the upper capsular attachments in front and behind. 4. A pair of bone-forceps to be next employed to cut off the entire inner condyle and trochlea of the humerus, and then introduced in the opposite diagonal direction, so as to detach the external condyle and capitulum of the humerus from the shaft. 5. The truncated and angular end of the humerus to be cleared, turned out through the incision, and smoothed across at right angles to the line of the shaft by means of the saw, whereby (6) room might be afforded so that partly by twisting, partly by dissection, the external condyle and capitulum might be removed without any division of the cutaneous tissues on the outer side of the arm."

Dr. Watson had practised this operation in six cases, with satisfactory results in all. It is claimed by the author—and fairly, we think—for this method that it is original; its merits are that the attachments of the triceps and brachialis muscles are left undisturbed, that the area of operation is limited almost exclusively to within the capsular ligament of the elbow-joint, and that a more ready access is gained to the ulnar nerve than by any other method. In cases of complete anchylosis or where any obstacles are found to prevent the execution of the more limited resection, this operation may always be converted into a complete excision of the joint. The plan appears to us so good that we shall unhesitatingly put it upon its further trial at the first opportunity.

Die Ohrenheilkunde der letzten 50 Jahre. Vom Dr. W. Kramer. Berlin. 1873.

Aural Surgery during the last Fifty Years. By Dr. W. Kramer. Our old friend Dr. Kramer, having completed the fiftieth year of his practice as an aurist, and noticing that his contemporary practitioners in that branch made no sign of duly celebrating the great event, has thought proper to erect a monument to himself and to present us and posterity with the above-named publication as a memento of his supreme merits as an aurist. Without the least desire to deal harshly with the aged doctor, we are compelled out of regard for the truth to state that the pamphlet under notice is to a considerable extent a *réchauffé* of his treatise "Aural Diseases and Aural Surgeons in England and Germany, 1865,"(a) and of his other works.

Age does not seem to have weakened his pugilistic tendencies nor chastened his style. His hand and pen are still against every man who ventures within his domain. There is but one standard of aural science—and Kramer is its prophet. This is the main gist of the pamphlet.

We should have been glad to welcome a fairly written synopsis of the progress of aural surgery during the current century, but the treatise in question is merely a polemical campaign against the more eminent living and dead writers on aural diseases, who, with scarcely an exception, are described as ignoramuses, and not a few as charlatans. In justice to our aural Don Quixote, it must be stated that in one respect he is impartial—for he strikes right and left, demolishing the quacks of his imagination, be they English, French, Germans, or Russians: they all share alike, and are mowed down without the least scruple. Our German *confrères* will no doubt take care of themselves if they think it worth while.

For reasons already stated this pamphlet does not admit of serious review, but we cannot refrain from culling a few flowers from the choice vocabulary of Kramer when treating of otiatrics in England. Troeltsch, it seems, stated in his work on "Diseases of the Ear" that the scientific development of aural surgery was mainly due to the English aurists, Wilde and Toynbee. This greatly excited the wrath of Kramer, who considers that he, and he alone, has laid the foundation of aural surgery as a science. Kramer repeats in this production his former attacks on English aurists, and especially on Toynbee as the head of them, in the most harsh, not to say vulgar, terms. Thus (page 26) he writes—"Toynbee's superficial knowledge and complete lack of real medical attainments, as manifested in his pretended diagnosis of acute and chronic affections of the middle ear, is only exceeded by the senseless audacity with which he tries to introduce the *rigidity* of the tympanic membrane as a morbid entity into the system of aural diseases, for which his own dissections do not furnish any support whatever." And again (page 27), "When we consider Toynbee's thoughtless diagnosis and treatment of the membranous ligaments in the tympanum, of the anchylosis of the stapes to the fenestra ovalis, and the apocryphal *rigidity* of the membrana tympani, we must confess that by this alone he proves himself a *charlatan* of the first water." But when we sum up all his own contributions to aural surgery, as well as those of Wilde, every impartial man will at once admit that Troeltsch has made himself supremely ridiculous by ascribing to Wilde and Toynbee an essential influence upon the scientific development of otiatrics, and by calling Toynbee 'the great reformer of aural surgery.'"

Kramer then reiterates his charges that Toynbee did not see nor examine during their lifetime the patients from whom

(a) "Ohrenkrankheiten und Ohrenärtzte in England und Deutschland."

the specimens were collected. This assertion having been proved a deliberate misstatement, Kramer now qualifies it in the following tame manner:—"My exposure of Toynbee's procedures, which have been published in English journals many years ago, may have induced Toynbee to publish some cases which he asserted to have examined during lifetime—*i.e.*, by the miserable light of a taper, and by the aid of the equally miserable Valsalva experiment."

The hypothesis of Helmholtz in relation to Corti's fibres is rejected by Kramer as an idle fancy.(b) Troeltsch, Gruber, Schwartze, Moss, Voltolini, Wreden, Wendt, Politzer, etc., are summarily and ignominiously dismissed. Thus, of Troeltsch and Gruber he says—"I think the procedures and the conduct of *these public teachers of otiatrics* can only be called *charlatanism.*"(c) He is equally complimentary to Hinton, whom he terms "Toynbee's hodman."

With regard to tinnitus, Kramer observes (page 61)—"The perfectly incorrect conception of tinnitus by Troeltsch is on a par with his crude empirical treatment of the same. He recommends fomentations, injections into the tubes, glycerine, tepid water, narcotics, chloroform, perforation of the tympanic membrane, and finally, if nothing will do, the great helper in need 'dear electricity.'" All this is mixed up pell-mell as in a marine-store, no rational indication being given; the only hope being that "a blind pigeon may, peradventure, find a pea." Kramer continues—"In opposition to this, a characteristic treatment of tinnitus, I will, in an appendix, give my own experience on the nature and treatment of tinnitus," which accordingly he does, and with the conclusions of which on many weighty points we find ourselves unable to agree.

"In conclusion," observes our author, "modern aurists have not discovered one single physiological fact which will stand a strictly critical and experimental examination. My observations on the conduction of vibrations through the air in the tympanum to the fenestra ovalis, experimentally verified, are probably the first step in this direction." Hence Kramer concludes that otiatrics have, as a science, made no progress since 1862; but that, on the contrary, aural sugery has retrograded both scientifically and practically. This retrogression, he maintains, is chiefly due to the false conception of the problems of pathological anatomy, the defective knowledge of the real wants of aural surgery, and also to the conceited self-estimation of Troeltsch as the leader and standard-bearer of modern aurists.

We have already stated that it goes against our grain to deal harshly with a practitioner of fifty years' standing, especially when we bear in mind that Dr. Kramer has done good service to aural surgery at a time when that branch of medical science was but little cultivated; but the overweening vanity of this author, and his utter disregard of professional amenity, left us no option in the matter. We now take leave of Dr. Kramer in perfect good humour, and are extremely glad to learn from his pamphlet that he is in excellent health, and we heartily wish that he may enjoy his green old age *cum dignitate*. That he will henceforth abstain from his undignified controversy with the younger generation of aurists is more than we can venture to hope for.

FOREIGN AND COLONIAL CORRESPONDENCE.

AUSTRIA.

VIENNA, October 13.

PROFESSOR HYRTL ON THE SCIENCE OF ANATOMY.

THE celebrated anatomist, Professor Hyrtl, intends to close his brilliant career after the lapse of this semester, and announced his intention to-day, in his introductory lecture, to a crowded audience. During an anatomical career of now forty years (the much-esteemed teacher began), the days were sacred to him when, at the beginning of each season, he used to enter the lecture-room, meeting an assembly of young men full of desire for knowledge, to receive the master's first greetings and welcome, and to be introduced into the beautiful dominion of a science which has been to him a true partner through life, and shall now become a worthy object for the student's aspiration, an affluent source for the education of their minds, an invaluable bequest of truth for their future career as physicians. It is no exaggeration (Hyrtl continued) to adorn with such attributes the science which I have served my life long, and which you are about to imbibe. And thus, with a kind of devotion, for the last time I commence my lectures, and will preface the serious work by a few serious observations on the nature of anatomy and its twofold signification as a subordinate branch of medicine, and as independent science.

He who gains some new acquaintance in life asks himself how he becomes impressed by it, whether he remains indifferent or becomes confident, whether it pleases his feelings and proves useful towards his ends. You, gentlemen, have the same right to similar questions, since you are about to make the acquaintance of a science which at present is entirely unknown to you, of the dimensions of which you are still ignorant, and the significance of which, with respect to the medical avocation, you cannot understand, but forebode.

The first question to which I have to reply is—What is Anatomy? It is a thing half science, half art; a thing that by work of hands has paved its way into the realm of mind. One may call it a handicraft, but with the golden basis of a science. Its task—"Non fingere et excogitare, sed invenire quid natura faciat atque ferat"—is the most becoming and most beautiful given to the aspirations of our mind. The classical ages having the γνῶθι σεαυτον as the device of their investigation, had a mere presentiment of the reason of that task, attempting the performance of it in the sphere of reason. Philosophy was the result, but it was reserved to anatomy to raise the veil from the material part of this existence. The aim to investigate the human body is pursued in a threefold manner, for to gain a knowledge of an organised body three things must be known—its external shape, its internal structure, and the manner of its action. The three questions which with respect to man are put to science are responded to by three subdivisions—namely, by physical anthropology, in so far as it concerns the external form; by anatomy in the strict sense of the word, revealing the marvels of the internal structure by dissection; and by physiology, teaching the phenomena and laws of life. Anthropology, as conception of the external properties of man, as knowledge of shape and its variations, consequent upon descendency, mode of life, clime, age, food, etc., must entirely be left to the zoologists, who have to close their scientific system with beast; and however man's ability of mind and haughty consciousness of his mental superiority may struggle against the relationship, he will still remain the brother of animal. The young science of authropology has already gained great significance, having radically reformed our notions on the origin of man, and it will not fail to gain still greater influence on our social life. In certain circles of society it is, therefore, considered a dangerous science, and for that reason no chair has yet been founded for its teachings at our university. Anatomy, however, and physiology are looked upon as necessities for medical men, and for these sciences rather too much is done by Government than too little.

Concerning the relation between anatomy and medicine, it would be a misconception to consider the former a mere preliminary study for the latter. Anatomy forms the basis of medicine, and it is more than arrogance to attempt to cure a patient without a knowledge of the healthy human organism. The dissecting-room, therefore, forms the Propylæ of medicine, and there are no words impressing with greater reverence the minds of those about to enter than the ones over the door of the dissecting-room of Paris—"Hic locus est, ubi mors gaudet succurrere vitæ." Now, if such an intimate connexion exists between anatomy and medicine, when the former is the starting-point of the latter, when it is impossible to walk with propriety on the toilsome path of a medical man without it, it is quite superfluous for me to impress your minds with the courage and power, with the endurance and persistence you will be obliged to employ in the investigation and acquirement of that knowledge as the representative of which I am now addressing you.

What awaits you here certainly is not the charm of grace—the dominion of death with its abhorrent attributes has no æsthetical aspect; the welcome it offers you is cold and earnest as is the corpse.

(b) Some little time back we came to the knowledge of the fact that more than one hundred years ago an acute French physician had anticipated the discovery of the fibres of Corti; it remained for Corti to demonstrate them. Neither Corti, Helmholtz, nor Tyndall mention this physician, and as most probably his writings on the subject are not known to them, we shall shortly accord to these foreshadowings a brief space.

(c) The *italics* are in the original.

The Viennese physicians stuck always to the sentence—"Homo quantum scit, tantum potest," which has been translated by an Austrian Minister of State as "Knowledge is power." All acquirements of modern industry are emanations of applied science, and the inquisitive and thinking observer of the International Exhibition in the whole palace will find not one object contradicting this principle. The International Exhibition itself is a Pantheon of knowledge, a temple in which the conquests of mental combats are deposited. After having considered the methods to be pursued in anatomical teaching, Professor Hyrtl winds up thus—"I am convinced that you will not consider the place from whence I am addressing you as that of a crammer with the title of professor, drawling in monotonous, tedious, pedantic words—the old fashion. So you may receive my hearty greetings, expressing at the same time a hope that also in this semester, which is to be my last as a teacher of anatomy, our meetings may become satisfactory to both of us. You must, however, accustom yourselves not only to *learn* anatomy, but also to *conceive* it. For that purpose there exists *one* means, which I name to you at the conclusion—viz., honesty, exertion, and unceasing labour."

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, October 28.

The Introductory Lectures.

Once more has the busiest week in the medical year—that of the "Introductories"—come round, and a few notes of some of the addresses will doubtless be of interest to many of your readers.

The Royal College of Surgeons generally takes the lead in point of time in commencing the session, and this year proved no exception to the rule. On Monday, October 27, Dr. Mapother, Professor of Physiology in the School of Surgery, lectured before a large gathering of the profession and of students on the interesting subject of "Lessons from the Lives of Irish Surgeons." Naturally, the Professor's remarks were addressed more especially to the student portion of his auditory. He commenced as follows:—

"Examples are better than precepts, and therefore it struck me that you would be glad to learn the ways in which our great surgeons, whose names will occur daily to you in the course of your studies, attained their eminence. You will be reminded of many of them as you walk through these halls, for since the foundation of this College—ninety years ago—she has always desired to perpetuate, by marble or canvas, the fame of her most distinguished members. Success among the public is not always a true test of skill or knowledge, but those who have been raised to our high places, or whose memories are here cherished, have, without exception, deserved such honours.

"If the saying of Dr. Gregory be true of the surgeon—namely, that 'the only judges of his merit are those who have an interest in concealing it,'—it must be allowed that the Fellows of our College have always acted most disinterestedly. I have arranged in chronological order the names of some of those whose lives and labours offer useful lessons for reflection, commencing with two or three who flourished at the end of the seventeenth century, and ending with some whose loss is still fresh in our memories. If dates and details about some of the earlier surgeons appear dry, I trust you will bear with me—for, believe me, the more you learn of your profession, the more pride you will feel in these countrymen of ours who have done so much without any of the aids for study which are now possessed by all of us."

The lecturer then proceeded to give a brief biographical sketch of most of the great fathers of surgery in Ireland during the past 200 years. Into his narration he interwove anecdote and history; and in tracing the origin of the College of Surgeons, mentioned "The Guild of Barbers of St. Mary Magdalene," chartered in 1446 by Henry VI., that unhappy king, for "the Promotion and Exercise of the Art of Chirurgerie," and which consisted of men and *women*. Clinical teaching is generally supposed to have originated during the present century in Dublin; but Dr. Mapother showed that so far back as 1785 four wards in Mercer's Hospital were set apart for the reception of cases for the lectures of the College of Physicians. He added, too, that clinical teaching was even older than this, having been pursued eighteen centuries ago, although in no very pleasant way for patients, as appears from the following lines translated from Martial:—

> "I'm out of sorts, but Symmachus is here,
> His hundred pupils following in the rear;
> All feel my pulse with hands as cold as snow,
> I had not fever then—I have it now."

Within the narrow limits of a letter it would be impossible to do full justice to Dr. Mapother's address, but I may be permitted to give at length its closing sentences:—

"And now, gentlemen, several considerations suggest that I should bring these commentaries to a close—firstly, the desire to respect your patience; and secondly, that others whom I would wish to notice are too lately taken from us to receive dispassionate treatment at my hands.

"On some future day justice will be done to the memories—too early lost to surgery—of William Henry Porter, most eloquent of lecturers and most elegant of surgical writers; of John Hatch Power, my revered master; of O'Bryen Bellingham, the most earnest friend of the Surgical Society; of Robert Williams, the sturdy advocate of the College rights; and of the benevolent Kingsley—all of whom are commemorated by bust or portrait. Still to the catalogue of great Irish surgeons must be added the names of Peile and Wilmot, and O'Ferrall and O'Beirne, Hutton and Ellis, Harrison and Ledwich, Smyly and Banon (lost to us whilst Presidents-elect); and from the lives of any one of them fruitful and good lessons may be deduced. None of those whose career we have studied to-day gained any position through nepotism. Of those who depend on such influence alone, it has been said by Sir D. Corrigan, in an address last July at St. Mary's Hospital:—'I have occasionally—nay, often—seen men raised by the influence of connexion or extraneous circumstances into temporary eminence—but if they went up like a rocket, they came down like the stick.'

"A universally regretted death and two resignations have changed our professional staff during the year. Charles Benson and William Hargrave—than whom the College never had more tried or trusted servants—have sought well-earned repose. William Barker, who, although not a surgeon, was a teacher and well-loved friend of a thousand, has passed away. Younger but no less earnest men fill their chairs.

"Let me end this lengthy lecture by reminding you that the leaders of our College for several generations owed their positions to honour and industry, as well as to genius, and verified the words of William Hunter—'A young man cannot cultivate a more important truth than this: that, apart from future recompense, merit is sure of its reward in this world.'"

To-morrow (Wednesday) Dr. Quinlan is to deliver an inaugural address at St. Vincent's Hospital; on Saturday, November 1, the session at the Ledwich School of Medicine is to be opened by Dr. A. Wynne Foot, Lecturer on Medicine; and on Tuesday, November 4, Dr. Lyons will lecture in the Catholic University School of Medicine. Of these and other addresses I hope to send you some account in due time.

GENERAL CORRESPONDENCE.

DIPSOMANIA.

Letter from Mr. J. Dixon.

[To the Editor of the Medical Times and Gazette.]

Sir,—Is it too late to substitute a better word for Dipsomania? I believe it was invented by Hufeland, and certainly a worse compounded word could hardly be found. Etymologically, it means "madness from thirst," whereas it is intended to imply either madness from drunkenness or an insane craving after strong drink. To the ordinary British citizen, untroubled by Greek derivatives, no doubt the word commends itself—it is so like *tipsy-mania*. Kuehn noticed the faulty composition of the word, and suggested an excellent substitute, *Methomania*; μεθη, meaning intoxicating drink. I get my information concerning Hufeland and Kuehn from Krans's "Med. Lexikon."

October 31. I am, &c., J. Dixon.

The report presented to the Committee having the management of the Hospital Sunday Fund in Liverpool, at their annual meeting last week, showed that the receipts were, by various collections, £8124 18s. 9d.; Hospital Saturday boxes, £1696 11s. 1d.; which, with other contributions, made a total of £10,018 12s. 2d.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, October 28.

Dr. C. J. B. Williams, F.R.S., President, in the Chair.

Mr. William Miller Ord communicated notes of a case of Duchenne's Pseudo-hypertrophic Muscular Paralysis, which, with the discussion thereon, we shall publish next week.

Subsequently the President (Dr. C. J. B. Williams) read a paper "On the Acoustic Principles and Construction of Stethoscopes and Ear-Trumpets." After noticing the invention of the stethoscope by Laennec, its modification by Piorry, and the introduction of the trumpet-end instrument by the author thirty years ago, he enunciates the principle of the stethoscope to be to conduct the sounds from the chest to the ear, both through its solid fibres and through its enclosed column of air. He then considers the *material* and the *form* best suited for this office. Wood, as a conductor of sound, is the best material, especially deal, and such woods as are rigid in longitudinal fibre, and yet light; the same reason makes them fit for sounding-boards of musical instruments. The only objection to wood is its fragility, especially when reduced to the shape best suited for stethoscopes. Metals are good conductors; but their coldness when first applied to the chest and ear, and their weight, are objectionable. Horn, *papier maché*, or guttapercha, would answer better; but a more suitable material is found in a preparation of india-rubber called ebonite, being easily formed into any shape, being also light, durable, and a good conductor of sound. With regard to the form of the instrument, after long and varied trials of stethoscopes of different shapes, the author is convinced by reason as well as experience that the trumpet-end instrument is the best. Conducting the sounds by its enclosed column of air as well as through its solid walls, this trumpet end brings both its solid and its contained air into closer contact with the chest-walls, from which the vibrations proceed, than can be done with a conical end, or any other: and there is neither too much hollow, which causes a confusing reverberation, nor superfluous weight of solid, which checks the weaker vibrations of sound. This form is also more comfortable to the patient, and easier and more steady for the observer; because its application is by a flatter contact and a firmer base than that of conical instruments, the edges of which often give pain. After discussing the subject of the transmission of sound through flexible tubes, the author admits their power, but concludes that the sounds are more or less modified by reverberation in them, especially when long or with large hollows. Dr. Williams concludes the subject of stethoscopes by a description of two forms made in ebonite—one for the hat, another for the pocket—and of some of their uses. The acoustic principle of the ear-trumpet is quite distinct from that of the stethoscope. The latter simply conducts pectoral sounds through its solid and its enclosed column of air. The ear-trumpet, on the other hand, acts solely as a reflector to receive the waves of sound from the open air, and to direct them into the ear as a focus. The best materials for reflecting aërial sounds are those hard and dense, such as metals, glass, porcelain, etc., but the weight of some of these, the fragility of others, and the intrinsic tinkling note of all, form objections to their use as ear-trumpets. Still the best instruments in common use are made of silver, plated metal, or japanned iron. The lightness of aluminium would render it more eligible. Polished ebonite also forms a good reflecting surface, and, although inferior to metal, has advantages over it in lightness and freedom from intrinsic sounds. The form of the ear-trumpet requires careful consideration. The simplest and most efficient reflector is a hollow cone with a wide base open to catch as large a body of sound as possible, and to reflect it in the simplest and most direct way through the apex into the ear. All repeated or secondary reflections of sound, as in parabolic and spheroidal cavities, are to be avoided; because, being retarded, they confuse the sound by an echo following, instead of adding to its distinctness. Such instruments may increase the noise, but they impair the clearness of articulate sounds, which ear-trumpets ought to convey pure, and unmixed with extraneous notes. But in point of fact these confusing sounds are met with in all ordinary ear-trumpets, causing the conch-like roar, like that of the sea heard in large shells. This noise is a reverberating echo of sounds from without, and takes its tone from the note proper to the size of the cavity or tube in which transverse or longitudinal vibrations are excited, responding to every noise or impulse. These noises are confusing, and often painful to sensitive ears, and should be avoided. They are much lessened by widening the open base of the cone; but they may be further diminished by several other expedients, as exemplified by the instruments exhibited, the most convenient of which is obliquely truncating the cone, leaving open half or more of its length. In so doing the instrument has an obvious resemblance to the ears of many quadrupeds, and probably this form is wisely designed to aid their hearing without the confusing noise of mere tubes and cavities. Perhaps, too, the hair with which the ears are fringed may subserve a like purpose, from which a hint may be taken if required.

After the reading of the paper, Dr. Williams exhibited and explained various forms of stethoscopes and ear-trumpets. Acoustics had been studied more in relation to musical notes than to common sounds, which could be understood much better by bearing in mind the definition which he had formerly given of sound, as *motion of a certain force resisted by a certain force*. The moving and resisting forces, acting alternately in opposite directions, constitute the vibrations of sound. These are best produced and conducted in hard, rigid bodies; but the conduction of sound is favoured also by similarity in density: thus a solid transmits its vibrations most powerfully through a rigid solid of the same density, and much less freely through air. The sounds of air but feebly affect dense solids, such as metals; in fact, they are reflected by them—turned away. But a solid of less density and great rigidity, such as wood, transfers vibrations more freely from metal to air and from air to metal, as exemplified by the tuning-fork on a sounding-board; and this property renders wood the best material for stethoscopes, which have to transfer sounds from the chest, generated both in air and in solids, to the solid structures of the ear. But it transfers the aërial chest-sounds still more perfectly through the column of air contained in the stethoscope, which thus becomes a sounding-board conductor, which, through the rigidity of its walls and the lightness of its mass, is sensitive to receive and faithful to transmit the weakest vibrations. To exemplify these remarks the following stethoscopes were shown, with comments:—Solid perforated cylinders, introduced by Laennec (one actually made and used by him): too heavy and clumsy, and not well fitting the ear or the chest. Unperforated cylinders: inferior in conducting power for breath- and voice-sounds. Piorry's slender stethoscope, with ivory cap and pleximeter: too small at pectoral end, and ivory screws troublesome and impair conducting power. Modification of the last, made all of wood, with a larger conical end, with cap and stopper to fit without screws: a good instrument. A similar one, with a hole in its side to show that opening the column of air impairs the conducting power, closing the hole restores it. Another instrument of this shape had a drum of thin indiarubber at its pectoral end; this, by preserving air-tight the enclosed column of air, enabled it to conduct sounds well, without complete contact, as on the ribs of very thin patients. The thin indiarubber water sac of Dr. Scott Alison is useful for a similar purpose with any stethoscope, by increasing the contact and conducting power for thin subjects, or even when applied outside the garments. Trumpet-end stethoscopes in wood and ebonite, either made in one piece (which may be carried in the hat), or with the ear end to take off and fit into the chest end, making it thus strong and portable for the pocket (supplied by the Indiarubber, Guttapercha, and Telegraph Works Company at Silvertown). These are the last devised, and recommended by Dr. Williams. A binaural stethoscope constructed by Dr. Williams thirty years ago was also shown, made of wood with metal tubes to each ear; it was found to convey the sounds from the chest with exaggerated loudness, but, being quite inflexible, it was awkward for application. The double stethoscope of Dr. Leared, shown at the International Exhibition of 1851, was a great improvement in being flexible, and fitting to the ears with a spring. The binaural and differential stethoscopes of Dr. Marsh and Dr. Scott Alison seemed to promise still further advantages to those whose hearing is equally good in both ears—a capacity which a great many do not possess. But of all these instruments, and of most long flexible stethoscopes, it may be said that although some sounds are exaggerated, others are impaired, and there is not that clearness and simplicity

which we hear in the sounds transmitted through the short wooden or ebonite instruments. With respect to ear-trumpets, Dr. Williams requested the members to try some of those in common use, of which several good specimens were before them, kindly lent by Messrs. Coxeter and Messrs. Weiss. The long flexible ear-tube answered perfectly well for a *tête-a-tête* conversation with a deaf person; but the ear-trumpets to be used in society or in public assemblies all had more or less of the roar of reverberation, drowning and confusing articulate sounds. Of the wide conical ear-trumpets, in which Dr. Williams had attempted to obviate this, one was made of japanned tin-plate, with eight or ten small holes in its sides to give vent to the transverse vibrations. This expedient was partially successful, the roar being slight and the magnifying power about ten times—that is, the ticking of a clock would be heard at ten times the distance at which it would be heard with the unaided ear. A longer cone of stiff paper, terminating in a short ear-piece of metal, was still more free from roar, and magnified the sound twelve times. This was the most successful of all the ear-trumpets. A third and smaller cone, of gutterpercha, had two diaphragms of stiff paper crossing in the centre and running in the axis of the cone, also to stop the transverse vibrations, which they did in great measure, the magnifying power being eight times. Lastly, a cone of ebonite, twelve inches long, truncated obliquely to half its length, magnified ten times, with only a slight roar excited by loud sounds. This last Dr. Williams considers likely to be the most practically useful instrument, and it may be improved by opening still further the cone to two-thirds of its length, which would make it still more like the ears of animals. Taking these for models, and avoiding as much as possible tubes and cavities, which are the cause of the confusing reverberation, we may hope to get means to aid the failing hearing in some measure as we do the failing sight. In reply to Dr. Leared, Dr. Williams said that he thought that the power of double stethoscopes to increase the sound more than single ones was of the same kind as that of binocular telescopes and microscopes, by impressing a larger surface of sensation.

CLINICAL SOCIETY.

FRIDAY, OCTOBER 24.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

BEFORE commencing the business of the meeting, Sir W. GULL took occasion to give expression of his regret at the lamented death of Dr. John Murray. In this the President amply concurred, and expressed a desire that the sympathy of the meeting should be conveyed to Dr. Murray's friends.

Dr. THEODORE WILLIAMS introduced Dr. Guinier, of Montpellier, who wished to demonstrate on his own person to the Society a new and effective method of Gargling. Dr. Williams stated that the chief features in which this method differed from the ordinary one were—1st. That the head, instead of being thrown far back, is only slightly inclined. 2ndly. That respiration is impossible during the operation, and that all that can be effected is a single expiration. 3rdly. That deglutition is almost absolutely controlled. 4thly. That the soft palate is drawn high up, and that the liquid used for a gargle, passing the epiglottis, enters the larynx, penetrating as low as the vocal cords.

Dr. GUINIER then, by the aid of the laryngoscope, demonstrated his method of gargling, and showed the water lying in the upper portion of the larynx and the white vocal cords shining through it. He also displayed in a beautiful manner the various acts of vocalisation, and gave explanations as to the plan by which he had educated his throat to these movements, the great point being the articulation of certain vowels, such as "oe," before gargling. He thanked the Society much for the kind attention they had given him, and hoped that in a future year he should be able to make a further demonstration.

Dr. LIVEING said he had often pointed out to his pupils that the uvula was less sensitive than the neighbouring mucous membranes.

Mr. PUGIN THORNTON asked what gargles had been found useful. An experiment had been made to demonstrate the fact that in ordinary gargling the fluid reached the surface of the larynx. It was this: First of all a gargle containing tannin was used, and afterwards iron applied by a brush, when it was seen that the larynx was blackened.

Dr. B. YEO doubted if the noise produced was due to the cause described. It was rather due to the passing of air through the fluid. Early training was most important in learning how to raise the soft palate.

Dr. THEODORE WILLIAMS, in replying for Dr. Guinier, said his method of gargling needed considerable practice to acquire, but that at Cauterets, where Dr. Guinier was physician, it was carried on on a large scale, and that young women, and even children, could manage it after a time. The liquid generally used was the water of the sulphurous springs.

Sir WILLIAM GULL read a paper on Anorexia Hysterica (Apepsia Hysterica). He introduced the subject by stating that in the Address on Medicine delivered at the meeting of the British Medical Association at Oxford in August, 1868, and published at the time in the medical journals, he had referred to a form of disease occurring mostly in young women between the ages of fifteen and twenty-three, and characterised by extreme emaciation, and often supposed to be due to latent tubercle, mesenteric disease, or so-called atrophy. This state he purposed at the time to call *apepsia hysterica*, and added in a note appended to that address—"I have ventured to apply this term to the state indicated, in the hope of directing more attention to it." In the paper now brought forward the word *anorexia* had been preferred to that of *apepsia*, as more fairly expressing the facts, since what food is taken, except in the extreme stages of the disease, is well digested. Dr. Laségue, of La Pitié Hospital, Paris, in April last published remarks on this state (translated into the *Medical Times and Gazette* of September last), which he also called *anorexia hysterica*. Dr. Laségue seems not to have known of the reference to this morbid condition which was made by the author of the paper at the time named; therefore Dr. Laségue's observations are the more confirmatory, having been made from an independent point of view. The author believed that the want of appetite was due to a morbid mental state. He had not observed in the special cases in question any gastric disorder to which the want of appetite could be referred. He believed that the origin was central, not peripheral. It was notorious that certain mental states were apt to destroy the appetite, and it would be admitted that young women of the ages named were specially obnoxious to mental perversity. We might call the state hysterical without committing ourselves to the strict etymological value of the word, or maintaining that the subjects of anorexia hysterica had any of the common symptoms of hysteria proper. The author then gave details of two well-marked cases of this malady, with photographs of the patients in the stage of extreme atrophy, and after they had recovered their weight and strength. In the starvation stage, when the patients were for the most part brought for advice, all the functions were found to be below the normal standard, but otherwise normal. Temperature half a degree to a degree below normal; respirations 12; pulse 56 to 60. An examination of the viscera of the chest and abdomen discovered nothing texturally abnormal. In fact the clinical characteristics were those of starvation only, without any signs of visceral disease. It was remarkable how long this condition often continued, and with how little change in the vital functions, the pulsation and respirations remaining at the low standard named for a year or two or more. Such patients, though extremely wasted, complained of no pain, nor indeed of any *malaise*, but often were singularly restless and wayward, if the prostration had not reached its extremest point. In one case only had a fatal issue occurred, though sometimes the exhaustion was so great as to make possible recovery seem very doubtful. In this fatal case, thrombosis took place in the femoral veins, the patient became feverish and died. Death followed from the thrombosis and the starvation only. The post-mortem examination discovered no tubercular nor other lesion. The author insisted that the diagnosis of these cases was to be made from the slowness of the pulse and breathing, from the slightly depressed temperature, and the absence of any sign of visceral disease in the chest and abdomen, whilst the emaciation was explicable by the fact of chronic starvation. In reference to treatment he contended that the patients require meral control, and that, if possible, a change in the domestic relations should be made. That from the beginning food should be given at short intervals, and that patients should not be left to their own inclinations in the matter. If the exhaustion had reached an extreme

point, then it might be necessary to apply external heat to the body, as well as to administer food; as Chossat had long ago shown that starved animals, when the inanition was extreme, could not digest food without the aid of external heat. One of the best ways of applying heat in such cases was that suggested by Dr. Newington, of Ticehurst, by an indiarubber tube, having a diameter of two inches and a half, and a length of about four feet. This tube, filled with hot water, and placed in the bed along the spine of the patient, is often of of great value. The author had not observed much advantage from the administration of drugs, whether tonics or alteratives. Believing the disease to be due to a want of mental equilibrium, he would rather trust to moral influences and to feeding than to medicines, though these might still be amongst the *adjuvantia*.

Sir William Gull further read some remarks on a Cretinoid State supervening in adult life in Women. The observations on this morbid state were made on five cases. In two of them they had extended over several years. He had not seen the disease in men. In four of the cases the changes named had begun between the ages of forty and fifty, in the fifth the history was not conclusive as to how far it might not have existed to some extent in childhood. In one if not in two the malady began after the cessation of the catamenial period, and in two the catamenia still continued and were rather profuse. The morbid condition to which the author wished to call attention was a general and gradual increase of bulk throughout the frame; but especially the outline of the face was changed from oval to round, or became somewhat oval transversely, like the refracted disc of the moon at rising. The complexion was soft and fair; the skin presented a peculiarly smooth and fine texture, which had a porcellanous aspect; the cheeks were tinted of a delicate light rose-purple. The cellular tissue under the eyes became loose and folded, and that of the neck and under the jaws thickened; the lips were large and thick, and of a rose purple; alæ nasi thick. The distance between the eyes appeared disproportionately wide, and the root of the nose depressed; this change gave the face a flattened, broadened character, which was quite peculiar, the whole expression being at the same time gentle and placid. The tongue grew broad and thick, the voice was guttural, and the pronunciation clumsy, as if the tongue were too large for the mouth. The hands had undergone a characteristic change, and became broad, thick, and spade-like, from thickening or infiltration of tissue. With this change in the face, tongue, lips, and hands, there was gradually increasing languor and disinclination to exertion; and the mind, from being active and inquisitive, assumed a placid and lazy indifference, with a liability to occasional outbreaks of temper. The intellect remained unimpaired. The integuments of the chest, abdomen, and upper and lower extremities were loaded with subcutaneous fat. A cursory aspect of one of these cases without any previous experience of its peculiarity would have led to the suspicion of some disease of the heart causing venous obstruction, or of a morbid state of the kidneys favouring œdema. Neither of these conditions was present in the cases under consideration. All the viscera were healthy. Although a large deposit of subcutaneous fat accompanied the changes named, the author contended that the mere condition of corpulency, obesity, or fatness would not explain the pathology of these cases. Common observation showed that in ordinary polysarcia there were no attendant changes which could be regarded as cretinoid. The author stated that his remarks on this state were rather tentative than dogmatical, but he believed that anyone who should observe the malady in question would regard it as substantive and definite, and as having special characters. That it was allied to the cretinoid state would appear from the facial expression, the changes in the tongue and hands, and the coincident change in the locomotive powers and in the mental activity. The author referred to Dr. Fagge's paper on "Sporadic Cretinism occurring in England." Dr. Fagge had cited a case beginning as late as the eighth year in a subject previously healthy and well-developed, and had speculated upon the possible supervention of the disease in the course of adult life. Rösch had recorded two instances of this disease beginning respectively at the ages of five years and between seventeen and eighteen. In the cretinoid condition in adults which the author had seen, the thyroid body was not enlarged in four cases, but from the general fulness of the cutaneous tissues in the neck he was not able to say whether the thyroid was wasted or not, as Dr. Fagge had found it to be in cases of sporadic congenital cretinism; nor was the author able to determine the presence of the supra-clavicular masses of fat outside the sterno-cleido-mastoid muscles first described by Mr. Curling, and specially noticed by Dr. Fagge as occurring in congenital sporadic cases. The author added that such masses of supra-clavicular fat in the lower triangular space of the neck were not infrequent in the adult, without any associated morbid state whatever. When the change which the author had described as occurring in adults had begun, so far as his limited experience went, it continued. Some advantage seemed to be derived from baths and frictions, fresh air and change of place—from such means, in fine, as stimulated the nervous system and quickened the peripheral venous circulation; but the results were very limited. This was specially shown by comparing two clinical reports made of the same case at an interval of seven years. The details singularly coincided, showing how little change had occurred in that time.

Dr. Quain said he had long been familiar with the form of disease described by Sir William Gull, and he had seen several like cases. He doubted the propriety of regarding them as hysterical. He related a very remarkable and typical case—that of a young lady, in whom there gradually came on such a distaste for food that it ultimately became an absolute loathing. She was quite willing to do all she could for her benefit, but food she would not take. At last she became so exhausted that she was more or less unconscious, and she could scarcely move her limbs. She then more resembled a dried mummy than a living being. Life was maintained by essence of meat disguised as medicine, and brandy mixture. She finally recovered, and was now in good health. Dr. Quain could not help thinking that there was some morbid state of the gastro-intestinal mucous membrane which led to this distaste for food. He mentioned a case in which the phenomena closely resembled those in the case already described. In the latter case, the reluctance to take food ceased after a spontaneous and copious attack of vomiting and diarrhœa. This patient passed through a tedious convalescence, but recovered, and is now alive and well.

Dr. Greenhow insisted on the importance of altering the surroundings in such cases. In one instance he caused the patient to be moved to another house, and she speedily improved. Her relations were of unsound mind. In another case, where the patient's mother was of unsound mind, and who fell into such a state, he caused the residence to be changed, and she soon began to improve. This, he was sure, was the real treatment.

Mr. B. Carter said that twenty years ago such cases were sent to Mr. Mackenzie, whose practice he had seen, and whose principles he had set forth in a little book many years ago. In some instances the patients desired to raise sympathetic feelings, and occasionally, to make the idea of food horrible to them, raised some disgusting image to the mind. In one instance the image so conjured up was putrid cat pudding.

Dr. Poore asked if there were any symptoms proper to starvation in Sir William Gull's case. Thus the Welsh fasting girl became restless and sleepless; the pulse and temperature rose as soon as she could get no food.

Dr. Symes Thompson said it was difficult to draw the line between such cases and real insanity. He remembered one such case where there was some doubt as to sending the patient to an asylum; however, she was sent and improved greatly, but was unfortunately removed and in no long time starved herself to death.

Dr. Greenhow explained that in both his cases there was restlessness at night, but no mental disturbance.

Dr. Williams asked, inasmuch as the mental rather than the bodily condition seemed at fault, would not forcible feeding do good?

Mr. Smith referred to a case in which signs of insanity began by a great repulsion to the Bible; when this passed away the same kind of feeling came on as regards food: when food was left in her way the patient destroyed it.

Dr. Edis said that when he was at Ticehurst a young lady came under treatment who had suffered the loss of a very dear relative. She refused her food, and no amount of coaxing could get her to take it. They used beef-tea enemata for a time, and in a short time she began to improve and left quite well.

Sir W. Gull, in reply, referring to the question of hysteria, said there was perhaps no great amount of hysteria, but it could hardly be called insanity. In one case the patient afterwards suffered from hysterical pain in the hip. We could not always send these patients from home. He doubted if the

mischief was peripheral, he rather thought it central. As to the Welsh fasting girl, she died of urinæmia, seeing she got no water, and not of starvation.

OBITUARY.

JOHN BUTTERWORTH WALKER, M.R.C.S.

Mr. J. B. Walker, aged 58, died at his residence, in Clifton-gardens, Maida-hill, on Saturday last, November 1, from acute pneumonia, after only a week's illness, during which he was attended by his friends Dr. Sieveking and Mr. Bullock (of Great Cumberland-place). Mr. Walker was the son and only child of Mr. John Walker, a gentlemen of good fortune, who resided for many years at Sydenham, and latterly in Stamford-street, Blackfriars-road. He pursued his medical studies at King's College, and also at St. Thomas's Hospital, where he became a dresser under the late Joseph Henry Green. At the Hospital he was always attentive to his duties, and, by his kindness to the patients and general amiability, became a favourite both with his master and fellow-students. He commenced practice at Iver, in Buckinghamshire, and married Miss Robinson, the step-daughter of Mr. Pennington, surgeon, of Needham Market, Suffolk. She died five years ago, leaving him with a family of ten children. Mr. Walker removed from Iver to London about twenty years ago, and for the last fifteen years resided in Clifton-gardens. In this wealthy district of London he had a good practice, and a large circle of friends, including many leading members of the profession. His genial character, kindness of heart, and amiability endeared him equally to all his friends and patients, and his gentlemanly bearing and high sense of honour added greatly to his social character and position. His eldest son, Mr. Robert Walker, pursued his medical studies and distinguished himself at St. Mary's Hospital, and was amongst those selected to join the surgical staff in the late Franco-German war. The honorary distinction of the Cross, for merit, from each country he recently received. He has for some time been engaged in assisting his father in his practice, to a large share of which he will in all probability succeed.

F. CRACE CALVERT, M.D., F.R.S.,

Died on the 24th ult. at his residence, Clayton-vale, Newton-heath, Manchester. He was seized with typhoid fever during a visit to the Vienna Exhibition last July, and his condition was aggravated by ulceration of the lungs, which was the cause of death. He was Professor of Chemistry at the Manchester Royal Institution. As an analytical chemist, Dr. Calvert has long had a more immediate professional connexion with Manchester, but his research has made him known to scientific men throughout the world. His doctor's degree was sent him by the late Baron Liebig. He was a Fellow of the Royal Society of England, a Fellow of the Chemical Society, and an Honorary Fellow of the Chemical Society of Paris. He was also a member of the Royal Academy of Turin, and of the Imperial Academy of St. Petersburg. He went to Manchester from France in 1846. He then received the appointment of Honorary Professor at the Institution in Morley-street. Dr. Calvert was a favourite pupil of Chevroul at Paris, and had previously studied chemistry under Girardin, at Rouen. Dr. Calvert was born in London. He was the son of Colonel Crace, a gentleman of fortune, who took his wife's name on his marriage. Hence the compound name borne by their son—Frederick Crace Calvert—who has died at the early age of fifty-four. He was married to a French lady, and they had one child (a son), who died in early youth.

JOHN ELDON YOUNG, M.D., Surgeon-Major of the 18th Foot,

Died on the 26th ult. at Gosport, in his 44th year. He entered the service October, 1853, became Surgeon in May, 1863, and Surgeon-Major. Served at the siege and fall of Sebastopol in 1854-55—medal with clasp, and Turkish medal.

Royal College of Surgeons, Ireland.—We understand that the dignity of President of the College for the ensuing year will be conferred upon Mr. Joliffe Tufnell, Surgeon to the City of Dublin Hospital; and that the Vice-Presidency will probably be offered to Mr. H. G. Croly, of the same Hospital.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentleman, having passed the required examinations, was admitted a Member on October 30:—

Morris, Beverley Robinson, M.D. Dublin, Nottingham.

The following gentlemen were admitted Licentiates of the College:—

Dawes, Richard St. Mark, 19, Lanark-villas, W.
Head, Robert Turner, East Grinstead.
Hills, Thomas Hyde, Maidstone.
Lattey, Walter, Southam, Warwickshire.
Mackinlay, James Egan Harrison, 7, Earl's-terrace, W.
Nunn, Philip William Gowlett, 14, Vale-place, W.
Ranford, Thomas Davis, Guy's Hospital, S.E.
Sherwood, Arthur Paul, 25, Edwardes-square, W.
Warden, Charles James Hislop, 21, Westmoreland-place, W.

The following candidates, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College:—

Nunez, San José de, Costa Rica.
Parakh, Dhanjioha Navroji, 201, Euston-road, N.W.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, October 30:—

Bailey, James Johnson, Stockport.
Lyddon, John Henry, Chatham.
Robbins, Henry John, Aldeburgh, Suffolk.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Buchan, Charles Forbes, M.B., M.S.—Medical Officer f No. 2 of Bridgwater Union.

Burman, J. Wilkie, M.D.—Medical Superintendent of the Wilts County Asylum, Devizes, *vice* the late Dr. Thurnam.

Grier, Charles, L.R.C.P., L.R.C.S.I., L.A.H.—Honorary Medical Officer to the Bristol Hospital for Sick Children.

Johnson, Sydney, M.B., M.C., of Dalton—Medical Officer of Health for Dalton-in-Furness.

Orwin, Arthur Wigelsworth, M.R.C.S. Eng., L.R.C.P., and L.M. Edin.—Resident Medical Officer to the Guest Hospital, Dudley, *vice* Llewelyn Thomas, resigned.

Pigeon, Henry, L.R.C.P., M.R.C.S. Eng., L.M.—Honorary Medical Officer to the British Hospital for Sick Children.

Tichborne, Charles R.C., F.C.S., M.R.I.A.—Lecturer on Chemistry at the Carmichael School of Medicine, Dublin.

NAVAL APPOINTMENTS.

Admiralty.—Dr. John H. Pemberthy, Surgeon to the *Zephyr;* Dr. George Robertson, Surgeon to the *Excellent;* Thomas H. Atkinson, Surgeon to the *Hibernia;* Francis J. A. Waring, Surgeon to the *Boscawen;* Edmund A. Lucas, Surgeon to the *Lord Warden*, additional, for disposal; William C. Sandys and Alfred N. Kelly, Surgeons to the *Iron Duke*, additional for disposal.

BIRTHS.

Brown.—On October 23, at 1, Bartholomew-road, Kentish Town, the wife of Andrew Brown, L.R.C.P. Edin., L.R.C.S., of a daughter.

Dalzel.—On October 30, at 40, Kensington-park-gardens, the wife of Surgeon-Major W. F. B. Dalzel, M.D., late Bengal Army, of a daughter.

Kavanagh.—On November 2, at Ierne House, Wickham-road, Lewisham-road, S.E., the wife of P. Kavanagh, M.D., L.R.C.S.I., L.S.A., of a daughter.

Littlejohn.—On November 2, at 24, Royal-circus, Edinburgh, the wife of H. D. Littlejohn, M.D., L.R.C.S., of a daughter.

Slade.—On October 28, at Puddletown, Dorchester, the wife of R. Slade, M.R.C.S. Eng., L.S.A., of a son.

MARRIAGES.

Hunter—Norton.—On October 30, at St. Mark's, Surbiton, Alexander Hunter, Captain 101st Royal Bengal Fusiliers, eldest son of the late James Hunter, M.D., of Bryansford, co. Down, to Lorina Emily, youngest daughter of the late Edmund Norton, Esq., of Lowestoft, Suffolk.

Milne—Garstang.—On October 30, at Holy Trinity Church, Dobeross, Manchester, John Milne, Esq., of Liverpool, to Marian, only daughter of Walter Garstang, M.D., M.R.C.S. Eng., L.S.A., of Dobeross.

Powell—Bennett.—On October 30, at Mountfield, R. Douglas Powell, M.D., F.R.C.P., of Henrietta-street, Cavendish-square, eldest surviving son of the late Captain Scott Powell, formerly 23rd Royal Welsh Fusiliers, to Juliet, younger daughter of Sir John Bennett, of The Banks, Mountfield, Sussex.

Pullan—Wright.—On September 20, at St. Mary's Church, Poona, Captain Ayrton Pullan, Bengal Staff Corps, to Janet Frances, daughter of Alexander Wright, Esq., Surgeon-General Indian Medical Department.

Sankey—Thorne.—On November 4, at the parish church, Kensington, Julius O. Sankey, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., the Turl, Oxford, youngest son of the late Rev. R. Sankey, rector of Witney, to Agnes Emma, youngest daughter of T. H. Thorne, Esq., of Leamington.

DEATHS.

BLAND, CORNELIUS, L.S.A., at Winchester-street, Pimlico, on October 29, aged 63.

CUTCLIFFE, HENRY CHARLES, F.R.C.S., Acting Professor of Surgery Medical College, Calcutta, at Calcutta, on October 21, aged 41.

HUNT, MARIA HARRIETT, wife of Henry Hunt, F.R.C.P. Lond., of 3, Brook-street, Hanover-square, and Shermanbury Place, Sussex, on October 29.

LOVE, GILBERT, M.R.C.S. Eng., at Wimbledon, on October 29, aged 53.

MILBURN, JOHN T., M.R.C.S. Eng., Surgeon half-pay, late 10th Hussars, at Crawcrook, Ryton-on-Tyne, on October 28.

SMITH, ROBERT W., M.D., F.R.C.S.I., M.R.I.A., Professor of Surgery in Trinity College, Dublin, and Vice-President of the Royal College of Surgeons, Ireland, at Eccles-street, Dublin, on October 28.

SQUIRES, CATHERINE JANE, wife of Wm. W. Squires, M.D., M.R.C.S., at Hardy-street, Nelson, New Zealand, on August 20, aged 24.

YOUNG, JOHN ELDON, M.D., L.R.C.S.I., L.A.H., Surgeon-Major H.M. 18th (the Royal Irish) Regiment, aged 44.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be Members of one of the Colleges of Surgeons of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Committee, on or before November 15.

BRISTOL ROYAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 20.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.—Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before November 12.

HOUSE OF CORRECTION, WANDSWORTH-COMMON, SURREY.—Surgeon. Candidates must be duly qualified. Personal applications to the Governor between November 8 and 11, between 11 a.m. and 2 p.m.

METROPOLITAN DISPENSARY AND CHARITABLE FUND.—Physician. Candidates must possess a Diploma from a British University, and also be Fellows or Members of the Royal College of Physicians, London, or undertake to become so within six months after election. Applications, with testimonials, to the Secretary, before November 15.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer. Candidates must be doubly qualified and registered. Applications, with testimonials, to the Secretary, 13, Cavendish-street, Ramsgate, on or before November 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Candidates must be F.R.C.S. Eng., and must attend at the Hospital with their testimonials on November 11, at 1 o'clock p.m.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Chippenham Union.—Dr. Kitchener has resigned the Pewsham District; area 3566; population 1679; salary £18 3s. 4d. per annum;—and the Workhouse, salary £50 per annum.

Drayton Union.—Mr. Thos. Roberts has resigned the Fifth District; area 11,201; population 2480; salary £21 per annum.

West Derby Union.—Mr. J. W. Warburton has resigned the Township of West Derby; salary £125 per annum.

APPOINTMENTS.

Bideford Union.—John Thompson, M.D. St. And., F.R.C.S. Eng., L.S.A., to the Bideford District.

Boston Union.—Wm. H. Radley, M.R.C.S. Eng., L.S.A., to the Boston District and the Workhouse.

Great Ouseburn Union.—Tertius D'Oyley Pain, L.S.A., to the Tollerton District.

Narberth Union.—Hugh P. J. Price, M.R.C.S. Eng., L.S.A., to the Third District.

North Bierley Union.—Philip E. Cogan, M.D. and M.C. Queen's Univ. Dub., to the Ninth District; Wm. R. Maekley, M.R.C.S. Eng., L.S.A., to the Thirteenth District.

PROFESSOR FLOWER, F.R.S.—This gentleman, whose illness we have already noticed, left England on Thursday last for an extended sojourn in the East, carrying with him the sincere wishes of his numerous friends for a return in perfect health.

MUNICIPAL HONOURS.—Mr. John Frankerd, F.R.C.S., has just been elected mayor of the ancient borough of Langport, Somerset, for the fourth time.

THE Liverpool Town Council have resolved to take measures for the compulsory purchase of a site at Bromborough for a cholera hospital.

DR. JOHN M. COLEMAN, of Wolverhampton, has been presented with a very handsome timepiece by the members of the Queen Adelaide Lodge of the Loyal Order of Odd Fellows, to which he is medical officer.

SMALL-POX has broken out near Cape Town, but the precautions taken lead to the hope that the disease will not become epidemical.

THE hospital erected at Dingwall, Inverness, as a memorial to the late Dr. Ross, of Dunglust, was formally opened on the 25th ult.

ASSISTANT-SURGEON HARRY LEACH, 1st Brigade Kent Artillery Volunteers, passed the requisite examination prescribed by the Army Regulations for the Reserve Forces on October 22 last, and received a certificate of proficiency.

ROYAL COLLEGE OF SURGEONS.—The primary (or anatomical and physiological) examinations for the diploma of Membership for the present session commence this day. At present the number is rather below the average. The "pass," or surgical, pathological, and medical, will commence on Friday next; and the primary Fellowship examination on Saturday, the 22nd, and the "pass" on Thursday, the 27th instant.

PRESENTATION.—On Thursday last Dr. Fitzgerald, of Folkestone, was presented by his patients with a very handsome and gratifying testimonial, which, in deference to his well-known musical tastes, most appropriately took the form of a magnificent walnut-wood grand piano, by Collard and Collard. It was accompanied by a beautifully illuminated address (the work of one of his patients), containing the names of the subscribers, and stating that the instrument was presented to him by a few of his patients and friends, as a mark of their high esteem and regard.

CLINICAL SOCIETY OF LONDON.—On Friday, the 14th inst., at 8.30 p.m., the following papers will be read:—Dr. G. Johnson, "On Cases of Poisoning by Homœopathic Concentrated Solution of Camphor;" also, "On Cases of Temporary Albuminuria, the result of Cold Bathing." Dr. Anstie, "A Remarkable Case of Death from Meningeal Congestion without any Inflammation." Mr. Henry Arnott, "On a Case illustrating Esmarch's Method of Controlling Hæmorrhage in Operations by Elastic Bandaging."

YELLOW FEVER IN AMERICA.—"A gratifying decrease," says a correspondent of the *Times*, writing from Philadelphia on the 21st ult., "in the number of cases of yellow fever, in consequence of the cold weather, is reported from Memphis. The daily death-rate is down to twenty to twenty-three, and the streets are said to present a more animated appearance than for a month, there being many signs of a revival of business activity. Over 1500 deaths have occurred since the fever began its ravages. At Montgomery, Alabama, the deaths from yellow fever average three daily; at Columbus, Texas, five daily."

UNIVERSITY OF DUBLIN.—On Saturday, the 1st inst., the Board of Trinity College, pursuant to advertisement, elected three examiners in arts, who will be members of the Conjoint Examining Board for Ireland, under the Medical Act of 1858. The examiners appointed were the following:—In Mathematics: Robert Stawell Ball, LL.D., Professor of Applied Mathematics, Royal College of Science, Dublin. In Classics: John William Moore, M.D., F.K.Q.C.P.I., ex-Scholar of Trinity College, Dublin. In English: Edward Dowden, M.A., Professor of Oratory and English Literature in the University. The Professorship of Surgery, vacant by the death of Robert W. Smith, M.D., will be filled up on this day (Saturday, November 8).

DEATH OF AN OLD COLONIST.—The Wellington (New Zealand) *Post* of August 6 says:—"Another old settler (Dr. Knox) died in the hospital at the age of 82 years. Dr. Knox arrived in this colony some thirty-two years ago, and after various changes at last settled down in the Porirua district, where he practised his profession and acted as coroner, until failing health a few weeks ago compelled him to seek refuge in the hospital in order to obtain proper medical attendance and nursing. In early life Dr. Knox was demonstrator of anatomy to his brother, the celebrated Professor Knox, whose name became so familiar in connexion with the Burke and Hare cases. During his residence in this colony Dr. Knox pursued his scientific studies with unwearied diligence, and to his knowledge of anatomy the Colonial Museum is greatly indebted for many interesting exhibits. The *Transactions of the New Zealand Institute* have also been enriched by many valuable contributions from his pen. He was an especial authority on all questions regarding the Cetacea family, and his residence at Porirua afforded him many opportunities for pursuing this branch of scientific inquiry."

THE Quarterly Return of Deaths by the Registrar-General, ending September 30 last, states that in the third or summer quarter of this year 114,343 deaths were registered. The annual death-rate was so low as 19·4 per 1000, and 2 per 1000 lower than the average rate in the corresponding quarters of the ten years 1863-72. The death-rate last quarter was lower than in the corresponding period of any year since the remarkably cold and wet summer of 1862, when the deaths were equal to but 18 per 1000 annually of the population. Had the death-rate last quarter been equal to the average rate in the ten last summers, nearly 12,000 more persons would have died than those whose deaths were actually recorded. A very large proportion of this decrease in the number of deaths was due to the continuance of a marked decline in the fatality of the principal zymotic diseases. The 114,343 deaths registered in the whole of England and Wales included 35,252 or 30·8 per cent. of infants under one year of age, and 24,524 or 21·4 per cent. of persons aged sixty years and upwards. During the three months ending September last 277 deaths were reported from small-pox, 1180 from measles, 2593 from scarlet fever, 502 from diphtheria, 1666 from hooping-cough, 3053 from different forms of fever, and 13,925 from diarrhœa; in all 23,196 deaths resulted from these seven principal zymotic diseases, against 33,963, 31,388, and 27,428 in the corresponding quarters of the three years 1870-71-72.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN OCTOBER, 1873.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	—	—	—	—	—	—
West Middlesex	17·11	0·018	0·083	0·001	13·8	3·3
Southwark & Vauxhall	17·97	0·053	0·086	0·002	14·0	3·3
Chelsea	18·00	0·058	0·088	0·001	14·2	3·3
Lambeth	18·10	0·044	0·091	0·002	14·3	3·3
Other Companies.						
Kent	28·69	0·013	0·249	0·000	21·8	5·9
New River	17·61	0·027	0·110	0·001	14·0	3·3
East London	18·67	0·040	0·125	0·001	14·8	4·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was very slightly turbid—namely, in those of the Southwark and Vauxhall, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Association of Medical Officers of Health, 118,874,212 gallons; and the number of houses supplied was 505,295. This is at the rate of 35·4 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 24·9 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

The returns of the Grand Junction Company have not been received.

OPIUM SMOKING.—Daily observation in hospital and dispensary practice during the past eight years, as well as attentive scrutiny of the health of opium smokers in all classes of society, abundantly proves to my mind the deleterious influence of opium smoking on health, and the serious effect it has on longevity. Its effects on the constitution, as I have observed them, appear to be—in the earlier stages, sluggish liver, obstinate constipation, irritable stomach, loss of appetite, and, generally speaking, impaired nutrition; later on, when the quantity of opium smoked is large, there is an enervated condition of the whole system, constant epigastric uneasiness, total loss of appetite, great attenuation, and general debility. The effects of the drug are modified by the circumstances of the individuals. It is amongst the poor labouring class of people that its most pernicious results are found. A working man who smokes opium has frequently to stint himself of the common necessaries of life; the consequence is, rapid deterioration of health and loss of muscular power. He becomes unfit for the usual amount of work, and the little he earns is spent on opium. Very soon he gets into a state of utter destitution. It is somewhat different in the case of those in comfortable circumstances who do not require to undergo manual labour. The deterioration of health in their case is more gradual, although none the less certain. For the first few years, when the consumption is small, they only experience the minor discomforts of disturbance of the digestive organs and loss of tone; but later, when the quantity consumed is large, the victim becomes enervated and emasculated, and suffers from general atrophy. The testimony of intelligent smokers as to the influence of the drug on the sexual appetite, is, that in the earlier stages, when very little is smoked, it excites desire; later on, when the system becomes enfeebled from excessive use of opium, impotence results. Women, too, who become confirmed opium smokers, are, as a rule, barren. I cannot speak with certainty as to the alleged influence of opium smoking in preventing disease, but judging from the large number of opium smokers amongst the patients in hospital and dispensary practice, I am rather inclined to believe that instead of giving immunity from disease, it rather predisposes to it. However that may be, there can be no doubt as to the influence it has in weakening the natural powers of the constitution in resisting disease. This is especially manifest in such diseases as dysentery, fever, hæmorrhage, and shock after surgical operations, in all of which the mortality among opium smokers is very great.—*Report of the Chinese Hospital at Shanghai, by Dr. James Johnson*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

P. O. S.—The session of the Royal Society will open on the 20th inst.

G. N. N. W.—Under consideration.

M.D., Adelaide, S.A.—Thanks for your favourable opinion; your letter has been handed to the publishers, by whom the back numbers will be sent next mail.

A Navy Surgeon.—The total invested funds of the Royal Naval Benevolent Society, according to the last report, was £44,502 8s. 7d.

Vincent F.—Yes; the late Sir Henry Holland compiled one of the series of County Reports then in course of production under the Board of Agriculture. It was published in 1807, and related to his native county—Cheshire. Sir Henry was but eighteen years of age, and he received £200 for it.

Ashantee, Southampton.—Messrs. Bell, of Oxford-street, have introduced a most useful and compact little pouch, not larger than a pair of stockings rolled up, and yet it contains two bandages each six yards long, water-proof lawn, lint, neat little box containing a roll of adhesive plaster, corium (lamb-skin), and envelopes containing indiarubber court plaster and gold-beater's skin. You will find it an admirable travelling companion. Take also one of Atkins' pocket filters, notwithstanding the large number already supplied by order of Government for the troops.

Corrigendum.—In the Paris letter which appeared in the *Medical Times and Gazette* of October 18, page 449, second column, thirty-second line, *for* "pathological dross" *read* "pathological drop."

ECONOMIC SCIENCE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the *Medical Times and Gazette* of October 18 occurs the sentence "Medicine no longer gives riches." If this be true, medical men should economise. Perhaps the result of an experiment I lately made with coals might prove of interest to some members (especially the young married ones) of our profession. Of a respectable neighbouring coal merchant I bought a quantity of the highest-priced and lowest-priced coals, the latter being denominated "nuts," the price of the one being (about a month since) 39s., and the "nuts" 28s. per ton. I measured and burned a given proportion of each coal on two consecutive days, each day being calm with little wind; thermometer standing at 57°, which was suspended from the ceiling, hanging five feet from the grate and four feet from the ground, the mercury turned away from the direct rays of the fire. The following was the result (fire lighted at 9 a.m.):—

Coals at 39s.	Thermom.	Coals at 28s.	Thermom.
10 a.m.	62 degrees.	10 a.m.	60 degrees.
11 „	66 „	11 „	64 „
12 noon	66 „	12 noon	67 „
1 p.m.	68 „	1 p.m.	71 „
2 „	68 „	2 „	74 „
3 „	68 „	3 „	68 „
4 „	65 „	4 „	67 „
5 „	62 „	5 „	67 „

"Nuts" are supposed to be the *small* coal of the better sort, and should contain no dust. The goodness of household coal depends on—1st, its heat-giving power; 2nd, durability; 3rd, cleanliness in burning. The "nuts" fulfilled the two first conditions, for when burning the thermometer went up 6° higher than when the other sort was burning, and the fire lasted an hour longer. On the other hand, the "nuts" gave a reddish-brown dust not found in the dearer coals. The dust was, however, heavy, and did not fly about the room. This extra dirt is the drawback, but when the hearth is, as it should be, swept three or four times a day, the affair is of small importance, compared with the advantage of getting coals 11s. per ton cheaper. The cheap coals I bought might have been exceptionally good—I do not know. All coals ought to be inspected before purchasing. They should be bought in summer after dry weather, when they are light. They should present a glistening appearance and be of convenient size (remembering the labour required to break large lumps), and should have

no dirt or slack. The slack of many coals burns well, as that of Whitehaven, but the buyer, if no judge, is better without it. If anyone choose to try "nuts," he must ascertain that they are the small pieces of a *superior* coal, and not dust and rubbish; and they must not be so small as to run through the bars of the grate. The present price of the coals I bought are respectively 42s. and 32s. per ton. I am, &c., A Bayswater M.D.

Mr. Balmanno Squire's Photographs of Skin Diseases.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have long been so thoroughly imbued with the sentiments expressed in your advice to me in your notice of the "Photographic Clinique of the British Hospital for Diseases of the Skin" that I am desirous of explaining my apparent disregard of them in my choice of the cases represented in that publication. In my earlier student-days I was in the habit of deprecating the ardour of my fellow-tyros in giving, as they generally gave, special or even almost exclusive attention to "either very unusual or very intractable forms of disease." I was, and still am, in that respect, a follower of Bacon, and think that what is of the greatest practical use to the greatest number is the *summum bonum*. The "Photographic Clinique," I admit, does not wholly aim, in its limited sphere, at such a mark; but an attempt of the kind you advise had already been made in my "Coloured Photographs of Skin Diseases" some years since; and the sale of that work has sufficiently proved the justice of your remarks. The "Photographic Clinique," unlike its predecessor, is published for private circulation only, and those who were invited to subscribe were at the same time duly advised that any cases represented in that publication would be solely such as were "either very unusual or very intractable forms of disease." Your judgment is justified by the result, since the circulation of the "Photographic Clinique" has not equalled that of the "Coloured Photographs"; and this notwithstanding that they are, so far as I am able to judge, far superior to the illustrations presented in the "Coloured Photographs." Your flattering commendation of them is, however, ample amends for that; but I was already aware, from the circumstance I have referred to, that one must not stray too far from everyday life if the object in view be general utility. I am, &c., Balmanno Squire.

9, Weymouth-street, Portland-place, W., October 29.

A Doctor's Log.—No. VII.

(*Concluded from page* 456.)

February 17.—Preparing for the end of the voyage. Note that the strength has been 999 men, 60 officers, 141 women, 167 children; one birth, one death, one epileptic left at Malta. The hospital will be closed to-morrow. No sick, we trust, will be left in Bombay. Thirty-four men, twenty-two women, and sixteen children have either been in hospital or received extras, in addition to a number of men, women, and children attending. Sea-sickness, a heavy gale, rapid changes of climate, the heat of the Red Sea, must be taken into consideration. The baggage brought out of the hold, tons and tons of strong-boxes, barrels, and packing-cases, which have been piled one over another, have stood the rough usage, the rolling of the vessel; and now the old proverb of the weak going to the wall in the shape of smashes, splitting across, chipping off corners, or the crushing of contents. Many casualties, specially affecting bath-tubs and thin, uncorded, unplated boxes. Early in the morning we pass lightships and lighthouses, and, entering the magnificent harbour of Bombay, notice a peculiar medicinal smell in the air and very dirty water. On the left is a pretty spit of land, with trees, houses, barracks and church-steeple, indicating Colaba. On the right apparently are a number of islands, and in the distant foreground, beyond the men-of-war, steamers, ironclads, trading-vessels, and fishing-boats innumerable, are more mountains. One woman promptly has a bad fall; another is suddenly taken ill and must be left behind. The baggage is taken off on lighters to the railway-station pier—about two miles,—whilst the passengers, now accustomed to boatmen without any clothes, go to another pier to see the city. Large open spaces, splendid detached buildings, palatial hotels, good shops in dirty back streets corresponding to a London mews, a burnt-up common with a band-stand, a poor cathedral with good monuments, a fair race-course, all hurriedly noticed. Everything terribly dear—two shillings here, two shillings there, a bag of rupees soon gone. Try a buggy in the evening, to be reminded of the "Arabian Nights" or *L'Africaine* at Covent-garden. Myriads of people in turbans and dresses of every colour—the most lively shades of violet, purple, crimson, green, and gold—drive superciliously along. Excepting on foot no women seen, but two or three Parsees with bloated cheeks and tremendous corporations loll back in one carriage, a pompous looking black man in a brougham, dandies with lively turbans in mail phætons, occasionally barouches, the coachmen and footmen looking civil, whilst the noble men inside are scowling; any number of broken-down buggies, also postmen in red, policemen in yellow, soldiers—and all fit into the kaleidoscope noticed on the mall and about the park, varied with fat cricketers in crimson—white teeth and dark faces everywhere. From the guide-book, the local Bradshaw, learn that in addition to medical college and hospitals there is a kind of Brown institute for diseased and decrepid animals; that hotel living averages fourteen shillings a day; one-horse buggy ten shillings a day; house-rent at Malabar-hill, the fashionable quarter, ranges from £20 a month to £100, and considerably more. A bachelor can live at a club for £35 a month. Excepting the head-dress, Europeans dress as in London; the ladies as if at a genteel English watering-place—some in splendid carriages; and in a brougham, in a black suit, a black hat, the usual basket containing stethoscope, *Medical Times and Gazette*, and papers in front, spot the professional face—careworn, anxious, up all night, with a fine practice, but a large family and an expensive establishment. Notice gas-lamps, water-pipes, good roads, omnibuses, pillar post-offices, and princely houses occupied by merchants. The crowds in the native town laughing, wrangling, bargaining—the women with bracelets and anklets, cowed and subdued, trudging about, some with heavy weights on their heads, others attending to the stolid, stupid-looking bullocks, etc.

In the evening go off from the railway-station previously alluded to—a forlorn place where the men had food, and officers a dinner at the rate of a first-class London hotel: soup, muttony-chop, beef-steak suggestive of indiarubber—uncomfortable carriages, the men closely packed, the jolting terrible—miserable work. In the moonlight notice dry plains, lofty mountains, rivers, swamps, graceful palm-trees. Tired, restless, suffering agonies from facial neuralgia; still the beauty of these palm-trees, generally solitary, spreading out like ostrich-feathers, of the hills dotted with rich jungle, the deep valleys and ravines, relieved by waterfalls,—all attract attention. It was too dark to observe the engineering triumph in the Tal Ghat, an elevation of 1912 feet, which the railway, by a zig-zag system of reversion down one hill, up another, next the locomotive shrieking through tunnels in the hard rock, somehow traverses. Then at the railway-station, breakfast, a wash or even a bath can be procured. At a short distance further on we reach Deolalee, our first halt, about 112 miles from Bombay, consisting of a small native village; a large encampment made up of huts and tents sufficient to accommodate 2000 invalids (they say); also officers' quarters, and a mess. A battery of horse artillery is allowed two blocks of building, their wives and children another, with a certain amount of furniture, blankets, and carpet-rugs. The rations, tea, bread, meat (generally boiled), provided; a sergeant receives 1s., and a gunner 6d. a day; the rest of the pay judiciously stopped just now, liquor unfortunately being procurable. In the cases of married men with children more will be allowed according to requirements, and if the husband be unsteady, his pay will be given to the wife. Every man, woman, and child will be visited daily, and every portion of the barracks. The native sweepers are responsible for the cleanliness of the lavatories and latrines, the individual occupants for their rooms. The natives do the cooking for fourpence a head; also bring water from some distance, all filtered before drinking; and the entire absence of drainage involves constant supervision. There are hospitals both for men, women, and children much the same as in England. The country about consists of beautiful blue hills, the summits either peaked or fantastically shaped, the more distant wreathed with clouds; and close to the camp on one hill is a ruined temple. The time expired; men and invalids frequently noticed to be slack, occasionally unsteady. Allotted a stone hut (one of a terrace) of fair proportions excepting the height—simply tremendous,—stone floor, one table, one chair, one cane-bottomed couch; a kind of back kitchen attached, called a bath-room, contains a tub, washing-stand, commode, and a frame holding three filtering vessels each above the other, containing water which trickles eventually on to the floor. Medical officers are advised never to travel without bedding, and if here a few days, to unpack luggage, which may all be kept in the room. My boots are mildewed, some splendid saddles, although packed in tin, are all but destroyed through damp, or else the dew whilst out in the open last night. One man, through a careless servant, has lost baggage; another finds a carefully packed mirror smashed; whilst a third broods over the ruins of his chest of drawers; and an old stager suggests that all packages should be raised on stones, for the white ants here are lively. The weather is that of Dover in hot summer; our food the old muttony-chop and beef-steak, cutlets *à la* country captain, lean and tough; the beer, claret, and ice very good, but terribly expensive; tea very good, bread also, and the curry fit for the gods. Breakfast at nine, good eggs; lunch (I prefer the English words) at one; dinner at 7.30; no wine drank after, but somehow brandy and soda fit in later; gin and tonic also popular. Nights very cold on the cane-bottomed couch, and the total darkness very bewildering; you feel your way from the mess, and tumble into a ditch unless provided with a lantern.

February 21.—Gradually settling down. Engage on the chance one native servant—worth ten Europeans as regards obedience, activity, intelligence, and method. It is something marvellous to note how rapidly wants are anticipated—nothing forgotten; and although he speaks but little English, and I no Hindustani, it is all a matter of pantomime. Then he drives away the barbers, beggars, tailors, snake-charmers, conjurers, dealers in shawls, sandal-wood, and precious stones, who implore the "great prince," "the illustrious chieftain"—meaning me—to patronise them. My European servant has also his satellite, who "great princes" him too; and to-day, as a procession carried in the baggage, a young lady, whose scanty attire would shock the Lord Chamberlain, carrying on her head a large box full of medical books, heavy in every sense; an aged patriarch, with a white beard; one or two boys, also with chests of drawers on their heads—the European servant marched behind, gently persuading them, with a big stick significantly flourished. On the head, about the shins, or the stern, you can hit with impunity; but about the chest and abdomen frequently fatal, through rupture of the spleen. Time, doubtless, will answer the question—why hit them at all? Men all healthy; women and children of the Battery suffering from diarrhœa somewhat seriously. One woman, who had been under treatment during the voyage, confined last night unexpectedly, and to my surprise attended by native apothecary—a very intelligent man, with all the importance of a lord mayor. The woman remains here a month to get strong, then with her husband proceeds direct to final destination. Find that India is a fearful place for documents, returns, statistics—apparently as long as these are correct and voluminous other matters are secondary. Time will explain this, and the reason why the rules, regulations, and circulars of one presidency differ from another. Read in the chronicles of Bombay that Gabriel Boughton, in 1636, surgeon, cured an Emperor's daughter; next a favourite "mistress" of a native Prince; and in consideration of such skill, was allowed permission to trade throughout India, besides securing important privileges for the English nation in the country. There is always a doctor in every story. Note the mortality of Bombay is represented as twenty-eight per thousand—Dr. Semple kindly lending "Report of Sanitary Commissioners for Bombay." Note the percentage of total abstainers—in the artillery 3, cavalry 1·3, infantry 1·9. The artillery show a high ratio of sick in 1869 of ague, fever, and diarrhœa at Deolalee—something associated with bedding and serge clothing issue. Deolalee may be described as a rest-camp for a few troops going up country, and for the numerous invalids and time-expired men about to proceed to England, and at the present considered healthy. In 1869, the analysis of water showed only one objectionable point—viz., a relatively large amount of ammonia, nitrates and nitrites; otherwise considered excellent—after careful filtration, I presume. Since the report, many improvements have been carried out.

February 23.—Diarrhœa amongst the men—their own fault; treated by compound colocynth and ipecacuanha, rest, abstinence from food (cold tea excepted). Tender feet and tight boots, the leather shrunk. Men go out shooting doves, partridges, and plovers. Curious to notice the kites, vultures, and other scavenger birds so tame. Find that excreta, removed by natives, is buried about two miles off. The soil is very porous, the water-tanks large and deep, the wind like a blast-furnace. Thermometer 92° Fahr. Men's rations good; see that each soldier has his belt and flannel shirt; explain that resting-camps are the resort of thieves; see that the filters are clean, and their use understood; encourage the drinking of tea, which is very good, the coffee not so. Examine the men daily, and in common-sense language explain to them their prospect of good health if careful and temperate in all things. We cannot fight against the blazing sun like the thick-skulled native, who goes about with his head shaved, with cholera, sunstroke, malaria, and dysentry ever lurking about him. "Sauve qui peut" is our motto. We have conquered India, but as to climate, health, the preservation of children, more anon, my intention being to record all things which appear curious and of interest to the

Griffin.

Typhoid and Constipation.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The paper by Dr. Nelson on "Constipation simulating Diarrhœa," published in the numbers of the *Medical Times and Gazette* for August 23 and 30, leads up to an opinion I have long entertained of the *origin* of typhoid fever. He says—"Seeing that from the undue retention of such offensive and effete matters [fæces in the intestines] there must be reabsorption and the determination of disagreeable molecules and odours to the skin, lungs, and elsewhere," etc.,—by which the blood becomes poisoned, and typhoid fever originated. That undue retention of fæces in the intestines is an invariable accompaniment of typhoid fever I am certain; had I kept notes of cases I could clearly have proved that fact, and I think have established the opinion I have ventured to express.

Sussex, November. I am, &c., W. E. P.

COMMUNICATIONS have been received from—

Mr. G. F. Yeo, Dublin; Dr. O'Donovan, St. Lucia; Dr. W. Alfred Johnson, London; The Secretary of the Apothecaries' Hall; Mr. Page; Mr. A. Borgen, London; Dr. West, London; Dr. Hawkins, Dorchester; Dr. Althaus, London; Dr. Quinlan, Dublin; The Secretary of the Anthropological Society; Mr. H. A. Davis, Durham; Mr. T. M. Stone, London; Dr. Quain, London; Mr. Teevan, London; Mr. J. Chatto, London; Dr. Semple, London; Dr. Bruce, London; Mr. N. Alcock, Aldershot; Dr. Calman; Mr. A. Orwin, Barnsley; Dr. Letheby, London; Mr. H. W. Green, London; W. E. P.; Mr. B. Vincent, London; Kaltenbach and Schmitz, London; Mrs. E. S. Gibbs, London; Dr. Wilkie Burman, Devizes; Mr. Poole, London.

BOOKS RECEIVED—

Morgan on Sewage, Sewage Produce, and Health—Walker's Egypt as a Health Resort, with Medical and other Hints for Travellers in Syria—De Valcourt's Sketch of Cannes and its Climate—Calvert on Carbolic or Phenic Acid and its Properties—Clarke's Surgery—Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1872—Althaus' Electricity, third edition—Man and Apes, by St. George Mivart.

PERIODICALS AND NEWSPAPERS RECEIVED—

Nature—American Journal of Medical Sciences, October—Manchester Examiner and Times—Inverness Courier—Bulletin Général de Thérapeutique—Pharmaceutical Journal—Science Gossip—The Obstetrical Journal of Great Britain and Ireland, November—Lancet—British Medical Journal—Le Mouvement Médical—Gazette Médicale—La Tribune Médical—La France Médicale—Liverpool Daily Courier—Le Progrès Médical—Gazette Hebdomadaire—Carlisle Express and Examiner—Revista de Portugal e Brazil—Edinburgh Medical Journal—The Southampton Times, and Winchester, Portsmouth, Isle of Wight, and Hampshire Express—Melbourne Age, August 23 and September 5—Sydney Morning Herald—The Nelson (New Zealand) Daily Examiner—The Allahabad Pioneer—American Journal of Insanity, October—Indian Medical Gazette—Edinburgh Daily Review—The Scotsman—Birmingham Gazette—Monthly Microscopical Journal—Practitioner.

APPOINTMENTS FOR THE WEEK.

November 8. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

10. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Mr. Thomas Bryant, "A Case of Intestinal Obstruction and Gastrotomy." Mr. A. E. Durham, "A Case of Foreign Body in the Pleura accidentally introduced through Opening made for Empyema, and successfully treated." Dr. Purcell, "A Specimen of Calculus in Pelvis of Kidney." Dr. Symes Thompson, "A Case of Scrofulous Kidney."

11. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Jonathan Hutchinson, "On Abdominal Section and other Treatment for Intussusception." Dr. Gee, "Case of Renal Calculi."

12. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8 p.m. Introductory Address, by the President (Dr. W. R. E. Smart, C.B.).

13. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. Dr. Peacock, "On the Advantages of Sea Voyages in the Treatment of Disease."

14. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Clinical Society, 8½ p.m. Dr. George Johnson, "Two Cases of Poisoning by Homœopathic Solution of Camphor." Dr. Anstie, "A Remarkable Case of Death from Meningeal Congestion without any Inflammation."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 1.

BIRTHS.

Births of Boys, 1263; Girls, 1207; Total, 2470.
Average of 10 corresponding years 1863-72, 2154·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	867	786	1653
Average of the ten years 1863-72	721·5	687·4	1408·9
Average corrected to increased population	...	...	1550
Deaths of people aged 80 and upwards	...	...	66

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	1	...	2	...	1	...	5
North	751729	...	24	1	6	13	2	15	...	3
Central ...	334369	...	9	...	1	3	2	2	1	2
East	639111	2	34	8	1	9	1	6	2	8
South	967692	...	30	2	2	14	3	6	1	3
Total	3254260	2	103	12	10	41	8	30	4	21

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·786 in.
Mean temperature	38·9°
Highest point of thermometer	54·6°
Lowest point of thermometer	26·7°
Mean dew-point temperature	35·4°
General direction of wind	Variable.
Whole amount of rain in the week	0·32 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 1, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Nov. 1.	Deaths Registered during the week ending Nov. 1.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2470	1653	54·6	26·7	38·9	3·83	0·32	0·81
Portsmouth ...	118280	12·4	85	38	53·4	30·4	42·6	5·89	0·81	2·06
Norwich	81677	10·9	48	36	51·0	27·5	39·4	4·11	0·22	0·56
Bristol	189648	40·4	146	78	51·7	28·8	39·6	4·22	0·44	1·12
Wolverhampton ...	70084	20·7	43	35	51·6	26·1	40·0	4·44	0·30	0·76
Birmingham ...	355540	45·4	287	179	53·0	26·3	40·3	4·61	0·18	0·46
Leicester	102694	32·0	80	41	53·0	23·0	38·0	3·33	0·16	0·41
Nottingham ...	89557	44·9	73	41	...	...	...	...	...	...
Liverpool	505274	98·9	352	226	54·5	35·0	42·7	5·95	0·79	2·01
Manchester ...	354057	78·9	242	208	.	...	...	...	...	...
Salford	130468	25·2	123	58	52·8	27·2	40·6	4·77	0·71	1·80
Oldham	85141	20·4	66	49	49·5	...	...	...	0·79	2·01
Bradford	156609	23·8	111	99	53·0	32·2	41·3	5·17	0·38	0·97
Leeds	272619	12·6	158	182	54·0	30·0	40·8	4·88	0·26	0·66
Sheffield	254352	11·1	237	124	55·0	28·8	42·3	5·73	0·43	1·09
Hull	128125	35·9	109	54	50·0	27·9	39·8	4·33	0·34	0·86
Sunderland ...	102450	31·0	79	49	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	86	80	...	...	...	...	...	...
Edinburgh	208553	47·1	132	80	...	...	...	...	...	...
Glasgow	498462	93·5	401	265	48·6	26·8	41·9	5·50	1·04	2·64
Dublin	314666	31·3	163	131	56·2	24·5	43·5	6·39	0·38	0·97
Total of 21 Towns in United Kingd'm	7507575	34·5	5491	3706	56·2	23·0	40·8	4·88	0·47	1·19

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·79 in. The highest was 30·34 in. on Tuesday morning, and the lowest 28·95 in. on Saturday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS OF TUMOURS OF THE BRAIN.

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Lecture III(a).

Gentlemen,—Omitting for the present any further reference to the important fact that destruction of much of the cerebrum or cerebellum may exist without any striking mental or physical symptoms, I now speak of the symptoms of tumour and other adventitious intracranial products in detail.

Class (1).—*The Symptoms which show that there is an Adventitious Product in the Head, but which do* not *show its particular Nature nor its Position.* These symptoms are often the sole ones at first. We take them separately—

a. Double Optic Neuritis.—I must say very little of this, since I have already spoken at length on it (*Medical Times and Gazette*, 1871, August 26, September 16, etc.), but I will again urge three things—(1) That double optic neuritis may exist when vision is apparently perfect; (2) that optic neuritis, without affection of sight, is as good evidence towards the diagnosis of organic disease as is optic neuritis in which vision is lost; (3) another matter scarcely less important is as to recovery from neuritis. I am certain that the most striking appearances of double optic neuritis may pass away (after large doses of iodide of potassium in my cases), leaving sight good; or, to speak with great caution, they will pass away so far as to render it impossible for a careful observer, seeing the patient for the first time when recovered, to be able to declare that the peculiarities discoverable about the optic nerve are pathological.

b. Headache.—We can only attach importance to headache for the diagnosis of an adventitious product within the cranium when it is severe. We can attach little importance to simple transitory headaches, as many people suffer from these occasionally who keep well in other respects. First of all, you must make sure that what the patient calls headache is real pain. A patient often calls a feeling of "confusion," of "swimming," etc., *headache*. I do not allude to these feelings, nor to what we so often hear described as "a weight at the top(b) of the head," feeling of "pressure," etc. These are common in women about the change of life, and in what is called (or mis-called) nervous debility, and in many other cases. You should always ask the patient what kind of headache it is, and his reply will give you a notion of the real character of his head-misery. You will find that it is often not a pain—not an ache: I speak of *severe aching*. I do not mean to imply that the headache in cases of intracranial tumour is always severe. It may be, and usually is, little marked at the very beginning of the illness. This is well exemplified in the case of a boy eight years of age who came under my care April 8, and who died May 26, 1867, of hydatid cyst in the left cerebral hemisphere (in effect a tumour, "foreign body"). I give an extract from the report of his case (*London Hospital Reports*, vol. iv., p. 391):—"He had been ill about eight or nine months, complaining of pains in his head now and then. His mother said—'*I used to think it was a sick headache, because it came on now and then.*' He would complain when he came in from play, and would lie on the sofa, and then it went off." Then he had no pain for several weeks; but after that it was so bad that he was "almost raving mad," and it "used to bring on a sickness." About 3 or 4 a.m. he would begin to complain of pain in his head, and "there was no more peace until about 10 a.m.," and then he retched and brought up stuff "like yolk of egg." If, however, the pain be not severe, we cannot attach much importance to it for the diagnosis of an adventitious product. Had we been consulted for the earliest of the boy's attacks, we perhaps should have thought as his mother did—that they were sick-headaches (*migraine*). Of course I can give you no exact measure of the intensity of the pain, but you may judge by the patient's expressions and by his manner. He may say, "It is not a *common* headache." He uses very strong, and sometimes strange, expressions, such as—"I thought I should go mad with pain." One patient whom I saw for cerebral symptoms, dependent on softening of the right lobe of the cerebellum with a lump of tubercle the size of a hazel-nut, said, "It seemed as if his brain were crushed"; and again, "as if his head were squeezed betwixt two boards."(c) The patient's friends may tell us that he sits down, lays his head on his hands, and remains moaning for hours, or that he stamps about the room, or that he "raves with pain," and sometimes —I take it this is hyperbolical—that he knocks his head against the wall.(d) As to its *continuance*, if it be recent it might indicate meningitis. We dare not attach importance to severe pain in the diagnosis of an adventitious product, unless it be of several weeks' duration, or unless there be well-marked double optic neuritis.

The pain in intracranial tumour may be in any part of the head. It is very often at the back of the head, shooting forwards to the temples or eyes. We must not infer from this that the tumour is in the cerebellum or under the tentorium. In the case of tubercle of the cerebellum just mentioned, there was no pain at the back of the head. Niemeyer (vol. ii., p. 238) says:—"We must be very careful about localising the tumour from the seat of the pain." And observe how cautiously he speaks when he adds (I italicise some words)—"Only pain confined to the back of the head permits us to conclude that very *probably* the tentorium is stretched, and that the tumour is *probably* situated in the posterior fossa." The pain in intracranial tumour is rarely at the vertex. It is generally diffused. It does not follow the tracks of nerve trunks, and is usually bilateral. It does not extend into the face. There is, of course, the obvious exception to the last statement that intracranial tumours squeezing the trunk of the fifth nerve may cause pain in the face. Again, when the adventitious product is an abscess from disease of the ear, there may be pain in all or most branches of the fifth nerve on the side of the ear disease; but this is from the ear disease, and not from the abscess. It is only when the pain is *persistently* of one side of the head, not extending to the face, that we can attach importance to it in localisation. In these cases the membranes (dura mater especially) are usually involved. As, however, in most such cases there is syphilis, the local pain may be due to changes in the periosteum. G——'s pain was in the left temple and left side of the forehead.(e)

Percussing the head is considered by some to be a useful means of ascertaining the position of a tumour, it being supposed that, when the pain is brought on or made worse when a part of the head is percussed, the tumour is of the brain in the region underneath that part of the head. I have not yet used this method of investigation in many cases.

It is to be observed that in the severest cases the pain occasionally passes off altogether. Thus the patient may be sleepless at nights from pain, and yet be well enough to go to his duties in the morning, and perform them somehow. You go to a patient one day and find him curled up in bed, suffering intense pain, and hear that he has been vomiting urgently. Next time you go to see him you may find him sitting by the fire, reading the newspaper, and apparently quite well. This is a matter of very great practical importance. Do not be deceived by these pseudo-recoveries. Occasionally a patient with cerebral tumour who is "doing well" dies suddenly. I have had several cases sadly illustrating this mode of death from adventitious products within the cranium. In my last lecture I spoke to you of rapid death by hæmorrhage from cerebral tumour, but patients will die in a few minutes or half an hour from (or at any rate with) intracranial tumour, there being no acute or recent change *discoverable* post-mortem.

(a) Lecture I. appeared August 9; Lecture II., August 23.

(b) "The brain is liable to suffer from the poisoned blood on which it must feed, in chronic kidney disease; and we find headache, frontal, occipital, or vertical, very common. Vertical headache is a symptom of very great importance in this condition, and is regarded as almost pathognomonic; indeed, frequent and recurring vertical headache is a diagnostic symptom of the greatest moment."—Fothergill "On the Heart," page 295, chapter "On Heart and Kidney."

(c) The case was under the care of Dr. Shann and Dr. Daniel H. Tuke, of York. I recorded it in the *Medical Times and Gazette*, August 30, 1862, page 222.

(d) I once saw a speechless child (not a deaf mute), whose mother told me that he had a habit of knocking his head against the floor. There was no hyperbole here, for when put down I saw the child strike its head and also its face against the floor strongly; the horrible squashy sound made by the contact of the nose and the ground showing that the force was considerable.

(e) As will be seen in the report of her case, *Medical Times and Gazette*, November 16, 1872, there was only complaint on one occasion of pain at the back of the head, although the tumour was of the cerebellum.

The case of G—— illustrates these remarks (*see* November 16, 1862).

I do not remember, however, any case in which there were such striking and repeated intermissions of symptoms as in G——'s case. Sometimes when we saw her she seemed so absolutely well that to those who had not gone into the case the diagnosis of intracranial tumour must have seemed preposterous. Those who do not keep in mind that there may be no obvious symptoms whatever from an adventitious product in the encephalon would necessarily think so.

The patient's headache is often brought on by disturbance, especially by moving about. This is important, because the effects of your remedies for the relief of pain will vary according as the patient is kept still or not. I had under my care a man(f) who used to go to bed simply to apply the ice-bag. I think it very likely that the rest necessary to adjust the ice-bag was really the cause of the relief.(g)

In some cases, but in very few indeed, of intracranial tumour there is no severe headache. Thus, in a case I recorded (*Medical Times and Gazette*, June 17, 1865), there was neither headache nor vomiting, though I found post-mortem a tumour the size of a large walnut, which, growing from one lobe of the cerebellum, had flattened the same side of the pons, the crus cerebelli, etc. In another case (see the *Medical Times and Gazette*, Case 8, July 12, 1873), of tubercle the weight of about eleven ounces in the left cerebral hemisphere, there had been little pain; there was double optic neuritis, etc. In a case I saw with Dr. Soutter of glioma of the superior (uppermost) frontal convolution, there had been no pain throughout.(h) Further, it must not be forgotten that a patient may have severe pain for weeks, and then get rid of it. Pain is, of course, not a symptom of tumour, but of changes excited by tumour in the brain—probably in the brain near it.

c. Vomiting.—This is not always present. The more rapid the progress, and the younger the patient, the more likely is there to be vomiting—attacks of vomiting. Its striking character is that it is "purposeless." It will come on not only after taking food, but when the stomach contains no food. There is usually not a sudden emptying, but a continuous retching; the patient says he strains much, and often the result is that only mucus or thin greenish fluid is brought up. The patient may tell us that he only gets up a little "phlegm," or that he vomits bile. It usually comes on at the time when the headache is unusually severe. The presence of bile in the vomit, I suppose, leads to the diagnosis of biliousness, or of "bilious or gastric" fever in the early part of the course of some cases of cerebral tumour. It is not at all uncommon for children blind from optic neuritis to be said to have become so "from bilious fever." I suppose that if any one vomits long, and strains much, he will bring up bile, whatever may be the cause of his vomiting. The tongue, however, is usually clean, and the appetite may be quite good in the intervals of the attack, as G——'s was. Besides, the patient in the early stage may look quite well, and may never have had any dyspepsia before the cerebral illness.

I have heard in cases of cerebral affection the diagnosis of some disease affecting the medulla oblongata or pneumogastric nerve when the patient vomited much. I have seen one case of tumour of the brain in which vomiting was excessive. There was found a small tumour on one side of the pons near its junction with the medulla oblongata; and this may have "irritated" the pneumogastric (see report of case in *Royal London Ophthalmic Hospital Reports*, vol. iv., pt. 4, p. 420). There was also a tumour at the sella turcica, and also of the left cerebral hemisphere. In another case of syphilitic disease, involving among other cranial nerves the pneumogastric, vomiting was a marked symptom (*London Hospital Reports*, vol. iv., p. 318). But in another case in which this nerve was similarly diseased (*London Hospital Reports*, vol. iv., p. 314) this had not been a marked symptom. On the whole, I can attach no importance to vomiting as a *localising* symptom: it may occur with tumour in any part of the brain. Let me enforce one thing: do not from the mere fact that there is headache and vomiting of bile make the diagnosis of disease of the liver. The diagnosis of disease of the liver coming on in a young and healthy-looking man is at any rate as difficult as the diagnosis of disease of the brain—provided, of course, there is no ascites and no jaundice and no organic lesion of the liver discoverable by palpation. The diagnosis of disease of the liver is often confidently made when all these signs are absent. If you use the ophthalmoscope in these cases of severe headache and vomiting, you will often see a pathological condition of the end of one cerebral nerve, and unless you hold that disease of the liver leads to optic neuritis, you can be sure that the patient's illness is not owing to disease of that much-blamed viscus. It is now agreed on I suppose universally, that the so-called "sick-headache" (migraine) is really a nervous affection (Anstie, Latham, Liveing). There is, indeed, in many cases of cerebral tumour, what may be called an artificial migraine.

d. Alterations of Pulse, Respiration, and Temperature ("*Cerebral Fever.*")—So far we have spoken of the chief symptoms of Class 1 separately, but there are other symptoms of the same order—other non-localising symptoms—viz., alterations of pulse,(i) respiration, and temperature. The symptoms, instead of being spread out over many weeks or even months, are, so to speak, run up into a few days or weeks. To give a severe case in illustration. The patient, after days or weeks of headache, which may not keep him from work, takes to his bed from increase of pain and from urgent vomiting. He *rapidly emaciates*, becomes profoundly apathetic, taking no notice of anything said to him, and perhaps often cries out, "Oh, my head!" His pulse may become slow—*e.g.*, 60—and may be irregular; his belly retracts, and his epigastrium sinks in during inspiration; his temperature is lowered. This is a marked case. We have all degrees of spreading out and running up of the symptoms.

Do not suppose that the patient, who is partly insensible, who has convulsive seizures, irregular pulse, and, to put it briefly, symptoms very like those of tubercular meningitis, will necessarily die. He occasionally recovers, but usually with loss or great defect of sight or with a liability to convulsive seizures. I mean that he gets into very good general health, and occasionally becomes too fat, probably because (his appetite remaining good) he leads a life of enforced idleness from the affection of sight.

Observe, emaciation is not a sign of cerebral *tumour* only, nor of any *one* kind of adventitious product. It attends the acute illness to which any adventitious product may give rise.

Such a severe condition is often called meningitis; and it is not easy to say it is not, especially if the patient be an adult. Tubercular meningitis in the adult is one of the most difficult of all cerebral diseases. There is from tubercular meningitis or from the "irritation" of tumour (or adventitious product of any kind) what Trousseau called "cerebral fever." (From sudden hæmorrhages of the brain we may have a very rapid development of the symptoms enumerated above.) In all these cases there is, I think, an essentially similar condition. Hence difficulties in diagnosis. I do not mind admitting that I find the diagnosis of the particular cause of this "cerebral fever" most difficult in some cases. I shall shortly relate one case in which I was in doubt whether a boy, twelve years of age, was suffering from tubercular meningitis or from tumour of the pons Varolii. After a few days' hesitation betwixt the two I decided for meningitis, but at the autopsy tumour of the pons was found. I saw another case in which a girl, twelve years of age, had symptoms which I supposed with others to be due to tubercular meningitis. She got quite rid of all cerebral symptoms, except paralysis of the left sixth nerve; but this recovery, whilst it might practically negative meningitis, did not negative the continued existence of grave cerebral

(f) Case mentioned at end of remarks, November 23, 1872, p. 569; he died somewhat suddenly in January; syphilitic tumour of middle lobe of cerebellum.

(g) I have now a patient who has from intracranial disease, probably tumour, severe headache, and double optic neuritis, who had severe pain after one examination. I wished to try the continuous current for the relief of this "artificial migraine," but by rest (half an hour) it passed off before I could apply the current. My clinical clerk, Mr. Sincox, has applied it several times since, and has thereby, he believes, cut short attacks of severe pain.

(h) This case is, perhaps, the most important case of cerebral tumour I have ever seen. It illustrates the recent brilliant experiments of Professor Ferrier, and having been mentioned by me (*British Medical Journal*, May 10), is referred to by him, in his paper in vol. iii. of Crichton Browne's "West Riding Asylum Reports," as bearing on localisation of movements in the convolution referred to in the text. I mention the case here because I wish to say that I did not make a correct diagnosis of the exact position of the tumour in the strict sense of the word diagnosis. I inferred the position of the growth in this case simply because I had seen a previous case like it. From Ferrier's researches we shall learn to diagnose the seat of disease in various convulsive seizures from rational evidence.

(i) The fact that alterations of pulse, respiration, and temperature occur in cases of disease of the "organ of mind," is one of very great importance. In cases of *discharge* of the very highest sensori-motor processes we have that most "mental" symptom, loss of consciousness, along with that most "physical" one, pallor of the face (cases of *petit mal*). For a physiological study of mind (notably for that of emotional manifestations) the "vital" symptoms resulting from disease of the cerebrum must be very carefully borne in mind.

lesion. The sequel showed that it did not. She had subsequently an entirely different set of symptoms from necrosis of the right fibula, and died by hæmorrhage. At the autopsy three cerebral abscesses were found, presumably pyæmic.

If the patient's symptoms—headache, vomiting, and neuritis—began when he was in good flesh, it might be said that his illness was most likely not tubercular meningitis, but tumour. However, this I think is not really of much value, as in some cases of tubercular meningitis the patient is well nourished. At the post-mortem in one case recently examined the patient was a fat young woman. The absence of previous pulmonary symptoms, or of previous ill-health of any kind, does not negative the diagnosis of tubercular meningitis. If the patient have had any epileptiform seizure some *weeks* before the meningitis-like condition came on, it is probably tumour. Then as to traumatic meningitis, we have usually the history of a recent blow. If the blow occurs months before, it is probably an adventitious product (abscess or new growth, syphilitic especially). The occurrence of specially nervous symptoms does not help you very much, as they may come on in tubercular or traumatic meningitis. In tubercular meningitis there is occasionally very distinct hemiplegia, and this, strange as it may seem, can occur early in the case, when the patient is not unconscious. I remember well a case in which a patient *was admitted for hemiplegia*. He was so well in general health that I took a clear history from him. He died of tubercular meningitis, and had "scrofulous disease" of both supra-renal capsules. I suppose the hemiplegia in such cases depends on thrombosis of the Sylvian artery, the Sylvian fissure being the one most "clogged up" by lymph, etc. Nevertheless, in spite of this one case, if a patient had had any specially nervous symptoms (palsy of any cranial nerve, hemiplegia, or convulsion) *before* the meningitis-like condition set in, I should exclude meningitis; and I should exclude it if double optic neuritis, or any very marked alteration of the discs, was found very early—in the first week, let us say. I should exclude it in favour of some local "coarse" disease.

But when recovery follows, what are we to say of these cases—I mean recovery to good general health? I still think them to be cases of cerebral tumour. For, as I have insisted, the absence of paralysis or mental defect—and, indeed, the absence of all symptoms—does not negative the existence of an adventitious product. We rarely have the chance of deciding this point. We have occasionally. In the *Royal London Ophthalmic Hospital Reports*, vol. iv., pts. 4 and 5, I recorded a case of a boy, eight years of age, who seemed to have entirely recovered from severe symptoms believed to be the result of cerebral tumour. He had double optic neuritis, and yet, when recovered, his friends supposed his sight to be good; but I found he could only read with the left eye. He was afterwards taken to an ophthalmic hospital for his defect of sight. A relapse occurred, and at the autopsy, by Dr. Swyer and myself, we found tumour of the middle fossa of the skull and of the middle cerebral lobe. The disease had caused perforation into the mouth.

ORIGINAL COMMUNICATIONS.

HISTORY OF THE EPIDEMIC OF DENGUE IN MADRAS IN 1872.

By MOODEEN SHERIFF,
Surgeon to the Triplicane Hospital, Madras.

The dengue has occurred for about fifty years in all quarters of the world. It has prevailed epidemically in America, Asia, and Africa, and sporadically in Europe. It is not new to India, for its prevalence was noticed and recorded at Calcutta about twenty years ago; but it is new to Madras.

Origin and History.—It seems to have originated in the British West India Islands, where it was known as "dandy fever," "from the stiffness and constraint which it gave to the limbs and body." It was named dengue by the Spaniards of the neighbouring islands, and this word, according to the new "Nomenclature of Diseases," is now adopted in French, German, Italian, and English.

The first epidemic of dengue noticed in medical works is that of 1824 in America, where it continued to prevail more or less epidemically under the title of "break-bone fever" until 1828, and then disappeared completely for about eighteen or nineteen years. It broke out in the same country in 1847 and 1850, and again in 1861. In 1853-54 the disease was very prevalent at Rangoon, Calcutta, and several other parts in the Bengal Presidency. As far as my knowledge extends, the Bombay Presidency seems not to have been visited by dengue until the year 1871, and the Madras Presidency till 1872.

Prevalence of Dengue in Arabia.—In 1870, when I was at Mecca, there were no cases of dengue, but I heard of its occurrence on two or three occasions during the few previous years. It was known there under the name of "Aburuka-bah" or "Aburukab," which means literally "the father of the knee," and is given because of the great pains and stiffness which it often produces in the knee-joints. It seems to have visited Arabia again in 1871, and was prevalent at Mecca, Medina, Tanyef, and Jedda in some part of that year as well as in the first quarter of 1872. I have obtained this information from persons who have been on a pilgrimage to Mecca from Madras during the last two years, some of whom remained there for fifteen or sixteen months. Almost the whole of the pilgrims from Madras have laboured under the attacks of "Aburuka-bah," and therefore know what this disease is by personal experience. The symptoms they describe are identical with those of dengue; and a few of them are still not free from pains in the joints, though it is nearly one year since they suffered from Aburuka-bah at Mecca. In June, 1871, the dengue broke out epidemically at Aden. Dr. Read, of the Rifle Brigade at that place, made a report on this epidemic, which is published in the *Proceedings of the Sanitary Commissioner of Madras*. According to this report, the disease was raging at Zanzibar and other parts of the African coast in the early part of the above year (1871), whence it was introduced into Aden by native trading-vessels.

Importation of Dengue from Arabia into India.—It lasted at Aden as an epidemic for a few months, and then continued for a few more sporadically. The free communication which exists between Aden and Bombay, Cannanore, Calicut, and some other sea-ports on the Malabar coast, was the means of importing the disease into the latter places during the above period. The troop-steamers *Jumna* and *Dalhousie* are supposed to have been the chief vessels which conveyed dengue from Aden to Bombay and Cannanore in the latter part of December, 1871; and with sufficient reasons. About the beginning of 1872 the disease made its appearance in Bombay, Poona, and Cannanore, and from the two first-named places it was carried all over India by means of railways. During the last year the dengue has been prevalent in many stations, towns, and villages in each presidency of India, and its visits have also been heard of in China, Burmah, Nepaul, and some other places. In some places it hardly left one inhabitant unattacked, and ceased to prevail only when there were no fresh subjects. It is still more or less prevalent in Madras and some other parts of India.

Synonymes of Dengue.—Dengue is known by many names which we should be acquainted with to recognise the disease if it prevails in other countries. In addition to those I have already mentioned—viz., dandy fever, dengue, denguis, break-bone fever, Aden ague, and Aburuka-bah—the following are the other most common names:—Scarlatina rheumatica, eruptive rheumatic fever, eruptive articular fever, eruptive epidemic fever of India, Mudak-Máriáta. Of all the above synonymes, eruptive rheumatic or eruptive articular fever is a more suitable term for the disease; but, as the word dengue is applied to it in the new "Nomenclature of Diseases," as already remarked, it will of course supersede the use of all other names, at least in all the countries under the British rule. The last name in the above list (Mudak-Máriáta) is a Tamil one, derived from two words—*mudak*, contraction or stiffness, and *Máriáta*, the name of an idol or Hindoo deity; it is very frequently used for this disease by the natives of Southern India.

Prevalence of Dengue in the Madras Presidency and in the Fourth District of Madras.—I first heard of this disease in Madras from Dr. Chipperfield's paper, published in the *Madras Monthly Journal of Medical Science*, No. xxviii., April, 1872. It will be observed from this paper that the first case in this city occurred on February 8, 1872. I did not see any case until July, but from this month till the end of 1872 the number which came under my observation was about 600.

During the above periods, especially in August, September,

and October, the prevalence of dengue was much greater than that of any other disease ever witnessed during my experience of twenty-five years. It scarcely left a house unvisited in the Fourth District, and in every house it visited it generally spared no inmate. No age, sex, or rank has been exempted from its ravages. The oldest patient suffering from the disease was about eighty years of age, and the youngest about two months. The female patients were quite as numerous as the male, but, as usual, the number of the former applying for relief at the Dispensary was comparatively very small. The disease made no difference between the rich and poor, high and low—his Highness the Prince of Arcot having been amongst its sufferers, as well as many of the beggars going about the streets. Not one quarter can have escaped. The epidemic was at its height in September, and somewhat less extensive in October, and there is no doubt that it would have continued till the whole population had been exhausted were it not for the sudden check on October 13 and 14, when there was very heavy and continuous rain, which produced a great change in the weather, and with this the disease became at once very mild and sporadical. It continued in this form till the end of 1872.

Symptoms.—The essential symptoms observed in the last epidemic were—pyrexia; pains in the joints, muscles, and bones; eruption; and headache.

1. *Pyrexia.*—This was of a continued type, and of very short duration, lasting generally from twelve to seventy-two hours. In some cases, however, it was prolonged to seven or eight days, and in a few to fifteen or more. In many of the cases in which the pyrexia continued more than a week, it was characterised in the latter part of its course by remissions or intermissions.

The fever came on either suddenly or was preceded by pains in the body, particularly the back and spine, for a period varying from some hours to three or more days. During the first half of the epidemic its attacks were almost invariably sudden, while in the second the preliminary pains were very frequently observed.

The fever was generally very strong, with burning hot skin; very frequent (120 to 140) and strong pulse; frequent (28 to 36) respiration; white or brown and furred tongue; thirst; and scanty and high-coloured urine. It was very frequently accompanied by convulsions and insensibility in children, and often by headache and delirium in adults.

2. *Pains.*—Next to pyrexia, the pains were the most constant and characteristic symptom. In severe cases they were not only felt in all the joints, but also in the muscles and in the bones; and they were described by the patients as of a gnawing and breaking character, with more or less stiffness in the parts affected. The large and small joints were affected alike, and the pains were seldom confined to less than six or eight joints, in well-marked cases. In the order of frequency, the wrist, ankle, and knee-joints, and the spine and fingers were first; the toes, elbows, and shoulder-joints the second; and the hip-joints the last. The affected joints were always more or less stiff, and frequently swollen, tense, red, and tender to the touch, as if congested or inflamed. At the termination or relief of pyrexia the pains generally abated, but in some cases they increased instead of decreasing. In either case, the pains which remained after the attack did not leave the patients entirely for some days, weeks, or months, and in some rare cases even for a year.

3. *Eruption.*—Though not invariable, the eruption is a very frequent symptom. It was generally transient and very variable in its character. For the most part it was like that of measles, scarlatina, erythema, or roscola; but in some instances it bore a resemblance to urticaria or lichen, or to a mixture of two or more of the above eruptions. In some patients the rash consisted of a mere blush or slight redness, which was discernible in Europeans, but not in natives; and in the former, again, the palms of the hands and soles of the feet were often entirely of a peculiar crimson colour. When the rash on the face was not far from the eyes, the conjunctivæ became frequently implicated in redness, and occasionally with lachrymation.

The rash was generally very partial and scanty, not being in many cases more than a few patches, and it was very seldom so copious as to occupy the whole or greater part of the body. The face, neck, chest, hands, and arms were most frequently the seat of the eruption, and it was also pretty frequently observed on the feet and legs. The duration of it was generally about the same as that of pyrexia—viz., from twelve to seventy-two hours. Among all kinds of eruption, the crimson or peculiar discoloration of the palms and soles of the feet was very obstinate in some cases, and in a few European patients it did not disappear completely for weeks—not even after a severe desquamation.

The rash may occur with the fever simultaneously or on any day afterwards, and in the latter case it generally makes its appearance on the third or fifth day. In some instances it is delayed till the eleventh or thirteenth day, while in a few others it does not occur at all in the original attack, but breaks out very distinctly on the relapse of the disease after twenty or thirty days. The occurrence of the rash was generally noticed on the odd days, as the third, fifth, seventh, etc. In many cases the rash has been observed to occur two or three times in the course of the disease, and it may therefore be divided into primary and secondary. The secondary is nothing but the recurrence or relapse of the primary, and occurs two or three times with a variable interval. For example, in a very severe case in my own family an efflorescence made its appearance together with the fever on the first day, and disappeared on the second; it reappeared on the fifth, to subside again on the following day; and at last broke out very copiously for the third time on the thirteenth day, when it remained for two or three days before it began to decline. The secondary rash was generally more distinct than the primary.

The rash, whether primary or secondary, was almost always followed by a desquamation, which was occasionally copious and lasted for weeks or months. I am aware of a few Europeans and natives who were not free from desquamation of their palms and soles of the feet for more than one or two months after the attack of the disease. It was generally of thin scales, like that in measles; but in some instances the cuticle of the palms and soles of the feet separated copiously, as in small-pox.

4. *Headache.*—Frontal headache, as a very frequent and peculiar symptom, was rare, particularly among the natives. I did not see more than six or seven cases in which this symptom was very prominent or peculiar. In two of these cases a dull pain in the eyeballs was also much complained of by patients. True, headache was present in many cases, but it was not peculiar or more severe than it is often experienced in the simple continued fever.

Sequelæ.—Convulsions; permanent pain, stiffness, and swelling in the joints; pericarditis; paralysis; diarrhœa and dysentery; debility; conjunctivitis; derangement of the brain; abortion.

a. Convulsions.—Dengue was very commonly accompanied by, or terminated in, convulsions among children; so much so, that every child attacked with it was expected to suffer from them. They generally occurred in the early part of the disease, and were accompanied by more or less insensibility. They were certainly the most dangerous of all the symptoms or sequelæ, and I have heard of many deaths from them. Some children under my own care were very nearly losing their lives from this symptom, but fortunately recovered.

They were generally clonic, but occasionally tonic or tetanic. The latter were more fatal than the former, probably from implicating the muscles of respiration.

The adults did not enjoy a complete immunity from convulsions, for I heard of some cases and saw a few myself in which they were present. In one of the cases which came under my own observation the convulsions were severe, distinctly tetanic, and chiefly confined to the respiratory muscles, which became repeatedly rigid after an interval of two or three minutes. During the rigidity, which lasted for about a minute on each occasion, the respiration was at a standstill, and thus the patient was threatened with suffocation.

b. Permanent Pain, Stiffness, and Swelling in the Joints.—After the cessation of fever, the pains and stiffness in the joints were almost invariably left behind for days to weeks or months. Among the sufferers of the last epidemic there are several who are not yet quite free from them, and some are still partially crippled, not being able to walk about or use the arms freely. A few, again, are still labouring under pains occasionally, though it is about a year since they have suffered from dengue at Mecca. In some cases the swelling of the joints was also a very obstinate accompaniment of the pain, but was generally slight, and of shorter duration than the latter.

c. Pericarditis.—In several cases with severe articular pains pericarditis was rather severe. One of the subjects of this

complication was very near dying, and the pains in this case were extremely intense, and he is still lingering on with them. Among the fatal cases of dengue I have heard of, some patients are said to have died after complaining of pain in the chest, and, if it is so, it is not improbable that the immediate cause of their death was pericarditis.

d. Paralysis.—One case terminated in general paralysis, including the optic nerve (amaurosis) and bladder. He was admitted under the head of paralysis, became bedridden, and died in the Hospital. I am informed by a medical friend that he knows two patients at Black Town who became suddenly amaurotic after an attack of dengue.

e. Diarrhœa and Dysentery.—In four or five cases the fever was accompanied by diarrhœa, and in one or two by dysentery. Two of the cases of diarrhœa were rather obstinate, but after all yielded to medicines.

f. Debility.—In some cases the general debility and prostration were much greater than could be expected from the suffering of so short a period as that of the attack of dengue. This was particularly the case with old persons, among whom I have seen a fatal case from debility alone.

g. Conjunctivitis.—In one or two instances there was actual conjunctivitis, requiring to be treated.

h. Derangement of the Brain.—A few children were deranged in their mind after the attack of dengue, and remained so for a long time. One of them is still in the same condition. This child is a daughter of a very respectable man in Royapettah. She was attacked twice within two months, and suffered from convulsions and partial insensibility in the first attack. The second attack or relapse was milder, and was not attended with convulsions, but accompanied by distinct eruption. The derangement of mind is the result of the original attack. She is now very dull and stupid; she neither asks for anything nor is inclined to play, and there is much deficiency in the power of articulation.

i. Abortion.—In September, when the disease was at its acme, two cases of abortion have been heard of as the result of dengue.

Relapses.—In addition to intermissions and remissions, the disease was found to recur occasionally after a complete apyretic interval, varying from one or two weeks to as many months. Its return after so long an interval must be considered, I think, as a relapse. This is doubted by Aitken. Out of many cases of relapse I have seen, I shall detail two by way of illustration:—1. A female child, Zynab Bee, aged 4 years, suffered severely from dengue about the beginning of October. The attack was accompanied by convulsions and insensibility. The child recovered gradually from the attack, but was slightly and permanently deranged in mind. On December 14 it was attacked with the fever again, and on the following day, when I saw it, the face, scalp, ears, and neck were covered with red patches like those of erythema. The fever subsided on the third day, and the rash on the fifth. There were no convulsions on this occasion, but the child appeared more deranged in mind than after the first attack. 2. The second case was that of a police-constable, Mahomed Cossim, who was admitted as an in-patient from dengue on the 3rd, and discharged on the 20th October. He was admitted again from the same disease as an out-patient, on December 23, and discharged on the 6th of the following month. There was no rash in the original attack, but the relapse was accompanied by it.

There were several cases of two relapses, and a few of three, most of them among children and youths. For the most part the fever in relapse was milder, and the rash more frequent and distinct than in the original attack.

Whenever the fever occurred after an apyretical interval of hours or days within a week, I have considered it a paroxysm, but after a week a relapse.

Period of Incubation.—I am aware of some persons who came to Madras, when dengue was prevalent, from villages and outstations where it was not in existence. They suffered from the disease here, and generally on the fourth or fifth day after arrival. A friend of mine also came from Bangalore to Madras, where he remained only two days, and on the third he went to Vellore and was seized with dengue on the railway before he reached the latter place. There was no dengue at Bangalore or Vellore at that time. From the above facts it would appear that the period of incubation is from three to five days.

Pathology.—Dengue is apparently a compound of two diseases, or, in other words, depends upon two kinds of *materies morbi*, one of which is like that of an eruptive fever, and the other the same as that in rheumatism or gout. The urine is generally acid in reaction, of high specific gravity, and contains an excess of uric acid.

The disease is highly infectious and contagious, in which respect, according to the experience of the last epidemic, it excels small-pox, measles, and all other eruptive diseases in this country. The contagion of the malady is stronger and more active amongst Europeans than in natives.

Causes.—As the disease attacked almost the whole population, under all circumstances, and without any difference of sex, age, nation, or locality, it was difficult to find out what its predisposing causes were. Its prevalence, however, was most extensive when the weather was very hot and oppressive, and received a sudden check when it became very cool, after the very heavy showers of rain we had on the 12th and 13th October last.

The exciting cause is a specific contagion, propagated by human intercourse.

Diagnosis.—In every place in which it made its first appearance it seems to have been confounded with several other diseases. If the rash was present, according to its nature it was mistaken for the measles, scarlatina, roseola, erythema, or urticaria. In the absence of rash, dengue was generally confounded with rheumatism, and sometimes with gout. Whatever the nature of the eruption may be, the dengue is distinguished from all other eruptive diseases by the presence of severe and obstinate pains in the joints; by the rash being generally very scarce, occurring more than once in an attack, and at irregular periods (either at the commencement or at any indefinite time during the course of the disease); and by the remissions, intermissions, and relapses. In addition to these, it is distinguished from measles by the absence of catarrhal symptoms, and from scarlatina by the absence of the severe affection of the throat and of the peculiar appearance of the tongue. The distinction between dengue and rheumatism and gout, and between it and ephemeral, simple continued, or intermittent and remittent fevers, is clear, from the combination of the contagion, rash, and severe articular pains.

Prognosis.—Dengue seldom proves fatal to adults, and even this indirectly by pericarditis, paralysis, etc. It is, however, dangerous to children, in whom it often proves fatal by convulsions. I have seen only two fatal cases, which I have described under the head of sequelæ, and in both these instances the patients came under treatment in a hopeless condition. The numerous deaths which have been heard of during the prevalence of the disease were all among the patients who were not subjected to treatment.

Treatment.—Although deaths from dengue were frequently heard of during the last epidemic, yet the natives of this country generally displayed a great disinclination in using medicines for this disease. The Hindoos, who were foremost in this respect, had a religious prejudice against the use of medicines in Mudak-Máriáta, and thought that it was not a disease, but an expression of anger of their deity, Máriáta, which must be assuaged by religious acts, as poojahs, etc., and not interfered with by medicines. The Mahomedans were advised by their hakeems not to take any medicine in Aburukabah, for it was supposed by them to be the result of natural and salutary efforts of the system in throwing out the vitiated and over-heated bile.

The epidemic, however, being very extensive and severe, a sufficient number of patients (about 600) did receive medical treatment, and I thus had ample opportunity of comparing the result of these cases with those that were left without medicines. My experience is greatly in favour of the former plan. I have not seen any fatal case among the patients who have submitted themselves to medical treatment, except the two who, as already mentioned, were in a most hopeless condition when relief was sought; while several deaths were heard of daily during the epidemic among those that did not take any medicine. Besides, there were many cases under my own care which were in great danger from convulsions, pericarditis, etc., and there is no doubt that some of them would have terminated fatally if left without treatment.

I may mention another circumstance to show that treatment is indispensable even in mild and simple cases. As I explained before, the pains, stiffness, and swelling of the joints were generally left behind for some days, weeks, or even months after the relief of pyrexia. These after-symptoms were often severe out of all proportion to the attack in their duration and intensity. In many a slight case they were very severe and obstinate, and *vice versâ*; and they have been most frequently

observed in those persons who have not submitted themselves to any treatment.

Whether severe or slight, dengue was generally very amenable to treatment. The attacks were readily cut short by medicine, and removed finally by quinine. A dose of purgative or emetic was the first medicine used in most cases, and was followed immediately after its action by a saline or diaphoretic mixture, or by James's powder. The diaphoresis ensuing from the above medicines generally relieved the attack, or produced an abatement, in six, eight, or twelve hours, and sometimes, in severe cases, in twenty-four or thirty-six hours. Occasionally the medicines were not successful in producing the desired effect until they were assisted by the use of warm or foot baths. As soon as the fever subsided, quinine was administered in four- or five-grain doses every three or four hours, which either checked the fever at once, or converted it into remittent or intermittent. In case of conversion, quinine and diaphoretic medicines were used alternately for a few days longer, or until the attacks were finally cured.

The headache was relieved generally by foot-baths, and sometimes by cold application to the forehead; the articular and muscular pains by fomentations, liniments, and warm baths; and convulsions by warm baths, ice or cold lotion to the head, leeches to the temples, blister over the neck, and mercurial purgatives. Among the patients suffering from articular pains after the attack of dengue there were some very severe and obstinate cases, requiring active treatment of rheumatism, including leeches, blisters, and alkalines.

Though not a malarious disease, dengue is greatly influenced by quinine, and I may cite my own case in illustration of this fact. In the middle of September, while engaged in attending upon a great many cases of this disease, I began to feel occasional pains and stiffness in my joints and back, from which I thought I might get an attack. A few days afterwards the pains were suddenly increased on one morning, with a slight fever and headache, and continued to get worse, till they were very severe in about six hours. Being now certain that I was labouring under dengue, I took five grains of James's powder with warm tea, and repeated it every second hour till three doses were taken. The third dose made me very sick at the stomach, and produced one broad motion. About this time I felt some sweat about the neck and forehead, to increase which, and to relieve the headache, I put my feet in hot water and covered myself up with shawls. In about half an hour afterwards I was in perspiration, which almost relieved the attack. Immediately after this I began to take quinine every third hour, in four-grain doses. Next morning I was able to do my duty as usual, and felt no inconvenience, except a little stiffness in the back, fingers, and toes. In the early part of October, about a fortnight after the first attack, I again felt a severe pain and stiffness in the back, which extended in two hours to several joints. I took eight grains of quinine at once, and repeated it in four-grain doses every third hour. In about eight or ten hours I was almost free from the above symptoms. About a week after there was a second relapse (third attack) of the pain and stiffness, which disappeared again under the use of the same medicine. After this relapse I continued the use of quinine in a small quantity for some days, and suffered no more from the symptoms of dengue.

Prophylaxis.—Isolation is the best measure that can be adopted for preventing the prevalence of dengue. Isolation, however, cannot be effected after the disease begins to prevail in a large village or town, particularly in a city like Madras; and it should, therefore, be carried out before it finds its way into the midst of any population. The best and easiest way of carrying this measure into effect would be to establish a quarantine in every village or town whenever the disease is expected to be introduced from any place.

When the prevalence of dengue was most extensive, in the month of September, the people in the Fourth District were much alarmed, and some of them requested me to give medicines to protect them from the attacks of the disease. Knowing quinine to have great influence over dengue, I thought it might also be useful as a prophylactic, and advised them to take it in a small quantity two or three times a day. They accordingly bought a very large number of quinine pills, each containing from two to four grains. Although I have no notes upon these cases, yet I am sure that with a few exceptions they have all been exempted from the disease.

Statistics.—As I have before mentioned, the number of cases from dengue which I have seen during the last year was 600. This number is not at all in proportion to the very extensive and fearful epidemic we had in the Fourth District, and the chief cause of this, as explained elsewhere, was a disinclination on the part of the whole native community to use any medicine in dengue. The number of cases from this disease would have been still smaller were it not for its greater portion consisting of public servants, who sought for admission chiefly to account for their absence from duty during their illness.

No death has occurred in the above 600 cases, and the two cases which have proved fatal from the sequelæ of the disease have been recorded under the head of other diseases for the reasons already explained.

Out of the 600 cases, 412 were treated as out- and 130 as in-patients, and fifty-eight were private cases attended upon by me in their own residence.

As this report is intended for out-patients, I shall for the sake of brevity show in figures a few of the chief statistical points connected, as follows:—

Race.	
Europeans and East Indians	57
Mahomedans	235
Hindoos	120
Total	412
Occupation.	
Public servants	192
Paupers	220
Total	412
Sex.	
Males	323
Females	89
Total	412
Age.	
Above 50 years	10
Between 20 and 50 years	315
Between 9 and 20 years	63
Below 9 years	24
Total	412
Period of the Year.	
July	25
August	52
September	170
October	157
November	4
December	4
Total	412

ON DIPHTHERIA: WITH ESPECIAL REFERENCE TO A RECENT EPIDEMIC IN ITALY.

By ROBERT HUNTER SEMPLE, M.D., M.R.C.P.L.,
Physician to the Bloomsbury Dispensary.

Diphtheria has probably been known since the earliest period of history, but owing to the obscurity of its early symptoms, the occasional rapidity of its course and termination, and the capricious nature of its visitations, it has sometimes been unnoticed altogether; sometimes it has attracted an unusual degree of attention; and sometimes (and indeed very often) its true nature has been altogether misunderstood. It has appeared as a fearful epidemic, sweeping off thousands of the population, at different periods—in Spain (1611), in Naples (1618), in Sicily (1625), in France (1757), in Sweden (1762), in New York (1771), and at several other times; but in point of fact it has been always present, although sometimes in so mild a form or in such isolated instances that its real character has been mistaken.

At the commencement of the present century—namely, about 1816—it appeared as a destructive epidemic in and about the town of Tours in France, where it attracted the attention of Bretonneau, who, though practising in that town, admits that the disease in the form in which it then presented itself was new to him. But, as is now well known, he devoted himself

most energetically to develope and describe the whole history and nature of the epidemic; and with the assistance of Velpeau, then his pupil, he was able to prepare and to publish the masterly researches which have for ever connected his name with that of diphtherite or diphtheria, both of which names were proposed by himself. It is equally well known that after raging as an epidemic, not only in the neighbourhood of Tours, but in many other parts of France, the malady at length reached the north-western frontiers of that country; and after attacking and carrying off several English patients in Boulogne-sur-Mer, it crossed the Channel, and appeared as an epidemic in Great Britain, where it raged most extensively in the years 1856, 1857, 1858, 1859, and 1860.

There is no doubt whatever that the British epidemic of those years was the same disease as that described by Bretonneau, and afterwards by his pupil Trousseau, and by Guersant, Bouchut, Empis, and others; but the question raised at the time, and perhaps not yet definitively settled in all people's minds, was whether it was a new disease, or one which had long been prevalent on the surface of the globe. I believe that it is not a new disease, and that, although it is no longer at present prevailing in England as a virulent epidemic, and never did occur here as an epidemic before 1855 or 1856, yet it has always existed in this and other countries in the sporadic form under the name of pseudo-membranous croup, and under that title it still occurs, though happily somewhat unfrequently, at the present day, in the British Islands.

I myself saw several cases of the epidemic at the period to which I refer as the epoch of the British visitation, and I happened about the same time to be engaged in editing and translating the French memoirs then in existence on the subject. Ever since that time I have carefully noted all the facts and writings relating to the disease, whether of a theoretical or practical nature, as far as they came within my reach, and I have seen several additional cases, taking care in the fatal ones to verify the facts observed during life by post-mortem examinations. I have come to the conclusion that Diphtheria is a disease always present upon the globe, but exhibiting two distinct forms—namely, the epidemic and the sporadic.

The first form is the disease described in excellent monographs by Nola (1620), Ghisi (1747), Cortesius (1625), Marteau de Granvilliers (1768), Bard (1771), Wileke (1764), and Bretonneau. The second is that which is only occasionally seen but is generally fatal, and is, or usually has been, denominated croup. I by no means assert that Diphtheria is Croup; but I maintain that the so-called croup with pseudo-membranous exudation is the same disease as tracheal (or laryngo-tracheal) diphtheria. This is the view now entertained by some of the most distinguished members of the profession, and most especially by that Nestor of our calling, Sir Thomas Watson; but I hope that I shall not be considered egotistic if I remark that my opinions on this subject were formed and published long before the appearance of the last edition of Sir Thomas Watson's excellent Lectures, in which the view I now advocate, and have always advocated, first appeared.

These preliminary remarks are necessary in order to introduce the subject which I now venture to bring under notice—namely, the recent outbreak of an epidemic of Diphtheria in Florence, in the vicinity of that city, and in other parts of Italy. The course of the disease, the victims it selects, its dreadful mortality, its capricious visitations, its intractability to therapeutic measures, are all features which are parallel and analogous to those observed in former epidemics, but with this difference—that it has now found the physicians prepared, by historical and pathological researches, for combating its approaches, and qualified to give lucid and careful descriptions of all its leading characters. I have been deeply impressed by the elaborate history given of the disease by the Italian physicians, and their thoughtful commentaries on its nature, pathology, progress, and treatment; and I think it very desirable that some of the particulars, which are at present inaccessible to many readers, from their being written in a foreign language and scattered through the pages of Italian medical journals and in monographs, should be presented to the medical profession in this country.

The sources from which, among others, I have derived my information as to the recent Italian epidemic are—the medical journal published in Florence, *Lo Sperimentale*, *Giornale Critico di Medicina e Chirurgia*, which contains a series of original memoirs on the subject, entitled "Istoria Clinica della Difterite osservata nella città di Firenze e Contorni nel Decennio dal 1862 al 1872"; a monograph by Dr. Oscar Giacchi, of Poppi (a small Italian town), entitled "Natura e Terapia dell' Angina Difterica"; a Report by Dr. G. Faralli, entitled "Studi sulla Difterite," which comprises a history of the whole subject, prepared for the *Sezione di Medicina Teorico-Pratica* of the Medico-Physical Society of Florence; and a small monograph by the same writer on the *Ciclo Termico* (Thermic Cycle) of Diphtheria.

It appears, in the first place, that the recent Italian epidemic—like that observed by Bretonneau, at Tours—shows itself independent of climatic or local influences, and that it attacks indifferently high and low, rich and poor, the dwellers in the city, and the inhabitants of the country, the cottager in the plain, and the peasant who breathes the pure air of the mountain. Children, however, as has been observed in all other epidemics, are the chief victims, although adults are by no means exempt, and often take the disease from the children. Dr. Nesti, who contributes a paper to *Lo Sperimentale*, entitled "Della Difterite nella città e contorni di Firenze dal 1863 al 1872," states that although the malady has furnished most victims in the northern, north-eastern, and south-western parts of Florence, yet it has propagated itself centrifugally to neighbouring parts, attacking localities altogether different in their geological conditions, the land being sometimes sandy, sometimes calcareous and clayey; and different also in their local position, for the epidemic has been equally fatal in the low-lying and fertile plains, as in the dry, elevated, and mountainous and pleasant regions of Fiesole, Ruballa, Mugello, and the like. Social conditions are alike disregarded by the epidemic, for (the same writer continues) it has attacked with equal virulence the uncared-for child of the peasant in the squalid cottage, and that of the noble and rich proprietor in his splendid palace. Dr. Giacchi, who practises in the country, gives evidence to the same effect, stating that in the lovely hilly regions, bathed by the waters of the Arno, and where the pure air is scented only by the emanations from the pine and the beech trees, the diphtheric epidemic is quite as destructive as in the corrupted atmosphere of great cities and amidst the mephitic exhalations of marshes.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

MEDULLARY SARCOMA OF THE FEMUR—DEATH—POST-MORTEM EXAMINATION.

(Under the care of Mr. BERKELEY HILL).

[Reported by Mr. ARTHUR KEMPE.]

THOMAS J., aged 34, confectioner, was admitted on July 28. The patient states that about two years ago he was kicked on the leg by a man, from the effects of which he was lame for about two days. The leg was bandaged, and he then for the first time felt pain in the left hip; but after using a little embrocation, the pain left him. From time to time the hip pained him, but never became swollen till April, 1873. He then went to a doctor, who treated him for sciatica. After having been treated for two months, he went to Buxton, in Derbyshire, to take the baths, during which time the hip seemed to swell more. The swelling went on increasing rapidly, and a fortnight ago he was confined to his bed. He then rubbed it with iodine, but no improvement taking place, he came here July 28. He says he has had small-pox about fourteen years ago; is married. Family history good. Never suffered from rheumatic fever, cough, or spitting of blood; never had pleurisy. Whole leg ached after standing, but pain went away on resting. Perspires much at night, when pain is worse. Is losing flesh; appetite bad for three months; gets little sleep. No pain on defæcation; motions good size—never any pus in them. He has noticed for some time that his water has been of a smoky colour, and he does not pass it so often as he used. In February his leg was so well that he danced all night, feeling only a little stiffness; dancing did not make it worse. First felt pain behind the great trochanter, the pain also going down the outer side of the leg. No pain in the calf or inner side of the thigh; no pain around body, or in iliac fossa. The left hip is very much swollen indeed, œdema spreading as far down as the knee, and over the iliac region. No tenderness anywhere along the spine, or over iliac bone or sacro-

iliae joint. Attempting movement of iliac bone gives him no pain, nor does percussion of the femur. Deep pressure on left iliac fossa causes pricking feeling. On examining the left groin, a distinct hard mass can be felt in the iliae fossa, and the edge of the psoas muscle is very hard. The chief swelling is in the gluteal region, where it commenced; but it extends forwards to the inner side of the thigh, filling the groin, half-way down the thigh, and upwards along the back to the angle of the scapula. The swelling in the left inguinal region lies in the iliac fossa, is hard, smooth, elongated, extending about three inches above Poupart's ligament from the middle line to the anterior iliac spine. Skin over tumour in gluteal region and outer side of thigh is mottled-purplish, elsewhere simply pale and œdematous. On examination per rectum, left ischio-rectal fossa is found to be filled with a hard, firm swelling, accurately limited to left half of the perineum; does not seem to pit on pressure. Measurements:—Calf: Left—13½ in.; right—13¼ in. Thigh: Left—lower part 14¾ in., middle 23 in., upper 27¼ in.; right—lower part 14½ in., middle 17½ in., upper 19¼ in. From lowest piece of sacrum to left spine of ilium antero-superior—left 17½ in., right 14 in.

August 1.—Mr. Hill introduced an aspirator trocar behind the great trochanter deeply into the swelling, but no fluid came away or even filled the needle. Only one puncture made.

From this date till the date of his death the patient continued unable to get up. He suffered severely from time to time; occasionally had a severe cough; was frequently sick and unable to take food; lost flesh rapidly; and some œdema of the right leg supervened.

Post-mortem, fourteen hours after Death.—Abdomen opened by the usual incision; transverse one was then made between the crest of the ilium and the ribs, and then one longitudinally down the thigh. The flap thus formed was thrown outwards, and thus the sartorius was disclosed stretched over a large and very elastic tumour, which bulged forwards into Scarpa's triangle and outwards between the extensors and the glutei. In doing this the glands of the groin were found to be infiltrated with the growth, large, irregular, and white. It was found impossible to remove the tumour entire, and so sections were made into it. Its substance was for the most part perfectly white or slightly pink, and dark reddish-brown from extravasation of blood, and very large patches of a light yellow colour, evidently cheesy. It extended from the middle of the femur through the whole of the upper part of the thigh and towards the middle line. It just involved the symphysis pubis, and filled up a greater part of the cavity of the true pelvis, where it infiltrated the obturator internus, but apparently did not affect the bone. Above this, all the glands by the side of the aorta were matted together by the growth, presenting a similar appearance to strumous mediastinal glands. In the thigh the tumour involved the soft parts rather than the bone; its exact point of origin could not be discovered. It did not appear to infiltrate the bone, but the femur just below the trochanters, as well as the internal part of the pubes, was entirely broken across and crumbled. Small spicula of bone also existed throughout the tumour. The femoral artery and vein passed through the centre of the growth; neither was occluded, but the growth sprouted at various points into the vein. On the right side the femoral vein was plugged, probably the result of pressure from growth of the glands. The cartilage over the head of the bone was perfect, but the inner wall of the acetabulum was almost destroyed, and the ligaments and tendons quite softened. In the walls of the heart there were several small deposits of similar appearance to that of the large tumour; some of these were found immediately below the pericardium, and several existed inside the heart in the columnæ carneæ, etc. Under the pleura of both lungs there were similar deposits to those under the pericardium, but none in the substance of the lungs. Lungs apparently healthy; congested at bases. Liver of normal appearance; no deposits. Kidneys large; no deposits. Spleen, no deposits. On examining microscopically a portion of the tumour, it was found to consist of pretty uniform round cells, larger than lymph corpuscles, and each situated in an alveolar space formed by a faint fibrillar structure.

MR. GUTTERIDGE'S OPERATION FOR STONE IN THE BLADDER.

As we stated in last week's number of the *Medical Times and Gazette*, Mr. Gutteridge performed his operation for vesical calculus on Monday, November 3, at St. Peter's Hospital for Stone. Mr. Gutteridge, as we think, very wisely gave hospital surgeons in London a chance of witnessing him perform lithotomy after his own method, and of thus judging for themselves of its value. Did he practise in London he perhaps would not have thought it necessary to have given public announcement in the medical press, or a prolonged intimation on the Hospital notice-board, of the date on which he would operate. As, however, he came up from Birmingham, and was only a few days in town, he sent cards of invitation to the surgeons at the metropolitan hospitals. It was in this way we learnt of the opportunity of seeing him execute what, in more ways than one, must be acknowledged an extraordinary and successful operation.

Mr. Gutteridge's scheme consists of two parts, viz.—to use his own words,—"of a due combination of incisions of parts ascertained by extended experience to be capable of being safely severed; and of implements with which the successive stages may be most surely and with least danger accomplished." The patient was a boy sixteen years of age, a native of the Black Country, and was submitted to operation without being anæstheticised, as Mr. Gutteridge has a strong objection to chloroform or ether in lithotomy. Kneeling before the patient when in the lithotomy position, and with his eye thus in a line with the perineum, the operator first passed the staff, which he handed to his assistant; he then made very firm pressure with the fingers of his left hand upon the anus, thus dragging the skin of the left side of the perineum, with the lower extremity of the gut, well over towards the right tuber ischii. He next rapidly plunged the scalpel into the groove of the staff at a point a little to the left of the raphe, and on a level with the anterior extremity of the tuber ischii, and then, without running the scalpel along the groove, he made it cut its way through the soft tissues. Next he passed the beak of the cystotome into the roughened groove, and, with the cutting edge directed a little upwards from the horizontal direction, he passed it onwards through the prostate and then turned the edge downwards and brought it out at the lower extremity of the skin-wound. This done, he passed his left index-finger into the bladder, felt the stone, then withdrew the staff, and passed in along the finger a grooved conductor, much like a narrow blunt gorget, and along this, after withdrawing the finger, he guided the forceps, only one blade of which was *in* the groove of the conductor. The stone was seized and at once withdrawn, and the operation thus completed.

It will be understood from this account that the method differs from that adopted by other surgeons in that—(1) no anæsthetic is administered; (2) that in dividing the structures in the ischio-rectal fossa the scalpel is thrust by one plunge into the groove of the staff at the point of the anterior extremity of the wound, and that owing to the traction made on the anus, the incision through the skin, when the parts are relaxed, is seen to extend over the tuber ischii; (3) that the incision whereby the bladder is opened is semilunar in shape, and describes a curve constituting an arc (as Mr. Gutteridge states it) of 100 degrees of a circle; (4) that the forceps are guided into the bladder along a grooved director instead of along the left index-finger. Mr. Gutteridge spares, if possible, the membranous portion of the urethra, and lays open only the prostatic part. His aim is to make his knife enter the canal at the apex of the prostate gland.

For these modifications in the procedure special instruments are provided. These were recently shown to members of the British Medical Association, at the forty-first annual meeting, in August last, a description of which Mr. Gutteridge has himself given as follows:—"A table constituted of a fixed frame, on which is a sliding top, whereby the patient may be firmly fixed and kept symmetrically in all respects, and yet through which, by means of a simple screw action, the position of *tight-up trussing* may be speedily relaxed, and the pressure on the respiratory and venous systems lightened, so that in a protracted operation rest may be given and renewed efforts made, by intervals, at the operator's pleasure—a resource in the aged and the fat of the very first importance as respects the sustaining the patient's power of endurance without fatal congestion. The manual instruments consist, first, of a staff, with handle capable of being used by the operator and the assistant at the same instant of time, and with a furrow for the knife to traverse, coiling slightly, and ruffed so that the holder of the knife may have a positive assurance of the knife and staff being in real contact throughout the course of the knife, until it is entered

into the bladder. Secondly, an implement consisting of a handle shaped for the finger and thumb, with scalpel mounted at one end; and at the other a beaked knife—properly a cystotome—fixed at a right angle to the scalpel on the axis of the haft, so that one instrument may effect, by a move of the finger and thumb, the two distinct incisions, the external one and that of the prostate. Thirdly, a conductor for the forceps conformable in respect of size to the operator's left forefinger. Fourthly, forceps with supplementary handles by which the stone may be compressed with hair-light pressure while increased force is brought to bear on the main arms of the forceps; admitting of the separation of the process of compression and traction; as well as relaxation of the hold of the stone, for the purpose of adjustment of the forceps to the stone, or gentleness of pinch, in case of the stone being of friable material."

The operation for stone performed with these instruments and in this way Mr. Gutteridge would desire to have known as "lithotomy made speedy and safe." Certainly in his own hands, when performed as we saw it, it is rightly so styled. It was done in a remarkably short time—less than half a minute,—and every step in the operation was executed with rapidity and precision. The boy has gone on perfectly well since the operation, and within forty-eight hours afterwards the urine was all voided by the natural passage. This, as is well known, is an unusually short time between the operation and the safety of the patient, which is secured by the flow of urine along the urethra. Yesterday, the eleventh day after the operation, the patient returned to his home in Staffordshire, perfectly cured. We sincerely hope we shall have other opportunities of seeing Mr. Gutteridge cut for stone.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 15, 1873.

THE GUINEA FEE.

In a recent number (October 18, 1873) we took occasion to discuss briefly the subject of professional fees. We showed that, owing to the marked depreciation in the value of gold in recent times, the traditional guinea fee represents at present only a fraction of the real value which it possessed during earlier historical periods. We assumed that the existence of a general augmentation of personal and domestic expenditure would be universally admitted, and expressed our belief that the guinea of the time of William and Mary was equal to at least three of our sovereigns in exchangeable value for the leading commodities of life. From these considerations we drew the conclusion that though nominally our leading physicians and surgeons receive the same fee as their predecessors of the eighteenth and latter part of the seventeenth centuries, yet in reality the present is equal to only one-third of the original guinea fee. The contrast has already awakened a considerable amount of attention, which, if the profession is alive to its own interests, and desirous of maintaining its position of honourable independence, will not abate till the effort to restore to medicine its equitable emolument and consequent social position has been crowned with success.

We have heard, however, in various quarters this statement discredited, and it is on this account we have thought it worth while to adduce in our present article indisputable evidence of the prices paid for the necessaries of life at a time when Radcliffe consoled himself at the loss of five thousand guineas by saying it would be repaired by going up an equal number of pairs of stairs, and when Radcliffe's neighbour, Dr. Gibbons, received £1000 a year from the overflow of patients who were not able to gain admission to the great physician of the day.

The guinea fee then was prevalent during the reign of Queen Anne, and there is every reason to believe that it dates from a still earlier period. This has an important bearing on the case, because during the last years of the seventeenth century, immediately before the commencement of the reign of Queen Anne, there was a marked increase(a) in the price of all commodities and a reduction in the value of labour. If the guinea fee dates its origin from the seventeenth century, when, owing to the worthless state of the silver coinage resulting from age and constant use, one guinea was commonly exchanged for 30s. in silver,(b) when beef was 1s. 6d. per eight pounds, and(c) artisans' wages were 6d. a day, instead of from the eighteenth century, when beef had reached the price of 3s.(d) for eight pounds, and artisans' wages had risen to 1s. 4d. to 1s. 6d. a day,(e) the only inference is that even in the eighteenth century the guinea fee should have been substituted by a fee proportionate to the altered rates of living and remuneration. But, even granting that we are to estimate the value of a guinea fee by the amount of provisions and other necessary commodities purchasable by it during the reign of Queen Anne, or even during the first half of the eighteenth century, we think we shall be able to prove that our original statement regarding the value of a guinea fee is more than justified by historical evidence.

The relative price of butchers' meat in the eighteenth century and now affords a fair index of the price of other marketable materials. During the first half of the last century bullocks were valued at an average of about £3 a head. In 1712 we have "four oxen £18," and in 1723 "four bullocks £8,"(f) and many similar entries. Though these oxen were certainly not, either in weight or quality,(g) equal to our

(a) "A History of Prices and of the State of the Circulation from 1793 to 1837," by Thomas Tooke, F.R.S. Vol. i., p. 25.

(b) *Ibid.*, p. 26.

(c) "Facts and Observations on Wages and Prices in England during the Sixteenth and Seventeenth Centuries, principally derived from Fabric Rolls of York Minster and the Shuttleworth Household Books," by the Rev. E. T. Rogers, M.A., Tooke Professor of Economic Science and Statistics in King's College, London. Read before Section F of the British Association, September 3, 1861.

(d) "Statement of the Number of Acres in the United Kingdom; Nature of Seasons, annual average Prices of Corn and other Agricultural Produce, etc.," compiled by G. N. Driver, Esq., Richmond-terrace, for private circulation amongst land surveyors. *Journal of the Statistical Society*, vol. i., p. 58. Also *Smithfield Market List.*

(e) "Chronicon pretiosum Snathese; or, Lists of Prices of various kinds of Agricultural Produce and of other Articles in the Ecclesiastical Peculiar of Snaith in the West Riding of Yorkshire in the Sixteenth, Seventeenth, and Eighteenth Centuries," compiled from the Probate Records of the Peculiar by the Rev. C. B. Robinson, M.A. *Quarterly Journal of the Statistical Society*, vol. xxi., p. 218.

(f) "Chronicon pretiosum Snathese," *ut supra*, p. 403.

(g) Professor Rogers points out that in the sixteenth and seventeenth centuries meat must have been very lean and poor in quality, as suet was four times as dear as meat itself.

present cattle bringing from £20 to £30 a head; yet a certain allowance has also to be made to their credit. Compared with other commodities, oxen in the early part of the eighteenth century were dear.(h) This arose from the fact that they were marketable not only for butchering purposes, but as beasts of traction and burden. In fact, notwithstanding their very low price, they were actually dearer than horses; so that on this and various other considerations, which we cannot at present adduce, we are justified in stating that in 1700-15 beef was little, if anything, more than one-tenth of its present price.

Then with regard to mutton. In 1707 sheep were worth 4s. a head; in 1724 they had risen to 5s., and in 1751 to 6s. 6d. a head.(i) At present two guineas would not, we imagine, be considered too high an average. In fact, in a Scotch paper taken up at random we find them quoted as high as 52s. 6d. Here, again, we may safely affirm that mutton in the early half of the eighteenth century was valued at one-tenth of its present price. It is a remarkable circumstance that during the eighteenth century the average price of wheat was almost the same as during the seventeenth.(k) Since then, however, wheat has advanced 33 per cent.(l) Poultry, during the first half of the last century, was almost ridiculously cheap. About the year 1700 two geese and a gander were sold for 4s. the lot; a cock and four hens went for 2s.; while eight ducks cost the small sum of 2s. 8d. In 1712 two geese and a gander were sold for 3s., and even as late as 1749 five ducks and a drake were knocked down at 2s. the lot.(m) This information throws some significance into the phrase to "make ducks and drakes" of a thing, for these bipeds appear to have been looked upon as the lowest edible form of animal existence. It is unnecessary to compare these with present prices. At that time a one-guinea fee would have purchased the stock of a complete poultry-yard.

Coals, shortly before the commencement of the reign of Queen Anne, cost 9s. a load—presumably about a ton.(n) As already mentioned, horses were in 1702 cheaper than oxen. They averaged £2 a piece, and subsequently rose, till in 1750 they were worth £4. From various items regarding "trotting" horses we can infer that a serviceable animal to drive would cost about £10.(o) In the year 1700 hay was 6s. 8d. a load, and in 1750 had risen to 15s.(p)

Any comparison of prices current in the early part of the eighteenth century with the present prices would be incomplete without a reference to the relative value of wearing apparel. Now, it fortunately happens that an honest Yorkshireman by the name of Hopkinson has had a very complete copy of his tailor's bill(q) transmitted to posterity. Mr. Hopkinson's liabilities were contracted about the year 1700. For one coat and waistcoat he paid, or rather it was intended that he should pay, 1s. 6d.; a pair of "britches" were put down at 6d.; and for a lot embracing two hats, a pair of stockings, and a pair of shoes, the purchaser was asked to pay the modest sum of 2s. 6d.(r) Mr. Hopkinson was a Yorkshireman, and *à priori* purchased his clothing on the most advantageous terms. Moreover, the clothes purchased may not have been of a very high class, either in material or in construction; but there is external evidence to show that his bill represents pretty closely the value of wearing apparel at that time.(s)

In 1708 bloodletting cost 6d., but by whom the operation was performed is not mentioned. With regard to the price of drugs, it is recorded that in the same year an employer of labour paid "for brimston and jollup for Jane, 8d." The services of the country practitioner do not seem to have had a very high money value, if one can judge by an entry—"To ye surgeon for cuering a bile, 6d."(t)

To complete the comparison of the value of articles of diet in the early part of the eighteenth century and now, it is necessary to add that the ordinary price of ale was 9d. a gallon,(u) and claret, as near as we can discover, had reached the still moderate price of £6 6s. a hogshead. Previously to 1735, when a duty of 20s. a gallon was imposed by Walpole on spirituous liquors, English brandy was 4s. a gallon, sherry was 3s. a gallon, while port was 5s. 4d.;(v) and there is reason to think that at this time the higher-priced drinks were not in great demand.

After this statement of facts, it is unnecessary to contrast formally prices current during the reign of Queen Anne and the first two Georges with prices prevalent in our own time. If our quotations are approximately correct, our statement that living is now three times as dear as when the guinea fee system was established, instead of exceeding the truth, falls considerably short of it. And though at that time prices varied in different places and at different dates more than now, we believe that our statements represent average quotations during the different dates specified.

During the latter half of the eighteenth century there was a marked advance in the list of prices. So much was this the case, that, as far as the mere price of commodities is concerned, the year 1799 was a much dearer year than 1869. In 1779 the market value of about fifty leading articles of commerce was, compared with prices in 1869, in the ratio of 202 to 119.(w) But, as we shall have occasion to show, other considerations than the mere advanced prices of leading commodities must be entertained before we can reach correct conclusions regarding the variations in the value of money. From 1750 to 1770 beef was sold at 1½d., 3d., and 4½d. per lb., according to quality; mutton fetched 2¼d., 3½d., and 4d.; fowls were sold at 2¾d., 3½d., and 8d. each, geese at 1s., turkeys at 2s. to 2s. 6d., and hares at 1s.; ducks had established their reputation to the extent of being valued at from 4d. to 9d. each as articles of diet; butter was sold at 4½d., 6d., and 11½d. per lb. of eighteen ounces; cream fetched 3d., 4d., and 5d. a pint; lobsters were valued at 1½d., 2d., and 4d. each; and oysters could be bought at 8d. per 100.(x) A turbot cost 6d., and a pair of soles could be bought for 4½d. Ale was 1s. a gallon; but spirituous liquors appear to have fetched a high price.(y)

At these rates a very substantial dinner with fish, fowls, joint, pudding, cheese, beer, etc., could be provided for eight persons at a cost of 4s. in all. At the same period coals cost 7½d., 10d., and 11d. per Cornish bushel, which was equal to three Winchester bushels. Hay was 2s. 6d. a cwt.(z) Wearing apparel was almost twice as dear as in the early part of the century. Labour was better paid than previously, but

(h) "Chronicon pretiosum Snathese," *ut supra*, p. 403.
(i) *Ibid.*, p. 405.
(k) "Progressive Value of Money," by Arthur Young, p. 75.
(l) Tables in Tooke and Newmarsh's "History of Prices," vol. vi., p. 433 *et postea*.
(m) "Chronicon pretiosum Snathese," p. 406.
(n) *Ibid.*, p. 394.
(o) *Ibid.*, p. 398.
(p) *Journal of Statistical Society*, vol. xxi., p. 384.
(q) *Ibid.*, p. 418.
(r) It appears that Hopkinson was a weaver, but also, if one may judge by the nature of his transactions, a small employer of labour. The same merchant charges against him "4 loomes with all the other working tooles belonging to his traid, £6." The apparel recorded in the text very probably consisted of working clothes. The "britches" were probably made of leather, as these are frequently entered at about the price paid by Hopkinson. "Two coats more, 10s." is an entry which, as indicating the value of Hopkinson's holiday or Sunday clothing, may afford a nearer indication of the value of respectable attire. The same merchant appears to have settled Hopkinson's funeral expenses, which, including "Crowner's fees," were £1 12s. 6d.
(s) Thus, in 1697, gloves are entered at 4s. a dozen; in 1708, a hat, 1s. 10d.; in 1732, two wigs, 2s.; in 1708, a yard of Scotch cloth and making, 1s. 7d.; one dozen stockings, 2s.; three dozen women's ditto, 18s.
(t) "Chronicon pretiosum Snathese," *ut supra*, p. 418.
(u) *Ibid.*, p. 418.
(v) "Statistical Account of the Parish of Madron, containing the Borough of Penzance, in Cornwall." – *Journal of the Statistical Society*, vol. ii., p. 198.
(w) Professor W. Stanley Jevons, in the *Economist*, May 8, 1869.
(x) "Book of Expenses, kept by a Clergyman near Penzance."—*Statistical Journal*, vol. ii., p. 214.
(y) *Ibid.*, p. 215.
(z) *Ibid.*, p. 215.

still wages appear to have been very low. A gardener received 1s. 6d. a day; a tailor received 8d.; artisans 1s. 4d., and women engaged in outdoor labour 3d. a day.(a) The wages of a maid-servant were £2 10s. per annum, and of a man-servant £4 5s.(b) Wheat retained the same average, but began to rise soon after this period.(c) Such horses as had been sold in 1750 for £4 were in 1783 worth from £6 to £8.(d) During the last two decades of the eighteenth century there commenced a general rise in prices, which continued till the year 1815. Between 1790 and 1800, butchers' meat was doubled in price, and wheat more than doubled.(e) In taking a more general view we find that during the last decade of the eighteenth and the first decade of the nineteenth century the price of the fifty leading commodities of life advanced almost 100 per cent.(f)

From 1815 to 1849 the tendency of prices was to fall, but, owing to the influence of the discoveries in Australia and California, the value of gold was so much depreciated, that since 1849 the cost of articles necessary for the maintenance of life has been gradually rising.(g) Professor Jevons affirms that between 1849 and 1865 prices had risen 21 per cent., and that beef and mutton had advanced to the extent of about 1s. per eight lbs.(h) Compare the prices of 1840 to 1849 with the present prices; the market price of the carcase of beef, "sinking the offal," was 5d. per lb.,(i) as compared with 9d., the present price. During the same decade the market price of mutton was 6¼d. per lb., as compared with 9¾d., the present price. At the same time milk was supplied to St. Thomas's Hospital from Romford in Essex at a price varying from 9d. to 1s. per gallon; eggs were sold at twenty for 1s., and good butter was retailed at 10d. per lb.(k) Thus, only twenty years ago beef was little more than one-half, and mutton two-thirds its present price;(l) milk cost little more than half that 5d. per quart which contemporary milkmen claim as the value of the pure fluid; while eggs and butter were less than half their present price. At the same time colliers' weekly wages varied throughout the decade from 19s. 10d. to 16s. 3d.,(m) which at present is little more than their daily pay. Masons, blacksmiths, and carpenters earned from 12s. 7d. to 14s. 9d. per week—only about one-third of their present earnings.(n)

Though the prices of food and the remuneration of all classes, whether artisans, tradesmen, or members of all learned professions, except the medical, had greatly increased at the period at which we have now arrived, the guinea fee—established when all personal and domestic expenses were almost as nothing compared with those of 1840-50—continued to be regarded as the proper remuneration for the advice of our leading physicians and surgeons. And now that prices are so much higher than in 1840-50, and men of all classes enjoy incomes greatly in advance of those of their predecessors of the last generation, the guinea fee still holds its position in our system.

The only argument which can be adduced in opposition to our statement relative to the increased expense of living is that in the beginning of the present century the fifty leading articles of food were very much dearer than now. But we hold that it is fallacious to judge the matter exclusively by that circumstance. In the earlier years of the century, physicians and surgeons had to live in the same quarter with tradesmen and professional men with incomes much smaller than the same classes now enjoy. Under these circumstances they could easily maintain their proper social position even when provisions were dearer than now. But under the present circumstances the members of a profession, whose usefulness depends to a certain extent upon the maintenance of its social position, cannot fail to be prejudicially affected unless its higher ranks be remunerated in proportion to the requirements of the time and the current value of skilled and unskilled labour.(o) The investigation of the history of prices shows that a moderate surplus income is necessary for the promotion of social and moral integrity and intellectual culture. The man whose income barely covers his outlay will be much more likely to adopt questionable methods of procuring money than one whose income is more than equal to his requirements. In the medical profession especially it is necessary to remember this, as no other profession so essentially requires a strict adherence to the principles of honour to prevent it degenerating not only into a trade, but into a very questionable trade.

During the course of the present century another agency has been at work in inducing a combination of conditions such as renders it imperative that people in respectable grades of society should have proportionate incomes. The progress of invention and manufacture has greatly increased the number of articles of taste and luxury; and though that may appear at first sight to be a small outlet for the spending of money, yet it is one of those small outlets whose constant stream leads to a leakage of no inconsiderable magnitude.

Independent of the many considerations which we have adduced in support of our own claim for an increase of the consulting fee, there are others on which we cannot enter. For instance, there are increased house-rent,(p) increased value of higher education, increased expenses of individual members of families, and many similar and self-evident conditions. We would refer such of our readers as are desirous of further information to independent sources of investigation. They will certainly find that, with an intermission due to exceptional agencies, the cost of living has gradually increased throughout the course of modern history, and that since 1849 there has been a steady advance in prices associated with conditions directly necessitating a still further advance.(q) Up to thirty

(a) "It is probable that some of these prices included board, which was valued at 10s. a week in case of ploughmen, as in other places men-tailors are said to have earned 13s., and women-tailors 7s. a week."—P. 217.

(b) This was in a gentleman's family. In the year 1839 (which was a cheap year), domestic wages had in the same district reached double these sums and were steadily increasing.

(c) Tooke's "History of Prices."

(d) "Chronicon pretiosum Snathese."

(e) "Statistical Table," by G. N. Driver.

(f) Professor Jevons, in *Economist*. In 1799, beef at Smithfield was 3s. to 3s. 4d. for 8 lbs, Mutton 3s. to 4s. 2d.

(g) Professor Jevons, *ut supra*.

(h) "On the Variations of Prices and the Value of the Currency since 1782."—Professor Jevons, in *Statistical Journal*, vol. xviii., p. 308.

(i) *Newgate Market List;* primest Scots beef quoted by G. R. Porter, F.R.S., in paper read before British Association, 1849; also *Prince's Price Current*.

(k) Paper by G. R. Porter, F.R.S., "On a Comparative Statement of Prices and Wages during the Years from 1842-49."

(l) "Results of the Trade of the United Kingdom during the year 1860, with Statements and Observations relative to the Course of Prices since the year 1814." By William Newmarch, Editor of the *Journal of the Statistical Society*. At Newgate Market the highest quotations for beef were—in 1851, 32d. and 36d. per eight lbs.; in 1861, 50d. and 52d. The Metropolitan Market prices in the *Times* for Tuesday, November 11, 1873, taken at random, are 74d. to 78d. Mutton was, at Newgate, in 1851, 44d. to 46d.; in 1861, 56d. to 60d.; and in Metropolitan Meat Market of 11th inst., 78d. to 82d. per eight lbs. Previous to this date (11th inst.) prices have been for some time rather lower than usual, even though it is understood that Government has been purchasing for the Ashantee expedition.

(m) Porter's "Comparative Statement of Prices and Wages."

(n) In Lancashire, wages between 1839 and 1859 increased to an extent varying in different trades from 10 to 45 per cent. Between 1851 and 1861 wages in the building trade had increased 10 per cent., and since then a constant advance has been going on.—See "The Increase of Material Prosperity, etc.," by J. H. Elliott, *Statistical Journal*, vol. xxxi., p. 365.

(o) "While statisticians are disputing, society has practically accepted the fact of a rise. The pay of the army is increased; the whole of the Civil Service and the staff of the Bank of England receive larger salaries; and, could the information be obtained, I believe the same change might be shown to have occurred in most private establishments."—Jevons, in *Economist*.

(p) There is a difficulty in determining advances in house-rents, as differences of accommodation cannot in comparisons always be taken into account. Professor Rogers found, however, that during the course of the sixteenth and seventeenth centuries rents had been doubled twice in 170 years. It is fair to surmise that during the eighteenth and nineteenth centuries there has been at least a proportionate advance. Also, Tooke's "History of Prices," vol. i., p. 313.

(q) "Since then—1849, the first year of the gold discoveries in Australia and California—the course of prices seems to have been entirely altered, and a permanent rise has been established"—Professor Jevons. Jevons' calculations are based on the price-lists of the *Economist* and the tables in Tooke's "History of Prices."

years ago Ireland alone used to supply us with the meat we required beyond our own native produce; but at present, while we import the full surplus food of every country in Europe and of America,(r) Australian produce has recently been introduced in the attempt to meet a demand which, notwithstanding high prices, continues to increase.

Under such circumstances involving present high prices and threatening future advances, the medical profession ought rightfully to claim a modification of fees, so that our leading physicians and surgeons may receive for their services a fee equivalent—not in name, but in reality—to that prevalent in comparatively recent periods, when one guinea was equal to at least three of our sovereigns; and members of the profession not in consulting practice may then also obtain a proportionate payment for their services.

THE PHYSIOLOGY OF VISION.

I.—The Identity of Light and Heat with other varieties of Force.

When we were at school we used to be taught that light, heat, and electricity were imponderable bodies—matter, that is, over which gravitation had no power, and which consequently could not be weighed. This corpuscular or material theory of light had its origin with Newton, whose genius did much to commend it to the minds of men, and was held up to the last even by such men as Sir David Brewster. But even before the days of Newton, that wonderful man Hooke had in his enunciated views shadowed forth a different idea, and had in some degree anticipated the grandest of modern generalisations—the unity and indestructibility of force. He is thus quoted by Tyndall: (a)—"First," he says, "that all kinds of fiery, burning bodies have their parts in motion, I think will be very easily granted to me; that the spark struck from a flint and steel is in rapid agitation, I have elsewhere made probable; that heat argues a motion of the internal parts is (as I said before) generally granted; and that in all extremely hot shining bodies there is a very quick motion that causes light, as well as a more robust that causes heat, may be argued from the celerity wherewith the bodies are dissolved. Next, it must be a vibrative motion." Here we have plainly enough shadowed forth the great modern doctrine of the identity of light and heat, or rather their common origin in vibratory motion. All this, however, was forgotten and eclipsed by the grand discoveries by Sir Isaac Newton of the nature and character of gravitation and of the complexity of white light. Nor did even the true nature of light occur to anyone subsequently, till the whole thing was worked out in a masterly manner by Dr. Thomas Young, who first and finally established the true nature of light, as wave-motion or vibration in an ether otherwise imperceptible to us.

About the year 1840, working in two opposite directions, a German country doctor and a Manchester manufacturer nearly simultaneously came to a momentous conclusion—viz., that the amount of force available in nature does not vary; it may change its mode of manifestation, and so seem to cease to exist, but in reality is indestructible. True, the doctrine did not assume a perfect form all at once; but once announced by Dr. Mayer and Joule, some thirty years ago, it has not ceased to rivet the attention of the later investigators, from whose hands it has issued even mathematically correct, and "Joule's unit," as it is called, is now universally used in engineering science as the basis for calculating how much work can be done by a given quantity of heat. For the due understanding of the transformation of force, we must first aim at elucidating the simplest modes of force. We all know that heavy bodies are attracted by the earth to a degree which admits of being measured, and which we call their weight, and that this tendency may be utilised and converted into work—say in raising another body to a given height; and it is this which, in a certain way, is taken as the basis or unit already spoken of. A pound weight falling one foot generates a force which, could it be applied undiminished for the purpose, would suffice to raise a pound weight of any substance through the space of one foot. This is the unit of work; it is called the foot-pound. Now, Joule's researches aimed at measuring exactly the amount of heat which could be generated by the fall of a given weight through a given distance; and by means of appropriate apparatus he was able to prove that the weight of one pound falling through a height of 772 feet was able to raise a given weight of water 1° Fahrenheit. The heat was in this case produced by the old familiar process of friction. Thus it was shown that work might be made to appear as heat; and the converse process of converting work into heat is familiarly illustrated to us by the steam-engine. But in the last case another mode of force is visible. The heat used is generated by combustion; and combustion is essentially a chemical process in this case, consisting of the oxidation of carbon. Here, however, another fact had to be determined—viz., whether the heat developed by the oxidation of carbon is always the same in the end whether the oxidation goes on quickly or slowly. About this there is now no reasonable doubt. But is it possible to again render the carbonic acid produced by this combustion a source of active force? for if not, then this force is permanently locked up—in fact, destroyed. In reality we see the converse process going on around us day by day in vegetable life, where carbonic acid is constantly being absorbed, the carbon fixed as wood, and so again rendered a potential source of energy. This can be still more clearly demonstrated in the case of hydrogen, which, when oxidised, produces great heat, the new compound being water; but water may be decomposed, and hydrogen and oxygen set free in a condition capable of again yielding the mode of force called heat by their chemical union. This is done by the mode of force called galvanism or electricity, which, in its turn, is generated by the chemical action of sulphuric acid on zinc, or some similar decomposition essentially chemical in its nature; so that we have here the chemical force converted into electricity, and the electric force acting so upon water as to render its components once more chemically active.

The cycle is complete. Work can be made to give rise to heat, and heat to work; chemical force may give rise to heat or to electricity; whilst this last may appear as chemical force, as heat, and as light. We have said little of the assumed identity of heat and light, because they are so intimately connected that it is harder to conceive of them apart than to conceive them of common origin. The rays of the sun are at once light- and heat-giving; all our artificial means of lighting also generate heat, and, if we concentrate the sun's light-giving rays, we do so with what is emphatically called a burning-glass. It is only when we call to mind that objects may give out heat before they are heated red-hot that we realise the fact that they are in some respects dissimilar. Nevertheless, they are in essence the same: both consist of vibrations or waves, both are contained in the solar rays—the only difference being that the waves which give rise to the sensation of heat are longer than those that give rise to the sensation of light; and whereas the long heat-waves can be appreciated by any sentient surface of the body, the shorter light-waves require a special organ for their due appreciation, which is the sentient surface we call the retina. But besides these—the long heat-waves and the medium light-waves—there are still others too short to

(r) Messrs. Edmund Phillips and Son's "Report on the Provision Trade," 1859.

(a) "Six Lectures on Light, delivered in America in 1872-73, by John Tyndall, LL.D., F.R.S., Professor of Natural Philosophy in the Royal Institution." London: Longmans. Pp. 277.

produce any effect on the retina, though they can manifest themselves by their chemical effects. These are the so-called chemical or actinic rays, to which the effects of photography are due, but which are not appreciable by our unaided senses. Thus we have light, heat, and chemical action generated by rays identical in kind, origin, and substance, differing only in their wave-lengths, and to which alone is due the difference in their physical effects.

THE WEEK.

TOPICS OF THE DAY.

It was announced in the *Gazette* of Friday last that "the Queen has been pleased to appoint George Burrows, M.D., F.R.S., and Physician-Extraordinary to her Majesty, to be one of the Physicians-in-Ordinary to her Majesty, in the room of Sir Henry Holland, Bart., M.D., F.R.S., deceased. The Queen has also been pleased to appoint Edward Henry Sieveking, M.D., to be one of her Majesty's Physicians-Extraordinary." The whole profession will be gratified by the new honour conferred on the much-esteemed President of the Royal College of Physicians. There is no member of our common profession who possesses more thoroughly and more deservedly the confidence of his brethren than does Dr. Burrows. Of Dr. Sieveking's appointment we spoke last week. The Court medical appointments of the present reign reflect the highest credit on the advisers of the Sovereign in these matters.

We regret to hear that Mr. Quain contemplates retirement from the representation of the Royal College of Surgeons in the General Medical Council. We believe that the resignation of Mr. Quain will prove a loss to the General Medical Council and to the College of Surgeons that will not be easily repaired. No member of that body has had more thoroughly at heart the interests both of the medical profession and of the College which he has most worthily represented.

From some expressions which fell from Mr. Bradford, the representative of the Society of Apothecaries in the General Medical Council, in his speech at the annual dinner on Lord Mayor's-day at Apothecaries' Hall, we gather that it is the intention of the Society to obtain from Parliament, as soon as possible, the necessary powers to join in the Conjoint Examination for England and Wales. We believe that the assent of the Government has already been asked and obtained, and that an enabling Bill is prepared, and will be passed through Parliament in the next session. This being done, the only question will be as to the course which will be pursued in Scotland and Ireland. If the profession in the sister countries will agree to establish conjoint boards similar as regards fee, requirements, and standard of examination to that which will be established in England, there can be no doubt the whole profession and the public will be benefited. But we fail to see that any benefit will accrue from partial and imperfect combinations, and we should look with dismay at the erection of one portal in England, whilst two remain open in Ireland, and at least eight continue to compete for the "siller" of the medical student in Scotland.

The following document is in course of signature, and has already been signed by many of the leading medical and other inhabitants of the district supplied by the Dairy Reform Company:—

"To Charles Murchison, M.D., F.R.S., LL.D.—We, the undersigned, late customers of the Dairy Reform Company, and others interested in public health and pure milk supply, desire publicly to express to you our sense of the skill and perseverance with which you traced and established the cause of the late alarming and fatal epidemic of typhoid fever. We owe to you the vigorous proceedings which forced an inquiry and arrested the epidemic. We wish to express our sympathy with you for the serious illness of several members of your family, and our indignation at the manner in which you have been publicly attacked by the manager and secretary of the Dairy Reform Company."

From Scotland there is another story of the reappearance of the sea-serpent. The supposed marine saurian has been seen on three different occasions—by two ladies from Dunrobin, by Dr. Soutar, and by the Rev. J. M. Jonas, of Golspie, a gentleman who has some reputation as a naturalist. Dr. Soutar describes it as apparently about forty or fifty feet long, "rushing about near the shore and raising a neck about four feet above water." A drawing made of this frisky apparition represents its back composed of a series of concentric rings, with a long neck and a pair of ears similar to a horse's. Mr. Jonas supposes it to be a plesiosaurus or some allied form. Mr. Frank Buckland suggests the more probable explanation of a long line of porpoises or seals, supposing the apparition to have been living; if dead, of a mast encased with seaweed.

Mr. Richard Davy has been appointed Surgeon to the Westminster Hospital, in the place of Mr. E. Legge Pearse, resigned.

Mr. Francis Mason has been appointed Consulting Surgeon to the St. Pancras and Northern Dispensary, in the place of the late Mr. Bishop. Mr. Mason was Surgeon to the Dispensary some years ago.

We this week have the pleasure of publishing a very valuable paper on the late epidemic of "dengue" in Madras, from the pen of Moodeen Sheriff, a Mahomedan gentleman, and Surgeon to the Triplicane Hospital, who has himself performed the journey to Mecca. The importation of the dengue from Arabia to India will constitute an interesting page in a future history of epidemics.

THE WAR ON THE GOLD COAST.

There seems to be little doubt that all the details of the Ashantee War were deliberated on at the Cabinet Council on Monday last; and, from the anticipatory preparations which have since been quietly going on, it would appear as though the Government were fully prepared to act at once upon the requisitions which it is fully believed the West African mail, due on the 15th inst., will convey.

The troop-ships *Himalaya* and *Tamar* will leave Plymouth on the 15th inst. for Queenstown, where it is expected they will embark the 2nd Battalion of the 23rd Regiment and the 2nd Battalion of the Rifle Brigade. These regiments have called in all their detachments, have received their medical equipment, and are kept in readiness to go on board at extremely short notice. It is rumoured that each of these corps will have five medical officers attached to it, so as to insure a thorough medical supervision.

Surgeon-Major T. Basset Reid, has sailed in the mail steamer of the 5th inst., to reinforce the medical staff at present doing duty at Cape Coast Castle, and a large number of army medical officers have been warned to hold themselves in readiness to embark for the same destination. Probably no expeditionary force ever yet left this country with so strong a contingent of medical men attached to it as will be the case in the present instance, should the contemplated arrangements be duly carried out.

We hear that several of the officers upon Sir Garnet Wolseley's staff provided themselves before starting with the prescription for bilious remittent fever so strongly recommended by Dr. Livingstone. It will perhaps be remembered that in his interesting volume on the Zambesi expedition the Doctor published the ingredients of a pill which was found to be of the greatest service to everyone accompanying him. The formula includes resin of jalap, powdered rhubarb, quinine, and calomel, and was always administered previous to the employment of quinine.

Hypodermic injection will no doubt be largely resorted to in the treatment of the sick on the Coast. In many cases the stomach rejects quinine almost as soon as taken, and, as its exhibition by the enema is very unsatisfactory, the only other method of employing it is by hypodermic injection. Ample supplies of quinine must be forwarded, if not already provided, as it is being generally administered, prophylactically, to all Europeans who have arrived on the Coast.

Whatever may be the result of the campaign, the Government would appear to be perfectly unanimous as to the means adopted for prosecuting it, and tolerably easy as regards a satisfactory termination; for it is semi-officially announced that, though Ministers will remain in town, there will probably be no more Cabinet Councils held for some time after the end of the present month. This confidence should be a good augury for the ultimate success of our arms.

UNIVERSITY OF DUBLIN.

On Saturday, November 8, the Board of Trinity College appointed Edward Halloran Bennett, M.D., University Anatomist, Professor of Surgery in the room of Robert William Smith, M.D., deceased. This appointment has given general satisfaction, more especially in the School of Physic in Ireland, which has been the scene of Dr. Bennett's labours for many years. The post of University Anatomist, thus rendered vacant, has, we believe, been offered to Dr. Thomas Evelyn Little, one of the Demonstrators of Anatomy in the School of Physic, and a very distinguished graduate of the University.

THE EDINBURGH UNIVERSITY CLUB.

On Wednesday evening the members of this Club assembled at St. James's Hall, Piccadilly, according to custom, to dine together for the fourth time during the present year. Between forty and fifty gentlemen were present, including some visitors of distinction, among whom were Mr. Savory, Professor Wanklyn, and the Rev. Dr. Gordon. Dr. Wilbraham Falconer, of Bath, occupied the chair. The toast of "Prosperity to our Alma Mater" was proposed by Dr. George Harley. In the course of his remarks Dr. Harley alluded to a statement recently published by the authorities of the Dublin University, to the effect that that University was the first to introduce clinical medicine as a systematic course of instruction for students at the bedside, when a class of this sort was instituted at the University towards the close of the last century. Dr. Harley had taken the trouble to refute this statement by referring to certain documents to show that Professor Cullen conducted a class of Clinical Medicine about the year 1780; and Dr. Sharpey had proved that a chair of Clinical Medicine in the University of Edinburgh was founded about the year 1748. Dr. Lyon Playfair, C.B., M.P., referred to the representation of the University *àpropos* of the coming election. For all he knew, before the Club met again he would have to seek for a renewal of their confidence as their representative member in the House of Commons. The constituency when he was elected numbered 5000 members on the Council of the University. He had recently revised these numbers, and found that while there had been considerable changes and additions the constituency remained numerically the same. Dr. Playfair referred to the growth and development of the universities in Scotland, and the ever-increasing numbers of English students availing themselves of the Scotch degrees. The authorities of St. Andrews University, having watched the rapid increase of the neighbouring town of Dundee, had resolved to establish an affiliated college in this important centre of commerce for the East of Scotland. The Town Council of Glasgow were now erecting a magnificent building, which would stand comparison with, and in many respects surpass, any of the university buildings in the United Kingdom. Dr. Playfair alluded with pride to the confidence hitherto placed in him, and to the marked absence of party, political, or religious bias in a mixed constituency whose object it was to return a man who would best promote the interests of the University in Parliament. Dr. Playfair concluded by saying that some reforms in the charter of the University, which had been long contemplated, had made such progress that they had now only to go through certain forms before they would become law. The dinner was served in the usual Scotch style, interspersed with some lively Scotch songs.

THE MIDDLESEX HOSPITAL MEDICAL SOCIETY.

The opening meeting of the 100th session of this Society was held in the Board-room of the Hospital on Thursday evening, November 5. Mr. Andrew Clark, the President, occupied the chair, and Mr. Smith, the House-Surgeon, read a paper on "Erysipelas" to a large meeting, consisting of over sixty students, most of the resident officers, and some few of the staff of the Hospital. Before the paper of the evening was read the President addressed some remarks to the meeting bearing upon the advantages which societies of the kind offered to students, more especially when—as is the case at the Middlesex Hospital Society—some of the lecturers and members of the staff took an active and personal interest in the proceedings. He then stated that during the past session there had been many very excellent papers read and discussed, numerous and instructive pathological specimens had been exhibited, and the meetings had been well attended throughout. He was glad to state, too, that the treasurer had a satisfactory report to make. After throwing out some hints as to subjects upon which papers might be written and with advantage brought under the notice of the Society, he called on Mr. Hammond Smith to read his paper on "Erysipelas." Mr. Smith dwelt more particularly upon the etiology of erysipelas, and referred to the outbreaks which occurred in the military hospitals during the late Franco-Prussian war, also to the repeated occurrence of the disease in one particular bed in the Middlesex Hospital. He brought some evidence to support the view that there is a close relationship, if not an actual identity of nature, between erysipelas and puerperal fever, and he concluded his essay by laying stress on the importance, in the treatment of the disease of paying attention to general rules of hygiene rather than to the particular drug that should be administered internally, or the styptic that should be applied externally. We understand that this Society intends to celebrate the centenary of its existence by a *soirée* in January.

MEMORIAL FROM INDIAN MEDICAL OFFICERS.

A memorial (which appeared in this journal on October 25) praying for the redress of certain grievances has just been presented to the Secretary of State for War by the Surgeons-Major and Surgeons of the Army Medical Department serving in India, signed by 213 out of 306 members of that body in active service. The principal grievances detailed in the memorial are the following:—That the Army Medical Warrant of March, 1873, has inflicted material injury upon the Surgeons-Major and Surgeons by withdrawing many rights and privileges; that a large number of the memorialists have been suddenly deprived of appointments in regiments, to their positive loss of income; that the relative rank of medical officers is lower than it should be; that selection for promotion is the rule and not the exception, at the expense of merit and long service; that selection is placed in the hands of the Commander-in-Chief, instead of being vested, as it should be, in the head of the memorialists' own profession; that retiring allowances are calculated upon too low a scale, considering the increased cost of the necessaries of life; that administrative appointments are indefinitely prolonged; that the term of

leave granted is not sufficient; that the position of the memorialists at mess is false and unworthy; that military men are appointed governors of general hospitals, whereas such posts might with advantage be conferred on medical officers; and that there is no allowance to medical officers in charge of regiments and batteries of artillery.

THE LAST ILLNESS OF THE LATE EMPEROR NAPOLEON.

At a supper in connexion with the Midland Medical Association at Birmingham, on Saturday last, Sir Henry Thompson referred to Mr. Gamgee's allusion to one subject (the death of the Emperor Napoleon), which, he said, was the only one upon which he (Sir Henry) must not utter a word. He imagined they all valued, as one of the highest qualities of members of their profession, the utter impossibility of anyone being able to get out of them that which had been committed to their care. It was utterly impossible for him to reply to the inuendoes which one found in journals and abroad. With regard to the case to which Mr. Gamgee had referred, if it had been the case of Smith, Brown, or Jones, they knew he should not speak about it for the world; and how could he about that case? But the time would come—and he should demand that time—for those charged with making known what was to be known about the case, to do so. After all, it was a plain, straightforward case, such as they and he saw in the hospital every month or two; but the position of the personage made it so much more interesting. When the time did come—and it would come one of these days,—he should insist that all the particulars of the case should be made known, and he should not flinch from any verdict which his professional brethren might give. He was ready to rest any reputation he might have upon everything he did in that case; and he might venture to say, in connexion therewith, that he did not look back with regret upon anything he counselled or did, and that he should be able to prove when the time came. It is to be regretted that any further delay should occur with reference to the publication of the details of the illness to which the late Emperor Napoleon succumbed. Taking for granted, as we do, and as Sir Henry Thompson says, that "it was a plain, straightforward case," we are at a loss to understand why the particulars have been so long withheld from the public. It is due to all parties concerned, but more particularly to Sir Henry Thompson himself, that an immediate stop should be put to rumours, however unfounded, which are, nevertheless, regarded by many as having some foundation in fact.

ANTI-VACCINATION IN MARYLEBONE VESTRY.

We should scarcely have thought that any, much less a metropolitan parochial body, nowadays could so far have supported the anti-vaccination theory as to refer the subject for serious inquiry to a parochial Sanitary Committee. Yet such a proposal has just been adopted by fourteen against twelve votes. The overwhelming evidence which has been from time to time produced in establishing the beneficial results of vaccination; the Act of Parliament legalising its compulsory enforcement after a most exhaustive inquiry by the Legislature, are to be subjects of an inquiry by the collective wisdom of a Marylebone Sanitary Committee. The following discussion took place on this subject at the Marylebone Vestry meeting, last week, on the return from the board of Guardians of the number of persons vaccinated during the past year being read:—Mr. Emery stated that he held in his hands an extract from medical journals showing that the most loathsome diseases were promulgated by vaccination, and he moved that the subject be discussed at the next meeting. Mr. Hiscox seconded the motion. Professor Marks said that discussing the question would lead to no practical result, and moved the next business. The motion was seconded and negatived. Mr. Taverner held that the subject was essentially a medical one, and ought to be considered by practical men capable of giving an opinion thereon; he would therefore ask Mr. Emery to refer it to the Sanitary Committee or a special committee. The Rev. C. J. P. Eyre (the rector) maintained that the question was one with which the Vestry had nothing whatever to do. An Act of Parliament had been passed, and the Vestry were bound to obey it. If any alterations were required, the parties complaining should endeavour to obtain a repeal of the Act. After some further discussion the motion was adopted on a division by fourteen to twelve.

ASSUMPTION OF MEDICAL TITLES.

A case of some interest, with reference to the assumption of titles by a registered practitioner, was decided last week at the Southwark Police-court. The prosecution was evidently a vindictive one, but, leaving out all extraneous matter, may be summed up in a few words. Dr. Archer Farr, of the Waterloo-road, is a L.R.C.P. Edin., Licentiate of the Faculty of Physicians and Surgeons Glasgow, and L.S.A., and it appears has been in the habit of signing certificates and styling himself "Physician and Surgeon." It was contended by the prosecution that he acted illegally in assuming these titles. It was eventually decided by Mr. Partridge, the presiding magistrate, that the defendant had not infringed the provisions of the Medical Act, and the case was very properly dismissed, with five guineas costs. We are glad to observe that Mr. Partridge took a common-sense view of the question, free from all nonsensical and technical points.

ANALYTICAL TESTS.

A deputation of master bakers waited on the Shoreditch Vestry last week to inform the Board that to their personal knowledge they knew instances where alum had been mixed with the flour in baking, which on analysation had been certified as being pure, while in other cases the bread which had been made purposely to test the analysis was stated to contain a quantity of alum that would be injurious to human health. These (as it would appear) contradictory certificates had not been obtained from the parochial analyst, but from Dr. Letheby and Professor Gardner, of the Royal Polytechnic Institution. The statement of these facts has induced the Vestry to refer the whole question to a special committee for consideration. It was further resolved to invite parochial analysts and others to attend the committee meetings, and assist them in their investigation of the matter. We shall reserve our judgment until the report of the committee is published.

DUBLIN SANITARY ASSOCIATION.

We are glad to see that the labours of this thoroughly useful and voluntary body are at last bearing good fruit. In the Dublin papers of Monday last is contained a full description of the new floating hospital for the port of Dublin, named on the 8th inst. the *Prudence*, but not yet launched, owing to the sinking of a tug-steamer close to the slips on which the hospital was built. In the same papers an advertisement appears relative to the undertaking of domestic scavenging by the Corporation of Dublin. Thus two sanitary measures, suggested many months ago by the Association, have been carried into effect. Such is the influence for good of a practical public opinion.

TESTIMONIAL TO DR. LLOYD, MELBOURNE.

A meeting, consisting chiefly of members of the medical profession, was held on September 2 last, in Melbourne, to present Dr. Lloyd with a silver tea and coffee service, in recognition of the services rendered by him as treasurer of the Medical Association of Victoria, and editor of the *Medical*

Gazette. Dr. Lloyd, in returning thanks for the testimonial, referred to the important services rendered to the profession by the Medical Association at a time when the provisions of the Medical Practitioners Statute were being overridden and systematically evaded, to the serious injury of various members of the profession, by the metropolitan and other coroners. The service bore the following inscription:—"Presented to Frederick Lloyd, Esq., M.D., by a few medical friends, in appreciation of his services as Treasurer of the Medical Association of Victoria, and Editor of the *Medical Gazette*—August, 1873."

CONVALESCENT COMBATANTS.

Two men of the 16th Lancers (states the *Bombay Gazette*) have been entertaining the depôt at Wellington with a prize-fight. The combatants, however, after the fifth round found themselves prisoners, and were called upon for an explanation of their conduct. The Wellington depôt is a home for convalescent soldiers, and if the energy now displayed fairly illustrates the bracing effects of its climate, great credit is due to the officer who first selected it as a sanitarium.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The paragraph regarding this body last week was erroneous, for we are now informed that Mr. Tuffnell was elected Vice-President in room of Professor R. W. Smith on last Thursday, and that Professor Mapother, Mr. E. Hamilton, and Dr. Tabuteau will seek the votes of the Fellows when Mr. Tuffnell's term of office expires next June.

BRITISH PHARMACEUTICAL CONFERENCE.

The following circular is being issued to the presidents and officers of the Medical Corporations and Schools and to other leading members of the medical profession:—

"Sir,—At the tenth annual meeting of the members of the British Pharmaceutical Conference, held at Bradford during the third week of September, 1873, the important subject of unusual doses in prescriptions, and the position which pharmacists should occupy in relation thereto, was carefully and patiently discussed in its pharmaceutical bearings by members from all parts of the country. By an 'unusual dose' was understood a large quantity of potent medicine designedly prescribed in rare cases, but which, as a rule, would not be dispensed by the pharmacist without hesitation. The result of the debate was the unanimous adoption of a series of resolutions embracing what was believed to be the essentials of safe practice in the matter. Further, the President of the Conference was requested to bring the resolutions under the notice of the presidents of the Medical Colleges and Corporations, and other leading medical authorities, and the medical journals, in the hope that the action taken would be approved and supported by physicians and medical practitioners generally. The proposal is that the prescriber should call attention to an unusual dose by adding, on the same line, his bracketed initials, thus (F. W.). A similar plan is already adopted on the Continent, and, indeed, in some countries is enforced by law. Appended is a copy of the resolutions. I trust that they will meet with your individual approval, and that you will contribute your influence in giving them wide publicity amongst the members of the medical profession.—I am, Sir, yours faithfully, Thomas B. Groves, President."

The following are the resolutions above referred to:—

"That this Conference, having considered various proposals for the use of special signs to mark unusual doses on prescriptions, and the great advantages to be derived from such signs, considers that the bracketed initial letters of the prescriber's signature, written immediately after the unusual dose, is the best suited for the purpose. This Conference also respectfully urges upon medical men the importance of the prescriber's full name and address being written on *all* prescriptions, to facilitate communication between the prescriber and dispenser. This Conference likewise considers it desirable for the dispenser to retain all prescriptions in which initialled unusual doses are prescribed."

FROM ABROAD.—NÆVUS TREATED BY CROTON OIL—DR. SCHWEIGGER ON ETHER IN PLACE OF CHLOROFORM.

Dr. De Smet communicates to the *Presse Médicale Belge* (November 2) an account of a case of nævus which he has successfully treated by means of croton oil. He observes that when the nævus is visible, vaccination is objectionable on account of the cicatrices which are left; and moreover, as in his own case, the child has frequently been already vaccinated. In this case the girl, five years of age, had a small nævus, which was situated immediately below the lower eyelid. Numerous small superficial vessels also converged towards it, the nævus, including these vessels, being a little larger in size than a half-franc piece, and having a slightly projecting centre. After perchloride of iron had been tried without avail, the croton oil was resorted to. Fifteen sewing-needles were passed through a cork so as to allow their points to project for about two millimetres, and the points were so disposed as to represent as nearly as possible the form of the nævus and the direction of its chief vessels. The cork was then dipped in croton oil, and, having been applied exactly over the nævus, the points of the needles were quickly forced into the part. Painful at the moment, this inoculation only left after it a slight sense of heat and pricking. A little wadding constituted all the dressing. Next day there was some swelling and a little vesication, but no pain. On two occasions, at intervals of two or three days, the part was slightly painted with the croton oil. The success was complete, the nævus completely disappearing, and the vessels becoming obliterated, so that no trace of the malady remains.

The advantages of the plan of treatment consist in the entire absence of cicatrix, its easy application, the little pain caused, and the rapid effect produced, the patient in this case being cured in a week. Of course it would not be applicable when the nævus is deep-seated and its vessels are voluminous, but it is well suited for cases where the nævus and vessels are superficial, and especially when the child has been vaccinated. Probably in some cases repeated frictions with the oil might suffice, but when the vessels have attained a certain magnitude their obliteration requires the punctures.

At a meeting of the Berlin Medical Society (reported in the *Wochenschrift* of October 13) Dr. Schweigger read a paper on "Ether-Narcosis," wishing to draw attention to a subject that has excited more attention in England and France than in Germany. In reference to operations upon the eye, with which he has most to do, he said he was of opinion that anæsthetics should be employed; for in operations in which a millimetre more or less may decide the fate of a man we cannot be too careful in our technical procedures; and that such operations are more easily executed under narcosis is undeniable. But to attain this end we must narcotise very deeply. It does not suffice to render the patient merely unconscious; and no operation should be begun until the cornea has been rendered so insensible as to allow of the contact of the finger or the introduction of the fixator without the excitement of reflex action in the eyelids and muscles. This is one of the disadvantages of anæsthetics, as in some individuals they have to be employed for a full hour before this end can be attained. In some cases, and especially in *abusus spirituosorum*, we can hasten on the narcosis by a preliminary injection of morphia; but even this, although seldom, fails, and there are individuals who cannot be narcotised. Another disadvantage is the occurrence of vomiting, which, however, may usually be avoided by narcotising on an empty stomach. Its danger is the greatest disadvantage of chloroform; and although Dr. Schweigger has never met with a fatal case, yet he has not infrequently witnessed appearances that indicated the greatest danger to life. A circumstance which should always be carefully attended to is the state of the pupil. A

moderate dilatation of this warns us to be careful, while a suddenly occurring and wide dilatation is always a sign of impending asphyxia. The moment this is observed, or when the respiratory movements are insufficient or arrested, the tongue should be drawn out of the month by means of a hook-forceps. The respiratory movements, which had been arrested by the falling back of the root of the tongue on the epiglottis, then are resumed. And to this, the most simple and the longest known procedure, Dr. Schweigger attributes his having been able to restore several patients who were in a most dangerous condition. Wishing to avoid, if possible, these terrible contingencies, he has of late resorted to ether, and has been so well satisfied with the results that he has not recurred to the use of chloroform. The ether narcotises as deeply and as rapidly as chloroform, while, after the inhaling apparatus has been removed, consciousness is sooner restored. In the light of his recent experience, he can only wonder how it came to pass that the employment of chloroform so rapidly superseded that of ether, and can only attribute this to the fact of ether being at that time badly administered. Nothing can be simpler than the apparatus now employed. A napkin is folded into the shape of a funnel, at the bottom of which is placed a piece of sponge of suitable size, and the whole is placed within a similar funnel, formed of impermeable material. Not less than twenty-five grammes of ether are poured upon the sponge, and the funnel is so applied as to include both month and nostrils. Used in this way, the ether exhibits no disadvantage as compared with chloroform, while it possesses the very great advantage of being much less dangerous. The circumstances which led Dr. Schweigger to abandon the use of chloroform have never been witnessed by him during the use of ether. Dr. Bardeleben observed that the superiority of chloroform to ether became so rapidly admitted because, in fact, the bulk of operations were not those on the eye. The fugitiveness of the effects of ether were just those which rendered it of little use to the surgeon; and its use is by no means free from danger, as death has resulted from it. If ether be preferred for operations on the eye, chloroform will continue to be employed in other operations. Dr. Liebreich observed that in operations on the eye rapid narcosis is desirable, and, as this can be accomplished by several narcotics, the least dangerous should be chosen. Chloroform and ether are both dangerous, death resulting suddenly from paralysis of the heart, and when the symptoms of this appear all means are useless. The bichloride series, such as the bichloride of methylene, which is much employed in England, are of safer employment. In them the narcosis commences in the head, the other parts of the body becoming narcotised only after some time. When dilatation of the pupils is observed during the use of chloroform, it is probable that it is not pure, but mingled with some of the bichloride series, which always induce such dilatation. Ethylidenchlorid produces a narcosis than which none can be better for operations on the head. Anæsthesia of the head is produced while muscular tone still continues, and rapid recovery from its effect takes place. These bodies possess the advantage of not producing paralysis of the heart, as may easily be seen by experiments on animals. In reply to Dr. Bardeleben, Dr. Schweigger observed that the shortness of the duration of the narcosis from ether was no objection to its use, as this may easily be prolonged by additional ether. Its danger is infinitely less than is that of chloroform. Dr. Lewin wished to call attention to a mode in which death is sometimes caused during narcosis. Some time since he produced a normal degree of narcosis by means of chloroform, when the patient made a deep and stridulous inspiration, and the various symptoms of impending death appeared. Passing the finger down to the larynx, it was found to be quite closed, the free end of the epiglottis having passed deeply into it, so as to seem fixed in the rima, completely blocking up the entrance of the larynx. On drawing out the epiglottis, respiration became re-established, and the threatening suffocation was averted. It may be supposed that in some of the cases of death from chloroform a similar condition of things has prevailed, the epiglottis having fallen backwards, its free end becoming fixed within the rima during inspiration.

NOTES ON FOREIGN HOSPITALS AND SCHOOLS OF MEDICINE.

I.—Denmark.

Denmark possesses but one university and medical school—the University of Copenhagen. Nine years ago the Danes could boast of a second University—at Kiel,—but this they lost when Schleswig-Holstein was ceded to Germany after the war of 1864. It is to the capital of the country, therefore, that the stranger must go who wishes to acquaint himself with the state of medical education in Denmark.

University education in Denmark is under the administration of the State, and so, with public resources virtually at their command, a few influential and energetic men have been able to accomplish great results in the departments of science and medicine. There is no miserable competition here of divided or opposed private interests, such as works so banefully in London; but the country being small and the University without a rival, there is complete unity of purpose in the plans which are being adopted for sound medical training. The results have been equally successful. In many departments of medical education, and probably on the whole, Denmark is setting England an example which she will do well to follow, both as regards her system of scientific and clinical training and the provisions for carrying this out with success. She is well forward in the great reformation in medical education which for the last fifteen years or more has been breaking over the face of Europe. The arrangements are, however, by no means definitely completed. While England is anxiously remodelling her entire system of medical education and examinations, and Germany daily increasing the number of laboratories and hospitals from north to south, one could hardly expect to be informed that the medical faculty at Copenhagen has established a perfect system of training, that natural science in Denmark is housed in perfect laboratories, and the practical physician taught in hospitals which are beyond improvement. We do not wish to make such a statement, for we shall have occasion presently to describe how extensive are the reforms which are still being planned and carried out. But this we confidently say—that, what with the recent and projected additions to the buildings for experimental science, especially in the way of laboratories and museums, and the possession of one of the finest general hospitals in the world, as well as of a special clinical hospital, the Danes have much less to do before they rest satisfied with their work than almost any of their neighbours.

The curriculum of medical study at the University of Copenhagen occupies six years, the first two of which are devoted to what might be called purely preliminary or scientific subjects. As in our own country, there are two sessions in each year of study, but they are peculiar in Denmark in being spring and autumn, instead of winter and summer sessions. The spring or first session commences on February 1, and ends in the first week of June; the autumn or second session commences on August 23, and ends on December 22. The English visitor who is anxious to see the Danish system of medical education in actual working will do well to bear this arrangement in mind.

The first year of the student's curriculum—he can hardly be called a student of medicine until the first two years of preliminary scientific education are past—is devoted to philosophy, including logic, psychology, and the history of philosophy. At the end of the second session an examination is held on these subjects.

The second year is devoted to natural science. Physics, chemistry, botany, and zoology are taught theoretically and practically, and the student works in the chemical laboratory. At the end of this year an examination must be passed on the subjects of the two preceding sessions, and this having been

done the preliminary education is finished, and the study of the purely professional departments begins.

The student now commences his attendance on systematic lectures upon anatomy and physiology (under different professors), and works at practical physiological chemistry in the laboratory of the Physiological Institute, which he can do with much benefit from his previous acquaintance with chemical facts and methods of a more elementary kind. He does not dissect during the first year. As a rule many of the students now go to the Clinical Hospital and attend the surgical practice; but this arrangement is neither enjoined nor recommended.

Anatomical dissections are commenced by the student in his fourth year, and continued during four successive sessions. At the same time and for the same period he attends lectures on medicine and surgery; so that for two whole years he is making himself familiar with three subjects which are probably the most important of the whole curriculum. During this period, also, the student attends to several other departments. In the fourth year, for example, he is instructed in the principles of general pathology and in pharmacology; while fourteen days in each session of the fourth and fifth years are devoted to what are called "medical practice" and "surgical practice," but which really consist in little more than writing prescriptions under the direction of an assistant-physician. Of infinitely greater advantage to the student are the surgical and medical clinics, which he now attends regularly, as will be described when we come to consider the Danish hospitals.

The first professional examination comes on at the end of the fifth year, and comprises anatomy, practical anatomy, physiology, and pharmacology. This over, the sixth and last year of study is entered upon. Systematic lectures are delivered to the men of this year on therapeutics, forensic medicine, and midwifery; pathological anatomy is fully studied; and, in addition to the ordinary clinics, those especially devoted to diseases of children and syphilis are attended. In the second session of this, their last year, the students go by the name of "examinatores," and when it is completed the second professional examination comes on. At this examination the candidate has to give evidence of a satisfactory knowledge of the following subjects:—1. Medicine, theoretical and practical, and a thesis. 2. Surgery, theoretical, practical, and operative, and a thesis. 3. Pathological anatomy. 4. Forensic medicine. 5. Midwifery.

Having passed through this ordeal, the licentiate has still to study midwifery practically before receiving the degree of doctor of medicine; this occupies only six weeks.

The average number of medical students at the University of Copenhagen at the present time is about 300—that is, about one-fifth of the men attending the various faculties. The Danish as a class resemble Scotch rather than English students. Denmark is a flat agricultural country from one end to the other, and the farms of Zealand and Jütland are apparently the homes of the majority of the Copenhagen students of medicine. It would be out of place in this report to comment on the intelligence and culture of the medical profession in Denmark in general; but it is our duty to acknowledge thus publicly the extreme cordiality with which we were received amongst the professors in Copenhagen, and the very obliging manner in which they showed us all that was to be seen and answered our numerous inquiries.

The English physician who visits the University of Copenhagen will be somewhat surprised—unless he is familiar with Germany—to find the medical department located in buildings at a distance of about half a mile from the University proper. While the latter is situated in the extreme west of the old town, the buildings where anatomy, physiology, and pathology are taught, as well as the Clinical Hospital and the Lying-in Institution, will be found in the north-east or fashionable quarter of the city. Here they form a large block lying between the Norges or Bred Gade (*Street*) and the Amalie Gade, in the neighbourhood of the Amalienborg Palace and other public buildings, and but a short distance from the harbour-side. It is this block of medical buildings, much more than the University proper, that is interesting professionally, and we will at once proceed to describe the various departments which it contains. The Clinical Hospital, however, will be described more conveniently along with the other hospitals of Copenhagen, and these we propose to reserve for a future occasion.

The remaining portion of the building, which is devoted to the teaching of science, takes the shape of a large, plain house, fronting the Norges Gade and flanked by two wings which extend towards the back. The house is in great part old, but the physiological portion (occupying one of the wings) has been only recently rebuilt, and important additions will be immediately made to the other wing for the purpose of extending the pathological museum. The central point of the building is a large auditorium or lecture-room, which is common to several of the professors. The anatomical museum, dissecting-room, etc., are situated on either side of the auditorium; the pathological collection is arranged on the upper floor; and the Physiological Institute occupies the whole of the south wing. The rest of the house is fitted up as residences for the professors of anatomy and physiology—an arrangement which at first somewhat surprises the English visitor.

The anatomical department is under the superintendence of Professor Schmidt. This gentleman, though still young, has acquired considerable reputation as an anatomist. He has made several important original researches on the development of the heart and brain, and he was the first to discover and describe the adenoid tissue of the pharynx. The suite of anatomical rooms consists of a museum, a dissecting-room, a room for histology, several working-rooms for mounting preparations, and vaults for storing the subjects. The anatomical museum at Copenhagen is a single large room, containing numerous specimens arranged in cases. Some of the preparations are of great value; and we would especially notice here the wonderful injections by the "corrosion" process, a fine example of permanent left vena cava superior, dissections of the anatomy of the ear, and numerous stages of the development of the brain. The dissecting-room is of moderate dimensions, and well lighted from the west. The floor is waxed, and the walls and roof covered with glazed tiles. The dissecting-room is open from November 1 until March 31, and about ninety bodies are dissected annually. The students hurry through the abundant material, and a subject is never more than two or three weeks on the table. No special text-book is used in the dissecting-room, which is superintended by the professor and a prosector. The student attends the systematic anatomical lectures during his third year, as has been already described. Professor Schmidt lectures during the spring and autumn sessions five times a week, from twelve to one o'clock in the afternoon, and holds an examination on topographical anatomy on the sixth day for an hour and a half. The room for practical histology is but small, and is supplemented by a large room in the Physiological Institute, to be presently described. The course of elementary histology is a voluntary one, and is held at an hour arranged at the commencement of the session. Hartnack's microscope is in general use at Copenhagen.

The Physiological Institute has been recently rebuilt and arranged under the personal superintendence of Professor Panum. This eminent physiologist, who was formerly professor at Kiel, is one of the leading promoters of scientific education in Denmark, and the medical school at Copenhagen as a whole—and not merely the department of physiology, although it especially—owes much of its present prosperity to Panum's influence and zeal. As we have already recorded, physiology is taught at Copenhagen in the same year as anatomy—that is, in the third year, or first professional year of the student's curriculum. The following arrangements are at present followed:—The Professor lectures publicly four days a week during the spring and autumn sessions from eleven till twelve, chiefly to junior students. Weekly demonstrations are held for an hour in the forenoon, and twice a week colloquial examinations are made by the Professor on the subjects of the lectures and demonstrations. During the same time the students work at practical physiological chemistry in the chemical laboratory of the Institute, which we will presently describe. Elementary histology, as we have already seen, is taught by the professor of anatomy. Advanced students are instructed privately in the laboratory free of charge; and twice a week, for two hours in the afternoon, the professor and his assistant hold a course of medical chemistry in the laboratory. Senior students alone perform experiments on animals.

The Institute is a large plain building of several storeys. On the highest floor is located a select anatomical museum of human and comparative specimens arranged according to the various systems—for example, the human and comparative anatomy of the organs of hearing in one case, the same of the organs of touch in a second case, and so on. Professor Panum holds the opinion very strongly that anatomy and physiology must go hand in hand; that structure is too frequently forgotten in the study of function; and that a well-chosen collection of

illustrative anatomical specimens is indispensable for the successful teaching of physiology. In this interesting museum some of the dissections of the ear, and of the viscera of the whale, and a very extensive series of malformations and monstrosities, deserve special mention. The physiology lecture-room is seated for 100 students, and is specially fitted up for class demonstrations. The room for practical histology accommodates twenty working students at a time, their tables being arranged at the windows and in the centre of the room. There is also provision for working by artificial light by means of gas-lamps with conical shades suspended from the roof. The laboratory for physiological chemistry is equally complete in its way, being fitted up with work-places, which are abundantly furnished with reagents, gas, water-taps, and so on. The room for physiological experiments on animals is comparatively smaller, and, of course, reserved for more advanced workers. On the same floor is a small room which serves as a pharmacological museum. The collection of physiological instruments is very large and fine; the room in which they are arranged opens into the private chamber of the professor. The underground floor of the Physiological Institute is occupied with cellars used as kennels, a rough analysis chamber, and a gas analysis room. The amount of space occupied by dog-kennels, rabbit-hutches, frog-tanks, etc., is somewhat surprising to an English eye. The windows here, and, indeed, in all other parts of the Physiological Institute, are triple, to prevent the cries of the animals from proving a nuisance to non-professional neighbours.

The Professor of Pathology at Copenhagen, Dr. Reisz, who has occupied the chair for the last ten years, is also pathologist at the Clinical or Frederiks-Hospital in the neighbourhood. The valuable products of the necropsies have been preserved, and the result is an excellent pathological collection in the opposite wing of the building to that occupied by the Physiological Institute. The museum is arranged in two rooms, flanked by one or more preparing-chambers, and is already too large for the available space, so that extensive enlargements are much required and will be at once begun. The pathological collection at Copenhagen well deserves careful inspection. Diseases of bones are abundantly represented. In a large collection of diseased hearts we were shown two very instructive specimens of ulcerative endocarditis, a disease of which no fewer than five cases have now been observed at Copenhagen since the year 1858. There is also a large collection of morbid growths. Professor Reisz lectures on general pathology in the common auditorium already referred to, twice a week during both sessions, from one to two p.m. These lectures are attended, as we have already explained, by students of the fourth year. Special pathology is included under the head of Medicine and Surgery. Pathological anatomy, on the other hand, is included among the subjects of the sixth or last year. Professor Reisz lectures systematically on this subject twice a week from one to two p.m., and gives other lectures and holds examinations in the course of the week at ten in the morning. Once a week, from two to four, there is a demonstration of diseased organs; and once a week, from one to three, there is a histological demonstration of the same.

This completes the description of the building in the Norges Gade and the scientific subjects to which it is devoted. We will now pass on to notice as briefly as we can the other departments of natural science which are chiefly to be found at the University.

The University of Copenhagen is an unpretending building in the Frue Plads, which was founded some 400 years ago, but has been more than once rebuilt. Although well towards the west of the city, and so removed from the mouth of the harbour, the University was one of the places which suffered most in the bombardment of Copenhagen by the English in 1807. The entrance-hall, staircase, and *Fest-sal* are magnificently and very artistically decorated with painted roofs, frescoed walls, and wood carvings. The north side of the buildings is occupied by the library, while the new zoological museum is situated in the rear. The handsome new library does not call for description in a professional report such as this, but we may mention that among the 300,000 volumes which it contains there is a very large collection of medical works in all languages. It will also interest some of our readers to know that the 4000 manuscripts in this library include Arne Magnaus' unique and invaluable collection of manuscripts from Iceland, chiefly upon Icelandic and Danish law and necromancy.

The Zoological Museum at the University was erected six years ago, and is one of the most handsome buildings of the kind in Europe. It contains a central quadrangular court, under a glass roof, and surrounded by open corridors in three storeys, off which the various rooms open. The court, which is decorated in a splendid but artistic and appropriate style, contains the skeletons of the larger mammalia, and this arrangement has a very pleasing effect. The collection in this museum might be described under two heads—first, as it represents zoology in general; and secondly, as an exhibition of the natural history of Denmark, Scandinavia, and the Baltic. Altogether a very large collection, arranged and kept with scrupulous care under the superintendence of Dr. Lütken, the Zoological Museum at Copenhagen ranks next to those of Vienna and Berlin. It may interest the naturalist to know that he will find in it several almost unique specimens, such as a skull of the Dodo; a stuffed specimen of *Alca impennis*—a very rare northern sea-bird without wings; and another of *Didunculus strigirostris*—a rare tropical pigeon, once considered to be allied to the Dodo. Here also is Lund's celebrated collection of tertiary fossils from Brazil, presented by that gentleman to his native country. Norwegian corals are abundantly represented, and there are numerous examples of Gorgoniadæ from Norway and the East Indies, with the Gorgons *in situ*. The Zoological Museum is open for study every Wednesday and Saturday from twelve to two o'clock. A second museum, containing whales only—a very famous collection—is located in another part of the University buildings. The Professor of Zoology is Dr. Steenstrup, who, along with two extraordinary professors, gives demonstrations in the museum. We have already seen that zoology is studied during the second year of medical education.

The Chemical Institute of the University is in the Newester Gade, and here lectures and demonstrations are given by Professors Thomson and Joergensen, the former of whom is also superintendent of the laboratory. Professor Thomson lectures four days a week during the whole session, and for the first part of the session every day. On the first four days of the week, from twelve to three in the afternoon, the same professor gives demonstrations in the laboratory. This laboratory has been built some fifteen years, and contains working-places for fifteen to eighteen students. Professor Joergensen lectures twice a week on the chemistry of the metals in the second part of the session, twice a week on inorganic quantitative analysis, and twice a week on organic qualitative analysis. There is a second chemical laboratory in Copenhagen connected with the Polytechnic School. The same two professors lecture there as at the University, and the laboratory is under the superintendence of Joergensen. Separate courses of physiological and pharmaceutical chemistry are given by the professors of the respective subjects.

On another occasion we will pass on to describe the clinical teaching at Copenhagen and the hospitals of the city.

Appended is a concise statement of the course of medical study in Denmark. The subjects of study are the same during both sessions of each year. The examinations take place at the end of the year in which they are recorded:—*First year:* Psychology; Logic; and History of Philosophy. (Examination on Philosophy.) *Second year:* Physics; Botany; Zoology; Chemistry; and Practical Chemistry. (Examination on the same subjects.) *Third year:* Anatomy; Physiology; Practical Physiological Chemistry. Surgical Practice. *Fourth year:* Anatomical Dissections; General Pathology; Medicine; Surgery; Pharmacology; Medical and Surgical Clinics. *Fifth year:* Anatomical Dissections; Medicine; Surgery; Clinics. (Examination in Anatomy, Physiology, Practical Anatomy, and Pharmacology.) *Sixth year:* Therapeutics; Forensic Medicine; Midwifery; Pathological Anatomy; Clinics (including Syphilis and Diseases of Children). (Examination on Medicine, Surgery, Pathological Anatomy, Forensic Medicine, and Midwifery.) Six weeks' Practical Midwifery.

THE HUNTERIAN COLLECTION.—At a meeting of the trustees of the Museum of the Royal College of Surgeons on Saturday last, Mr. George Busk, F.R.S., a member of the Council of the College, was unanimously elected a member of the Board, in the vacancy occasioned by the decease of the Bishop of Winchester; and Mr. Alban Henry Griffiths Doran, M.R.C.S., L.S.A., of St. Bartholomew's Hospital, has been appointed Second Assistant in the Museum, in the vacancy occasioned by the resignation of Mr. Jas. Lidderdale, M.R.C.S.

REVIEWS.

Du Traitement des Plaies en général, et en particulier d'un Mode nouveau de Pansement Antiseptique, par le Coal-tar et le Charbon; suivi d'un Aperçu sur la Pourriture d'Hôpital et son Traitement. Par le Dr. Louis Beau, de Toulon, Médecin-en-Chef de la Marine; Professeur de Clinique et de Pathologie Chirurgicales à l'Ecole de Médecine Navale de Toulon. Paris: J. B. Baillière et Fils. Pp. 134.

Assuredly antiseptic surgery is in no fear of languishing at present, whatever may be the value of the theory upon which the "antiseptic" dressings are employed. Only a few months ago we reviewed in these columns a volume entitled "Earth as a Topical Application in Surgery," in which it was explained that earth, rich in yellow ferruginous clay, free from grit and foreign matter, and well dried and sifted, is an alleviator of pain, a deodoriser, and the possessor of the power (1) of arresting and sometimes of preventing inflammation, (2) of exciting wounds to heal with rapidity, and (3) of preventing putrefaction.

Now we have before us a description of the treatment of wounds by a new kind of dressing, styled by the author of the treatise, and the originator of the dressing, "*l'emulsion au coal-tar saponiné.*" This emulsion of coal-tar is asserted to possess antiseptic properties without any irritating ones, and to have power in checking congestion, inflammation, and pain.

The search after some more efficient disinfectant for offensive wounds and ulcers than was at the time known, led Dr. Hewson to employ earth: the desire to find a dressing which is at the same time antiseptic, emollient, anti-infectious, and anti-inflammatory, has led Dr. Beau to the employment of "*coal-tar saponiné.*" The greater number of disinfectants, as he says, are also irritants, but this (the only one amongst antiseptic dressings of undoubted efficacy) is an exception to the rule. It is made by mixing rather less than two and a half parts of an alcoholic tincture of saponine (obtained from *Quillaya saponaria*) with one part of coal-tar, and after digesting the mixture in a sand-bath for eight hours, it is then filtered. This mixed with water in the proportion of one-fifth part constitutes the mother-emulsion, which can be diluted according to requirements with two, three, or four parts of water, or with fifteen or twenty times the quantity; or the water of the emulsion may be replaced by glycerine. As an application to wounds this mixture is spoken of by its introducer in terms of the highest praise; so also is the employment of animal charcoal and coal-tar, with charpie steeped in coal-tar. The dressings, though in some cases they must be frequently removed, require for the most part few changes; and the dressings first applied can in other cases be left on the wounds during the whole process of healing. Then they may be reckoned in the category of the dressings which provide a permanent moisture, such as Percy, Lombard, and Larrey advocated in France, and which, under the name of "water-dressings," Macarthy and Liston in England made popular. They are, too, at once antiseptic and disinfectant and isolating dressings. The same remarks, however, which we made in noticing Dr. Hewson's treatise we are led to adopt in referring to Dr. Beau's—viz., that however efficacious the dressings may be found, we cannot hope they will obtain any great popularity, owing to the cumbrous character and the uninviting nature of the materials themselves. Dr. Beau, however, does not confine himself to an account of coal-tar for wounds, for he devotes the first forty-one pages to a description of the treatment of wounds in general. This includes some general considerations as to wounds, and as to the etiology of the complications of wounds. Then comes a rational exposition of the principal kinds of antiseptic dressings hitherto employed: —(1) *Dressings on the Principle of Occlusion* (including some remarks on subcutaneous operations), viz.—the "pneumatique occlusion" of M. J. Guerin, and the continued aspiration of Maisonneuve; as well as the isolating dressing with cotton-wool introduced into the Hôpital Saint Louis in April, 1871, by M. Alph. Guérin, and founded upon the discoveries of Pasteur and the ideas of Tyndall, but which, for reasons stated in the text, is very often useless, if not positively objectionable. (2) *Disinfectant Dressings*, including charcoal; the dust of tan, Peruvian bark, and other substances of the same kind, which act at once as coagulating and absorbing agents; resins; camphor; essential oils, and a host of other materials.

The third part consists of a short sketch of hospital gangrene and its treatment, extending from page 118 to the end of the book. It is divided into three chapters: the first is on the nosogenic element of hospital gangrene, which Dr. Beau says is of a cryptogamic nature; the second, on the treatment, preventive and curative, of the disease; and the third contains a few concluding remarks, in which the author tells us that he was incited to write upon the subject by the destructive epidemic of gangrene which distressed the Seamen's Hospital at Brest during the late war. In this epidemic the charpie steeped in coal-tar acted satisfactorily as an absorbent agent for putrid gases; and the emulsion of *coal-tar saponiné* kept up around the diseased surface a sufficiently preservative and parasite-destroying atmosphere.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, November 4.

Meeting of the University Council—Opening of the Session—Address by the Principal.

The opening of the session 1873-74 of the Edinburgh Medical School has taken place without any of the turmoil which has accompanied the commencement of recent sessions.

The last blast, let us hope, of the trumpet of the retreating female medical party was blown at the meeting of the General Council of the University held on Friday last. The following extract from minutes of a meeting of the University Court of date July 17 was read:—"The University Court having considered the action at the instance of Miss Jex-Blake and others against the Senatus Academicus and the Chancellor of the University, and the judgment of the Court of Sessions thereon, resolve—'That it is expedient that the regulations of the University Court for the education of women in medicine in the University of Edinburgh, contained in their minute of November 10, 1869, and approved of by the Chancellor of the University on November 12, 1869, should be suspended *in hoc statu*; and with the view of carrying out the necessary procedure for having such regulations suspended, the Court, in terms of the Universities (Scotland) Act, sec. xii., 2, direct the secretary to communicate this resolution of the Senatus Academicus of the University for consideration.'"

After some remarks by Professor Macgregor, Mr. Hoggan (who, it will be remembered, at one time aspired to become, in a somewhat irregular way, a lecturer to the lady students) expressed his surprise that the University Court should have made such a resolution without having first consulted the General Council. He considered that if they had power to do so it was a mere farce to come and ask the Council for its consent. He had hitherto considered that the Council was one of the governing bodies of the University, and that its consent was necessary to steps taken in confirming or rescinding all new regulations made; but he found that these new regulations had been really rescinded by the Senatus before the consent of the Council had been asked. He objected to any further action in this matter being taken until their position and rights had been both defined and vindicated. He referred particularly to the applications made some time ago by certain ladies to be allowed to go through their preliminary examination in arts; this matter was referred to the Senatus, who, on October '27, resolved as follows:—"The Senatus consider it undesirable *in hoc statu* to admit ladies to the medical preliminary examination in arts, and resolve accordingly." He asked if the Senatus had any power to make such a resolution without the consent of the Council having been asked and obtained to the rescinding of the former resolutions. If the consent of the Council was not necessary, there was no use in asking it. But if it was necessary, then the Senatus had taken up a position at once illegal and insulting to the members of the Council. Mr. Hoggan concluded by moving that—"In view of the illegal position assumed by the Senatus towards the Council on the question before it, the Council refuses to take further action until its rights and position have been defined and vindicated."

Sir Robert Christison thought it was important that the Council should know its own rights, and also evident that Mr. Hoggan was not aware of them. In regard to this question, the right of the Council was this—that when the University Court passed a certain resolution such should not go definitely forth as a law of the University until it was submitted, in the

first instance, both to the Senatus Academicus and the Council, who might or might not give an opinion on the matter. While the University Court was called upon to communicate with the Council and Senatus, it was not bound by the opinion of either.

Mr. Hoggan's motion not being seconded, fell to the ground, and the following motion by Professor Macgregor was ultimately adopted unanimously:—"That the Council instruct their secretary to acknowledge receipt of the communication from the University Court, and consider it unnecessary in the meantime to express any opinion regarding it."

The present session of the University of Edinburgh was formally opened yesterday by an address from the Principal, delivered in the Queen-street Hall. There was a large attendance of students.

Sir Alexander Grant commenced by pointing out the large increase in the number of students during recent years. Last year 1906 students matriculated, being the largest total number on the rolls since the year 1826. The increase on the previous session was fifty-two. This increase was, he said, owing entirely to the numerous fresh accessions to the medical faculty. This faculty during last session numbered 782, no less than 180 of whom obtained degrees in medicine. "We have thus," he said, "within the University of Edinburgh by far the largest and most important medical school in the United Kingdom." While congratulating the Edinburgh Medical School on its prosperity, he went on to say—

"Prosperity is never a thing to be boasted of or relied on, and it may well raise a thought whether, as the old Greek mother-cities used often to be outvied and endangered by their colonies, it may not come to pass that the medical school of the University of Edinburgh will some day be eclipsed and reduced to a second rank by institutions which are at present quite juvenile, and which are a sort of offshoot from ours. Such reflections are suggested by reading of the opening of the splendid new buildings of the Owens College at Manchester—an institution which boasts not only Edinburgh names among its teachers, but also what Edinburgh is as yet far from being able to boast, the best chemical laboratory and theatre in Europe. The question of proper buildings for medical teaching is now assuming an acknowledged importance in all civilised countries. Germany has set the example. Within the last few years the University of Leipsic has been furnished with a complete accommodation for scientific teaching in its latest forms; and during the same period, from various causes, the number of students in the University has risen from about 500 to about 2500. That University of Berlin, besides other buildings, has received the most costly theatre for chemistry that has ever been erected. The University of Bonn only last year saw the completion of a new and splendid anatomical theatre; and quite recently it has been announced that the University of Prague has received a grant from the State funds to the amount of £42,000, for the erection of theatres and laboratories for chemistry, anatomy, and physics. Looking nearer home, I need hardly remind you of the favoured sister University of Glasgow, which, like Tyre of old, seems to live delicately, and to lack nothing that ships and wealth can bring, among which may be reckoned educational architecture and stately palaces for science. It is not only when compared with these brilliant instances that the medical school of Edinburgh appears as a Cinderella. There is a real daily-felt inconvenience and disadvantage in its present arrangements. The class-rooms of the University were devised half a century ago, and were amply sufficient for the requirements of those days. But since that time a great and important change has passed over the character of medical teaching. Mere listening to lectures (however good in themselves) forms a far less exclusive part of the training of the medical student than used to be the case. Practical work—actual dissecting or experimenting for several hours each day—is now thought to be the indispensable condition of a thorough medical education. Anyone can perceive how sound must be this view of the preparation of the student for the duties of a profession so essentially practical as that of medicine or surgery. It stands to reason that even the theoretic part of these professions—the discovery of new laws and new methods—is likely to be better encouraged by a system which calls on the student to exercise his own powers, than by the older method, which left him comparatively passive, and merely required him to imbibe the theories of his teachers. But for all the modern requirements of medical teaching, both in respect of giving the students ample convenience for their manipulations, and in respect of giving the teacher concentrated space and clear light for demonstrating before numerous audiences, the class-rooms of the College of Edinburgh are sadly deficient. There is, however, some prospect of having these deficiencies supplied at no very distant date."

The learned Principal went on to say that the site lying to the east of the new Royal Infirmary, between that building and the University, has been purchased for the purpose of building theatres, class-rooms, and laboratories. Through the munificent liberality of Sir David Baxter (who bequeathed £20,000 towards this object) and others, the University authorities have now either received or been promised sums amounting in all to about £36,000 for this purpose. Looking to the assistance which might fairly be expected from Government towards a clearly proved necessity of the University, Sir Alexander Grant thought he might say they had already got half-way towards the attainment of the object.

The Edinburgh Extramural School of Medicine was opened yesterday forenoon. Dr. George W. Balfour delivered the introductory lecture in the hall of the Royal College of Surgeons. Dr. Balfour endeavoured to picture the astonishment which would be experienced by one of the skin-clad savages who inhabited the shores of the Firth of Forth or the site of this city 2000 years ago, could he now be introduced to the changed scene. But his awe-struck amazement would be as nothing compared with the admiring astonishment with which Hippocrates, the father of our art, could we rouse him from his long slumber, would regard the present state of medicine. He pictured him scornfully surveying our paltry architecture as he passed along our streets to the Royal Infirmary, where, after ascending the main staircase, he is conducted into one of the side rooms, and courteously received by the attending physician and his clinical clerks, who—mindful of Mr. Syme's first axiom, never to look surprised at anything—are politely blind to the scanty raiment of their strange visitor. Warmed by the genial atmosphere around him, feeling himself as it were at home amid the sick and their surroundings, conscious of his own personal reputation and of the esteem in which his views and his works were held for many hundred years, the venerable gentleman essays to impart a little clinical instruction in return for the kindness with which he has been received. Attracted by the appearance of some fluid collected in glass jars which he thinks he recognises, he proceeds to descant on the prognostics to be derived from the appearance of urine. He points out that clouds in the urine are favourable in proportion to the lightness of their colour, but that however light may be that colour, the prognosis becomes more unfavourable if the cloud should rise instead of fall, and absolutely unfavourable—a fatal sign—if there is a general turbidity of the urine without any sediment, while a sediment, smooth, white, and consistent indicates freedom from danger and a short illness; but if the urine be occasionally clear the disease will be protracted. Yellow thin urine indicates an unconcocted disease, and a danger lest the patient may not be able to hold out till the disease becomes concocted; while a dark-coloured urine is always bad, and the darker the urine the worse the prognosis, especially if it be accompanied by a farinaceous sediment; and if bubbles settle on the urine the kidneys are affected, and the complaint is sure to be protracted. Thus pleasantly discoursing on the results of his experience obtained in his own infirmary—the Asclepion of Cos—and delighted at the ease with which his clear and incisive if somewhat dogmatic sentences have flowed from lips silent for so many hundred years, Hippocrates glances complacently round upon his audience, and finds that while he has been speaking one of the young men has by boiling some of the urine in a test-tube obtained an opaque, milky-looking fluid, and another a copious brick-red deposit. A little aghast at these peculiar and unexpected results, he wisely says nothing, and when suddenly asked as to what he thought of the comparative merits of picric and nitric acids as tests for albumen, he feigns a little deafness. But the look of helpless imbecility which begins to steal over his face is not lessened when another inquires whether he prefers Moore's, Trommer's, or Boc Hoher's test for sugar in the urine, or whether he pronounces any other less fallacious; and what he thinks of a milk diet as a curative agent. The words "milk diet" recall the fast-fading colour faintly to his cheek, and with one timid glance at the microscope beneath which one of the clerks has a preparation the nature of which he is anxious to know, poor Hippocrates passes out into the ward discoursing pleasantly of the virtues

of ass's and of cow's milk, of their hurtfulness in fevers, and of their curative virtues in gout and in phthisis. The physician ignoring his peculiar ideas as to the use of milk in fever, courteously inquires his views as to tubercle, what he thinks of its relation to inflammation generally and to catarrhal pneumonia in particular; and without waiting for his answer shows him a fine specimen of the "cracked pot" sound, and then hands him a stethoscope that he may listen to a peculiarly good example of bronchophony. The word has a Greek ring about it, and thinking he may understand it better with the instrument in his hand, Hippocrates takes it, and uncertain what to do with it, looks first at it, and then through it, considers whether he should listen to it as to the moaning of the sea in a shell, or whether the sound is to be produced by blowing through it as a trumpet; and utterly bewildered by all he has heard and seen, suddenly recollects an important engagement in Thessaly, and with many thanks returns the wonderful but unknown instrument, and departs a sadder if not a wiser man, fully conscious that if called upon to pass a clinical examination of to-day, he—the greatest clinicist of antiquity—would infallibly be found wanting. Dr. Balfour went on to say that the first lesson to be learned from this little episode of Hippocrates was the very great advance in scientific accuracy which medicine has made since his day. The second lesson—and a very important one it was—was that the most thorough knowledge of ancient medical lore, and the most perfect acquaintance with the purest Ionic Greek, were of no practical value to the medical student of the present day. He urged the study of natural philosophy, and natural history, more especially of vegetable physiology. He considered chemistry most important, and believed that medicine would assuredly halt until we had a practical chemist attached to all our infirmaries. He then urged upon the students how they should approach and carry out their study of medicine. He concluded a very interesting and amusing address by referring to the changes that had taken place in the teachers of the School since they last met. Dr. Arthur Gamgee had been appointed Professor of Practical Physiology in Manchester, and Dr. Bell Pettigrew, whose researches into the anatomy of the heart, the mechanics of flight and of animal movement generally, and the physiology of the circulation, had already made him an European name, would now lecture on physiology. Dr. Grainger Stewart would commence a course of systematic medicine; and they had on the most important subject of insanity and psychological medicine two new names to enrol—Dr. Clouston (successor in Morningside Asylum of their old and much-esteemed friend Dr. Skae), whose inquiries had extended mainly in the direction of the therapeutics of insanity; and Dr. Batty Tuke, whose name was well known as a most able investigator into the physical causes of insanity.

BIRMINGHAM.

November 11.

Sir Henry Thompson at the Midland Medical Society—Mr. Gutteridge and St. Peter's Hospital—Clinical Study at the General Hospital, also Cases therein—Queen's Hospital: Opening of New Wards—Hospital Sunday—Zymotic Diseases Prevalent—Gaol Appointment—Sewage Question and the Town Council.

The annual meeting of the members of the Midland Medical Society, held on the 9th inst., was graced by the presence of Sir Henry Thompson, who had been invited by the Council to deliver the opening address. This was an additional attraction, and brought together a large assembly of the members of the profession and their friends. Sir Henry took for the subject of his discourse, "The Future of Operative Surgery in relation to Stone in the Bladder," and he handled it in a very able and edifying manner, prophesying for stone extermination in like manner to "plague" and other diseases, which had and might be extinguished by a judicious and enlightened policy. On the conclusion of the address, a vote of thanks was unanimously accorded him on the motion of Mr. Gamgee, proposed in his usually eloquent manner.

In reference to the presence of Mr. Gutteridge, of this town, at St. Peter's Hospital on Monday last, he informed us that the boy upon whom he operated has already recovered, and gone home to the Black Country. The operation occupied only twenty seconds; the stone was of moderate size; and the wound healed by the first intention—this being about the fourth time in which so satisfactory a result has occurred in this gentleman's experience. We hear with satisfaction that Mr. Gutteridge intends ere long to give the profession the benefit of his vast experience in the shape of a pamphlet on "Lithotomy."

The medical staff of the General Hospital has furnished a capital electrical room, and some highly interesting results have followed the use of the continuous current. A Daniel Murshead battery (100 cells) is the one used. Under the care of Dr. B. Foster there is a very interesting case of locomotor ataxy, which has been greatly relieved by an ascending current to the spine; and a case of facial paralysis is improving by the continuous current after faradisation had proved useless. In the same physician's care was a case in the last stage of pseudo-hypertrophic paralysis. The boy has been under observation since 1869, and his wasted limbs present a striking contrast to their former huge size four years ago, as is shown by his photograph. Under the new arrangements at this Hospital, all the clinical teaching is carried on very actively, and, as far as possible, the systems of the General and Queen's Hospitals have been assimilated. The students of Birmingham now have the doors of both hospitals open to them, and, consequently, the opportunities for clinical study are unsurpassed. It is noteworthy that a committee which has been sitting at the General Hospital for the revision of the laws of the institution has specially discussed the question of the advisability of having the medical officers on the Board of Management; and it is gratifying to the profession to learn that it was determined, by nine to two, "That it was desirable and expedient that the honorary medical officers should have a voice in the Council of Management." This decision is at once honourable to the committee and an evidence of the *entente cordiale* which exists between all the officers of the General Hospital. Last Saturday was quite a field-day for the working-classes here. It was the opening day of the new buildings of the Queen's Hospital, for which they had obtained so much money. The Mayor and *élite* of the neighbourhood, with a large body of friends and supporters of the institution, took part in the ceremony, which passed off with perfect *éclat*. Still, when the debt of £6000, which is yet owing, is wiped off, there will be a more unbounded satisfaction at the completion of the work. In connexion with the rearing of this additional structure the name of Mr. Gamgee stands conspicuous, and he has also the proud satisfaction of being the author of "Hospital Saturday."

"Hospital Sunday" this year was for the amalgamated charities, when the collections amounted to £5000 and upwards—none too large a sum when we consider that it has to be divided amongst twelve charities.

Cases of typhoid and scarlet fever abound in the town, many of them of a severe character; there have been numerous deaths from both diseases. The scarlet fever has assumed in many instances a malignant type, with sloughing ulceration of the fauces and low fever. In some of the cases of typhoid we have been enabled to trace the cause to the water-supply, which we found to be contaminated by sewage matter, which had found its way into the wells from too closely adjoining privies. No outcry has as yet been raised against our milk-cans; the only interference with the milk-dealers has been in the shape of fines imposed on them by the magistrates for a too reckless use of "Simpson."

The profession will be glad to know that the magistrates have gained the victory in the case of the salary of the Surgeoncy of the Gaol, and that the stipend will be £200 a year instead of £100 as was desired by the economists, so that now there will be no difficulty in getting candidates to apply for the appointment—in fact, we hear that there are several in the field.

As showing the importance of the "sewage question," and how it occupies the public mind, we may mention that at our recent municipal elections it became quite a party-cry, and was one of the principal topics discussed in the electioneering speeches, and a test of the merits of the different candidates—amongst the successful of which stand the names of Mr. Barrett and Mr. Cox, both members of our profession.

Cholera has (according to the *Bombay Gazette* of the 20th ult.) been very prevalent amongst the European population at Jubbulpore, and the public offices have been removed as a precautionary measure.

GENERAL CORRESPONDENCE.

IN WHAT BRITISH MEDICAL SCHOOL DID SYSTEMATIC CLINICAL TEACHING ORIGINATE?

LETTER FROM DR. GEORGE HARLEY.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the abstract of Dr. Mapother's introductory address at the Royal College of Surgeons, Ireland, which appeared in the pages of your journal of November 8, it is stated that "clinical teaching is generally supposed to have originated during the present century in Dublin"; but Dr. Mapother showed that as far back as 1785 four wards in Mercer's Hospital were set apart for the reception of cases for the lectures of the College of Physicians.

If by this it is implied that systematic clinical teaching in the United Kingdom originated in Dublin, I venture to call Dr. Mapother's attention to the fact that clinical lectures were given as a systematic course within the walls of the Edinburgh Infirmary by at least three successive generations of teachers during the last century—to wit: Drs. Andrew Duncan, Francis Home, and the renowned Cullen. And not only were the lectures delivered, but some were actually printed and published, as is proved by an octavo volume of no less than 332 pages now lying on the table before me. The title of this volume is—"Clinical Lectures, delivered in the years 1765 and 1766, by William Cullen, M.D., etc. Taken in shorthand by a gentleman who attended." This work was published in London in 1798, eight years after Dr. Cullen's death; and from the preface we learn that Dr. Cullen at least, if not others before him, was in the habit of delivering regular courses of clinical lectures in Edinburgh at that very early date; for the concluding words of the preface express a regret that there is no "*complete copy of all Dr. Cullen's clinical lectures.*(a) We fear (adds the preface) such a thing does not exist; but a diamond is not to be thrown away because we do not possess the whole mine."

I had written thus far when Professor Sharpey referred me to Thomson's "Life of Cullen," vol. i., p. 101, where I find the following passage:—"In this country the merit of first proposing to explain in clinical lectures the nature and treatment of the cases of patients admitted into a public hospital belongs to Dr. John Rutherford, Professor of the Practice of Physic, to whom this privilege was granted by the managers of the Royal Infirmary of Edinburgh in the year 1748. In the following year the same privilege was extended to the other professors."

I am, &c.,

GEORGE HARLEY, M.D., F.R.S.

Harley-street, Cavendish-square, November 11.

BLOODLESS OPERATIONS.

LETTER FROM DR. FAYRER.

[To the Editor of the Medical Times and Gazette.]

SIR,—The mode of controlling hæmorrhage during surgical operations ascribed to Esmarch is no doubt most excellent and ingenious, but it is not new. The Indian medical officers for many years have been practising the same principle in the removal of scrotal tumours. The growth is raised, compressed with a bandage to squeeze out the blood, and a cord applied round its neck to prevent the ingress of more; amputation follows, and with a very trifling loss of blood compared with that of former operations. Whilst denying any novelty in the principle, I readily admit the great advantage of the new method of its application. The elastic bandage and cord are improvements on the cloth bandage and cord, soaped and running through a ring, used in Calcutta, and I hope my friends in India will lose no time in adopting this improvement. If you will refer to the *Medical Times and Gazette* of 1862 and 1863, you will find previous communications on this subject.

Another useful application of the elastic cords to surround and constrict the limb, and of the elastic bandage—if applied from above downwards instead of the reverse,—would be in the case of snake-bite: the cord to prevent entry of poison into the circulation, the bandage to press out that already inoculated, and prevent its diffusion in the arcolar tissue. A small incision through each puncture would favour the exit of blood and poison; and a sucking instrument like an artificial leech would still further do so.

I am, &c., J. FAYRER.

(a) The italics are in the original, and not introduced by me.—G. H.

DELIQUESCENT CHLORIDES IN STREET-WATERING.

LETTER FROM MR. W. J. COOPER.

[To the Editor of the Medical Times and Gazette.]

SIR,—The report of Dr. Letheby's paper "On the Right Use of Disinfectants," which appeared in your last week's number, contains an extraordinary *addition*, having reference to the application of deliquescent chlorides in street-watering. Dr. Letheby did not allude to the subject of deliquescent chlorides or to street-watering. If he had done so in the terms stated in your report I should have taken the opportunity in discussion of contradicting such statements, which could only have been put forward in complete ignorance of the success attending the use of deliquescent salts in laying dust, saving road material, and preserving tradesmen's goods from injury, of which benefits abundant proofs are extant. But as my object in writing this letter is to obtain correction of an error and explanation of a singular discrepancy, I will not further trespass on your space, except for the purpose of stating that I was present from the beginning to the end of the reading of the paper, and the discussion which followed.

I am, &c.,

Royal Hotel, Norwich, November 11. W. J. COOPER.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 28.

Dr. C. J. B. WILLIAMS, F.R.S., President, in the Chair.

(*Continued from page* 534.)

MR. WILLIAM MILLER ORD communicated notes of a case of Duchenne's Pseudo-hypertrophic Muscular Paralysis, with special reference to the temperature of the overgrown limbs, and with general remarks. The patient, a child aged seven, had suffered for two years from progressive weakness of the back and lower limbs, of which no exciting cause was known. There was no impairment of the mental faculties, but the child constantly fell while walking, and could not get up again without seizing some firm support by the hands. The sacro-spinal muscles and the muscles of the thigh were thin and poor, but the calves were distinctly overgrown. The observation to which attention was specially directed was, that the calves were distinctly warmer than the thighs by from 1·9° to 3·9° Fahr. The fibres of the muscles, being removed by an *emporte-pièce*, showed no material deviation from a healthy structure, certainly no degeneration; but there appeared to be an increase of the white fibrous element between the primitive fasciculi. It was suggested by these facts that the disease was in a very early stage, and that vaso-motor derangement, probably paralytic, played a great part in its production. The diseases called "progressive muscular atrophy of childhood" and "infantile paralysis" were compared with the pseudo-hypertrophic paralysis. It was noted that, whereas in the former of these a definite wasting of certain parts of the cord had been demonstrated by Dr. Lockhart Clarke and Dr. Bastian, no morbid appearances had been detected in the brain or spinal cord characteristic of the pseudo-hypertrophic paralysis. It was inferred from these and other considerations that the origin of the disease must be looked for in the sympathetic or ganglionic nervous system. No affection of sensation was detected in this case; and the one morbid condition was the gradual weakening of the muscular power in the lower half of the body generally, associated with the hypertrophy of the calves. This was regarded, not as a true hypertrophy of muscle due to excessive use, but as an overgrowth of interstitial connective tissue due to hyperæmia.

DR. ALTHAUS said Dr. Ord had made out a new point when he found an increase of temperature in the parts concerned. He thought it must throw light on the subject, and seemed to point to the trophic system of nerves being at fault. The

case was not a pronounced one, but seemed only commencing. There was no doubt about its nature; still it was not very marked in the calves, and the microscopic appearances were slight. Griesinger and Billroth had also described the pale condition of the muscle. In other cases there had also been noted true hypertrophy of the muscular fibres, so that in this disease there seemed to be two stages—one of hypertrophy, one of wasting. Eulenburg and Cohnheim's case was remarkable for the changes in the nerve-centres, there being considerable development of fat about the cord, and wasting of the lateral columns; the sciatic was also covered with fat. Duchenne believed the mischief to be cerebral; he had seen marked alteration of sensibility, but that was not noted here. Cohnheim's case pointed to the spinal cord as the seat of lesion. The mischief was also symmetrical in most cases. As faradic sensibility was diminished, that too pointed to a cerebral origin.

Dr. Langdon Down thought it neither vaso-motor nor spinal, but rather cerebral, for in nine cases he had noted want of intellectual power. Sometimes, as in one of his cases, there was no loss of sensibility, for the process of removing portions of muscle was very painful.

Mr. W. Adams said Dr. Meryon's cases were not referred to. He had seen a good many cases. Often the resulting deformity was supposed to be due to a contraction of the parts. Often, too, the muscles of the forearm and leg were large, whilst the arm and thigh seemed wasted. Dr. Meryon thought arsenic did good.

Dr. George Harley asked if the muscular hypertrophy was fibrous or fibrillar. Fibres might vary in size even in the same muscle, but the fibrillæ did not vary. The author seemed to think the rise of temperature due to hyperæmia; in reality both hypertrophy and increase of temperature were due to the same cause. He thought the condition depended on paralysis of the vaso-motor system of nerves.

Dr. Ord, in reply, agreed that this was an early case. The structures seemed paler than usual. Dr. Althaus and he must surely be referring to different cases by Eulenburg and Cohnheim. Sensation in his case was normal and the intellect fairly good, except that the memory seemed short. The elder brother of the patient was an idiot. Dr. Meryon's cases were disputed, therefore he did not refer to them. His views quite agreed with those expressed by Dr. George Harley. He did not measure the fibrillæ.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 8.

Sir W. Jenner, Bart., M.D., F.R.S., President, in the Chair.

Dr. Dowse showed a specimen of Medullary Disease of the Kidney. The patient had long suffered from pain in the back, and had passed albuminous and bloody urine. When seen he was cacheetic, the abdominal veins enlarged, and in the left side a large tumour. About a month before death he suddenly became collapsed, and vomited a quantity of dark matter, but improved somewhat thereafter. He died rather suddenly. A portion of his brain was softened, his liver was cirrhosed, and the left kidney was enlarged and cancerous; masses of cancer were also found round the duodenum and colon. (Referred).

Dr. Fagge showed a specimen of Suppurating Lymphatics and a Large Spleen from a female who had been wasting for nearly two years, ever since her marriage. First a mass formed in the left groin, which opened and discharged; after that the leg opened and discharged serous-looking fluid. After death all the lymphatics seemed enlarged, beginning with those round the Fallopian tube and ovary on the left side, where there was a quantity of pus. The glands all up the side to the neck were enlarged and suppurating, so were they in the porta and round the bronchi. The liver was large, but apparently healthy. The spleen was also large, with masses the size of walnuts in it, something like syphilitic disease; but of this there was no other sign. It was not Hodgkins' disease.

Dr. King said he had seen something like this condition of spleen in fenny Lincolnshire, where it was attributed to malaria.

Dr. Greenhow exhibited a specimen of Hydatid Disease of the Liver from a female, whom he first saw in 1867. She then presented manifest signs of hydatid disease, and was tapped, much fluid being removed. There were also some signs of lung complication. She was better till 1869, when she began again to increase in bulk, and when last seen she was very large. Again she was tapped and some fluid removed, but she did not this time diminish in size. Shortly after this she began to shiver, and pus formed. The cavity was regularly washed out with Condy's fluid, but she gradually sank. The hydatid sac was found to involve most of the thorax on that side, and the ribs were thinned. There was hardly any pleural cavity left, and the lung was greatly condensed. Another and smaller cavity was found in the liver; he supposed it the one formerly tapped.

In reply to Sir W. Jenner, Dr. Greenhow said he thought the smaller was the one formerly punctured, as it corresponded to the seat of the puncture.

Dr. Legg showed a specimen of Obstruction of the Common Bile-duct by a Gall-stone, with consequent enlargement of the biliary-ducts. An abscess formed round one of these large ducts, and opened into the peritoneum. Subsequently an opening was made into the pericardium and pleura. The patient was a Jewess, aged 23, who five months before admission complained of pain in the right side, vomiting, and jaundice. She was not, however, jaundiced in the hospital. The stools, too, were brown, yet the gall-stone was tightly wedged in the duct. Below the duct was pale grey; above it was full of bile. The cystic duct was free, and the gall-bladder was not enlarged. A case something like it was recorded in Frerichs.

In reply to Sir W. Jenner, Dr. Legg said he accounted for the brown stools by other sources of colour besides the bile, as from medicines, hæmorrhage, etc.

Dr. Cayley having elicited that the ducts were only dilated on the left side, suggested that the duct on that side only had been compressed and obstructed up to shortly before death, when the stone had moved to the situation where it was discovered.

Mr. Nunn showed the parts concerned in a Shot-wound of the Skull. The subject committed suicide by putting a pistol to his ear, where was a large lacerated wound. The ball pierced the brain, and impinged against the skull on the other side, producing a fracture, but not piercing the bone. The outer table was fractured much more extensively than the inner—the reverse of what happens if the fracturing force impinges against the outer table first.

Dr. Liveing showed two Hearts with Moderator Bands, attention to which had been drawn by Dr. Rolleston in his Harveian Oration. One, the larger, was on the right side, the other, and smaller, on the left. Their function was probably to check the dilatation of the heart to any undue extent.

Sir W. Jenner said they were fully described in Dr. Wilkinson King's paper in the *Guy's Hospital Reports*. He thought they were not uncommon on the right side and quite as large as this; on the left they were rarer. In some animals, as the hare, they were well marked.

Dr. Green exhibited a specimen of Fibroid Induration of the Heart, from a man, aged 52, who was brought into Charing-cross Hospital dead, and no history was attainable. The heart was large, especially on the left side. The pericardium was healthy; the endocardium was thickened, opaque, and white, especially towards the apex; the ventricle was dense, and tough on cutting, and was fibroid to the naked eye, especially near the endocardium; the fibroid structure was more abundant in certain situations; the right ventricle was dilated, but not very thick; the outside of the organ was fatty, and its valves healthy. The kidneys were hard, but not particularly so; the connective-tissue in the walls was partly corpuscular, partly fibrillar, similar to its condition in cirrhosis of the liver. There seemed to be four kinds of fibroid change in the heart—one from old pericarditis, another from endocarditis, a third affecting the right side in emphysema, and a fourth in syphilis.

Dr. Fagge had seen a specimen something similar last week, but he could not add much to what had been said. An old man, aged 70, felt very faint in the City and fell down. He was taken to Guy's Hospital, where, when seen, his pulse was slow and his temperature low. He died, when the only change found was a fibroid left heart. There was not much change in the endocardium. In another case he had seen, the mischief did not seem to spread outwards; there was most change in the middle of the heart's wall. There was no history of syphilis, and there was no small cell-growth.

Mr. Greenfield asked if the kidneys had been examined microscopically. He had seen a specimen at St. Thomas's,

where were vegetations on the valves, and the kidneys were large and hard. The heart was as in Dr. Green's case, but in the kidneys round the vessels was a nuclear growth. The urine had been albuminous.

Dr. Green said the vessels of the brain were in his case fatty and atheromatous.

Mr. Nunn thought there was no reason to limit this change to syphilis.

Mr. Potts exhibited a specimen of Osseous Deposit in the Arachnoid, from a female patient aged 44. She had been under delusions, mainly of a religious kind, and was sent to an asylum. She complained of pain in the head, and ultimately died comatose. A deposit of bone was found on each side of the longitudinal sinus.

Dr. Ralfe exhibited a specimen of Aneurism of the Aorta in the Sinuses of Valsalva, from a young Chinaman who had been exposed to great hardships in the Eastern seas. He had a double bruit at the base of the heart. He gradually grew worse until he died, when the left ventricle was found dilated. The valves were healthy, but incompetent, owing to the aneurism and dilatation. The aorta was atheromatous.

Mr. Clark brought forward a specimen of Ruptured Heart from an old woman who was run over in the street. There was no mark externally, but the ribs and sternum were fractured. The pericardium was filled with blood, and in the right apex was a small orifice, through which a stilette passed into the ventricle; otherwise the heart was healthy. The spleen was ruptured. There was no clear account of the time of her death.

OBITUARY.

GWYNNE HARRIES, M.D.

At the age of thirty-three, and at the outset of a career of great promise, Dr. Gwynne Harries, one of the Inspectors of the Medical Department of the Local Government Board, has just died. His death affords another proof of the dangers to which all members of our profession are exposed, but which attach themselves in a special manner to posts such as that which Dr. Gwynne Harries so well filled. Naturally a man of considerable physical vigour, and having his heart thoroughly in his work, he never thought but how he could best perform his duty. Just prior to his death he had been investigating outbreaks of typhus and scarlet fever in one of the northern counties, and in the performance of his official duties he contracted the latter disease. Up to midday on Wednesday of last week he was still at his duties, but, feeling ill, he was compelled to leave his work unfinished, and he reached town on Thursday morning. Severe throat symptoms and other indications of scarlet fever having set in, he was removed to the London Fever Hospital. But the unremitting attentions which all connected with that establishment so gladly bestowed upon him were of no avail—he rapidly sank, and died soon after noon on Saturday. Before removal to the Fever Hospital he was under the care of Dr. Robt. Liveing; after removal, Dr. Broadbent and Mr. Mahomed, the Resident Medical Officer, took charge of the case. He was there also seen by Dr. Murchison and Mr. Simon. The latter spent some time at his bedside, and Dr. Broadbent's and Mr. Mahomed's attention was unremitting. One could not help being most deeply impressed during the progress of the case with the enormous advantage of the reserved rooms at the Fever Hospital for cases like that of Dr. Harries, which must else have been treated under the disadvantages of a crowded hotel or a lodging-house. Dr. Harries had been a successful student and a prizeman at King's College; he was a graduate of the London University; and it was in recognition of abilities of a high order that two years and a half ago he was appointed to the post in which he has died. His death is keenly felt by his chief and his colleagues, by whom he was looked upon as an able and genial fellow-worker and a hearty friend. On Monday his remains were taken to Paddington for removal to his home at Haverfordwest, in South Wales, and Mr. Simon, accompanied by Mr. Netten Radcliffe, Dr. Thorne Thorne, and Dr. Ballard, the only members of his staff who were in town, attended at the station on the occasion. On Wednesday the funeral took place, Dr. Buchanan being present on behalf of the medical officer and inspectors of the Local Government Board. Dr. Harries leaves a widow, but no family.

The following characteristic letter, honourable alike to the memory of its lamented subject and to the writer, has been addressed by Mr. Simon to the editor of the *Times*:—

"In Memoriam.

"Sir,—In respect of the office I hold, I beg you will allow me to add a few words to the announcement which your advertising column contains of the death at the age of 33, of Dr. Gwynne Harries, one of the Inspectors in the Medical Department of the Local Government Board.

"From the time, about two and a half years ago, when Dr. Harries entered this branch of the public service, he had identified himself, heart and soul, with our work. Having brought into it attainments and moral qualities of a very high order, which would have won him success and honour in any career of life, he had given them with enthusiasm to his duties, and he had been prized among us as he so highly deserved.

"On Thursday last he returned to London from the North of England mortally stricken with fever, which he had caught in the performance of his duties. In one of the reserved rooms of the London Fever Hospital, the value of which for emergencies of this sort can hardly be over-estimated, he had every possible skill exerted for him, and with every possible kindness and sympathy: but it was in vain, and on Saturday his disease ended in death.

"For the officers of the Department from which Dr. Harries has been taken I may simply and truly say that we are all in sorrow for our colleague, that we shall ever remember him with sincere esteem, that we shall miss him as a brother in our work.

"To Dr. Harries' family—to those who have to deplore an irreparable private loss in this early close of a life which abounded in vigour and promise, and seemed destined for a long career of happy usefulness—it will doubtless, even now, be some consolation to reflect that he died in obedience to the claims of the public service, doing his professional duty in work which is full of hope for others. Like many who have wept for the fallen of far different battle-fields, they have lost their dearest in the service of their country; but of the Civil servant, as of the soldier, no better memory can remain than that his loyalty, even unto death, has been true to the standard under which he served.

"I am, Sir, your obedient servant,

"3, Parliament-street, November 11. John Simon."

JEAN JACQUES CYPRIEN COSTE.

Although we have already furnished an obituary notice of this distinguished *savant*, our readers will be interested on perusing the following particulars of his life, contributed to the *Revue Scientifique* by M. Léon Souberain.

"Coste was born at Castries (Hérault) on May 10, 1807, and pursued his medical studies at Montpellier, where he became *chef de clinique* of Delpech. While giving the greater part of his time to the fulfilment of the duties of his post, he also commenced, with that eminent surgeon, researches in embryogeny—a study, indeed, which was to form the constant occupation of his life; and in 1831 he presented, under the conjoined names of master and pupil, to the Academy of Sciences a memoir, 'Sur le Développement de l'Embryon des Oiseaux,' which soon afterwards obtained for him the prize in physiology. About this time he accompanied Delpech on a mission to Scotland and Ireland for the purpose of studying the outbreaks of cholera, and took an important part in the work published by Delpech on his return. Coste also published conjointly with his master the 'Recherches sur la Génération des Mammifères et sur la Formation des Embryons, 1834-38'—a work which caused him to be chosen as substitute for De Blainville in the chair of comparative anatomy of the Muséum d'Histoire Naturelle. His lectures, published in 1837 by MM. Gerbe and Meunier under the title of 'Cours d'Embryogénie Comparée,' enabled him to expound his ideas and to make known his work on development in the different degrees of the animal series. Next year he was sent by the Government into Germany, in order to examine the various museums and to collect all documents relating to embryogeny — a portion of science pursued there at that time with much success. In 1838 he published his 'Ovologie du Kanguroo,' in reply to the researches of the great English naturalist, Richard Owen, and also a memoir on 'Le Nidification de l'Epinoche,' which excited much attention.

"In 1838 the chair of Comparative Embryology was founded at the Collége de France, and Coste became its occupier,

having already delivered lectures in that establishment, in which he communicated the results of his important researches. Finally, in 1847 he published the body of the doctrine resulting from his experiments in his 'Histoire du Développement des Corps Organisés et de la Gestation chez l'Espèce Humaine.' Elected a member of the Académie des Sciences in 1851, Coste became its president in 1871, after having fulfilled the office of secretary for two years in place of Flourens. An *éloge* on Dutrochet which he read during his period was much remarked.

"Coste's researches on embryogeny are highly appreciated by *savants*, but works of this serious character excite but little attention beyond the learned world; and it is as the promoter of pisciculture, the art destined to replenish the waters, that his name has become so popular. Other persons have taken an important part in the application of this art but it is to Coste that is due the glory of having given it its true value. The influence that he has exerted on the progress of pisciculture cannot be better exhibited than in the words of M. Quatrefages:—'Having an enlightened and unlimited confidence in the future of aquiculture, and one of the first at the work in common, M. Coste has done, and especially caused to be done, much. Strong in the high authority conferred upon him by his scientific position, and also fortified by the administrative support and high patronage which he has known how to conciliate, he has shown an ardour quite unequalled in encouraging this rising industry, in defending it against unjust mistrust, in stimulating new applications, in proclaiming the results already acquired, and in foreseeing new and yet greater ones.'

"In 1852 Coste obtained the foundation of the establishment at Huningue, a true *atélier* of pisciculture, which served as a model for those which were organised at a later period in England, Belgium, Holland, Russia, etc. This model establishment at the present time remains with Alsace and Lorraine in the hands of the Germans, and has not yet been replaced in any other part of France. But if we no longer possess Huningue, happily we have the fish-pond laboratories at Concarneau, which Coste established for continuing his researches, organising a miniature sea-world in a transparent abode, where nothing escapes investigation. The Concarneau laboratory has since been imitated in various places, in consequence of the services which it renders to science; and numerous observers to whom Coste always gave free access to his laboratories have borne witness to the immense utility of these arrangements.

"Inspector of the river and coast fisheries since 1861, Coste never ceased contributing to the progress of aquiculture; and the successes obtained in the Bay of Forêt, in the Karnak river, and most of all in the Bay of Arcachon, testify loudly to the importance of what he accomplished. Arcachon, which had dwindled down to insignificance, now possesses a bay peopled by numerous parks of oysters, and finds all its past splendour revived. . . . Coste died poor, but leaves a memory dear to all who knew him. Let us hope that the important collection which he had formed by preserving all the demonstrative preparations of his scientific experiments, and which are of capital importance for the history of embryogeny, will be preserved in the establishment where these different materials have been amassed; and that it will remain at the disposition of *savants*, perpetuating among them the name of the excellent man whose loss we now deplore."

GILBERT LOVE, M.R.C.S.

Mr. Gilbert Love, of Wimbledon, whose death took place on October 29, was born in Tyrone, Ireland, in 1820. He was educated at Trinity College, Dublin, and was about twenty years of age when he came to England. His first professional engagement was at the St. Marylebone Infirmary, where, according to the testimony of Dr. Robert Boyd, the then resident physician, he was particularly attentive to the sick poor. In 1841 he went to Wimbledon, and assisted Dr. James Bright, then in practice there, for about three years. In 1844 Dr. Bright left Wimbledon, and Mr. Love, having obtained his diploma from the Royal College of Surgeons, set up in general practice for himself, and eventually took Mr. Finch (one of his contemporaries at the Marylebone Infirmary) and Mr. Pocklington into partnership. Wimbledon was the scene of his labours for thirty-three years; and during his long residence there he had nearly identified himself with the charitable and social institutions of the place. He was one of the originators of the Cottage Hospital—if, indeed, it does not owe its existence to his conception. But of the high regard and esteem in which he was held at Wimbledon no more striking evidence can be required than the following letter, addressed to him in his last illness:—

"50, Albemarle-street, W., Oct. 28th, 1873.

"Dear Mr. Love,—We think it may give you pleasure to know that the project of a testimonial to you from your friends and neighbours has been welcomed with unanimous approbation. No sooner was it known that you, who had been for so many years the alleviator of their pain and the sympathiser in their sufferings, were yourself bowed down by an illness so painful and dangerous as to compel you to resign your profession, than all classes, high and low, pressed forward to testify their sorrow, sympathy, and esteem. The sum which has been collected as an offering to you, and of which, on the part of our friends and neighbours, we have now to beg your acceptance, is of comparatively small value, apart from the evidences—written and spoken—of regard which have been received from all the contributors. It cannot be regarded but as a demonstration of the number of friends you have among us, by whom your constant kindness and consideration will never be forgotten.—We remain, dear Mr. Love, your sincere and grateful friends, John Murray, William Williams, Horace Watson, Alfred Markby, Chas. J. Wynne.—We enclose a cheque for £800."

HENRY CHARLES CUTLIFFE, Surgeon of the Bengal Army,

Died on the 24th ult., aged 41. He entered the service May, 1858, and became Surgeon May, 1870. He was Fellow of the Royal College of Surgeons, and acting Professor of Surgery at the Medical Hospital, Calcutta.

MEDICAL NEWS.

University of London.—The second M.B. Examination commenced on November 3, and was completed on Monday, November 10. Out of twenty-seven candidates who presented themselves, seventeen passed in the first division and five in the second. The names are as follows:—

First Division.

Addy, Boughton, St. Thomas's Hospital.
Barlow, Thomas, B.Sc., University College.
Benham, Henry James, University College.
Bird, Cuthbert Hilton Golding, B.A., Guy's Hospital.
Bomford, Gerald, King's College.
Cockburn, John Alexander, King's College.
Colgate, Henry, University College.
Coupland, Sidney, University College and Middlesex Hospital.
Dodson, Andrew, Birmingham and Guy's Hospital.
Dyson, William, B.A., University College.
Firth, Charles, St. Bartholomew's Hospital.
Harvey, Charles William, University College.
Petch, Richard, King's College.
Pope, Harry Campbell, Liverpool Royal Infirmary and University College.
Railton, Thomas Carleton, Manchester, and St. Bartholomew's Hospital.
Rayne, Charles Alfred, University College.
Skerritt, Edward Markham, B.A.

Second Division.

Appleyard, John, University College.
Baber, Edward Cresswell, St. George's Hospital.
Bindley, Philip Henry, University College.
Cornelius, Walter Bernard, University College.
Lewtas, John, University of Edinburgh.

Royal College of Surgeons of England.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Court of Examiners on the 11th inst., and, when eligible, will be admitted to the pass examination:—

Campbell, William M., M.D., student of the Edinburgh School.
Collet, Golding Bird, of St. George's Hospital.
Eccles, Arthur S., of St. Bartholomew's Hospital.
Edwards, Roger, of University College.
Farley, John J., of the Toronto School.
Geraty, Thomas, of the Dublin School.
Gravely, William H., of University College.
Greenish, Robert W., of University College.
Holmested, Charles W., of the London Hospital.
Hope, James W., of St. Bartholomew's Hospital.
Howitt, Henry, of the Toronto School.
Irvine, D. Lewis, of the Newcastle School.
Johnson, William H., of the Toronto School.
Nankivell, Frank, of the Edinburgh School.
Noott, Edward, of St. Thomas's Hospital.
Saunders, Frank H., of St. Bartholomew's Hospital.
Simon, Robert M., B.A. Cantab., of Guy's Hospital.
Skipworth, Herbert, of the Birmingham School.
Smith, Sidney, of Guy's Hospital.
Streeten, F. Edward, of St. George's Hospital.

Trotter, Leslie B., student of the Edinburgh School.
Wakefield, Thomas, B.A. Cantab., of University College.
Whitelegge, Benjamin A., of University College.
Wood, Arthur, of the Edinburgh School.

Nineteen candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, November 6 :—

O'Brien, James Octavius, Guy's Hospital.
Scott, Edward, Stockland, Devon.

The following gentleman also on the same day passed his primary professional examination :—

Johnson, Chadd Moore, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

AUSTEN, JOSIAH, L.R.C.P. Lond., M.R.C.S. Eng.—Consulting-Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

BARRY, JAMES W., L.R.C.P. Lond., M.R.C.S. Eng.—Honorary Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, *vice* J. Austen, L.R.C.P. Lond., M.R.C.S. Eng.

BENNETT, EDWARD HALLORAN, M.D.T.C.D., A.B., M.B., C.M., F.R.C.S.I. —Professor of Surgery in Trinity College, Dublin, *vice* Dr. R. W. Smith, deceased.

CURLING, WILLIAM, L.R.C.P. Lond., M.R.C.S. Eng.—Honorary Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, *vice* R. Hicks, M.R.C.S. Eng., L.M., L.S.A.

DAVY, RICHARD, M.D. Edin., F.R.C.S. Eng.—Surgeon to the Westminster Hospital, *vice* G. E. Legge Pearse, F.R.C.S. Eng., L.S.A., resigned.

EVANS, GEORGE H., M.B. Edin., F.R.C.S. Eng.—Acting Surgeon to the Birmingham and Midland Free Hospital for Sick Children.

FOWLER, CHARLES, L.D.S.R.C.S.E.—Surgeon-Dentist to the Birmingham and Midland Free Hospital for Sick Children.

HICKS, ROBERT, M.R.C.S. Eng., L.M., L.S.A.—Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

HILLS, THOMAS HYDE, L.R.C.P. Lond., M.R.C.S. Eng.—Resident Medical Officer to the Ramsgate and St. Lawrence Royal Dispensary, *vice* J. St. Claire Gunning, L.R.C.S.I., L.A.H., resigned.

HODGES, WILLIAM, M.R.C.S., L.R.C.P. Lond.—Medical Officer for the Workhouse, Clifton Union.

MULCAHY, PATRICK, F.R.C.S.I.—Medical Officer for the Ballinamore Dispensary District of Bawnboy Union.

ROGERS, JAMES, M.R.C.S. Eng., L.S.A.—Medical Officer of Health for Swansea.

SAWYER, JAMES, M.B. Lond.—Acting Physician to the Birmingham and Midland Free Hospital for Sick Children.

SOUTHEY, A. J., M.R.C.S., L.S.A.—Medical Officer of Health for the Eton Rural and Eton Urban Sanitary Districts.

STURGES, OCTAVIUS, B.A., M.D. Cantab., F.R.C.P. Lond.—Assistant-Physician to the Hospital for Sick Children, Great Ormond-street, W.C., *vice* Dr. John Murray, deceased.

WADE, ARTHUR LAW, B.A., M.B. Trin. Coll. Dub., L.R.C.S.I.—Surgeon to the Royal Isle of Wight Infirmary.

WALFORD, EDWARD, M.R.C.S. Eng., L.S.A.—Honorary Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, *vice* Samuel Woodman, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A.

WELCH, J. B., M.B. Lond., M.R.C.S. Eng., L.S.A.—Extra Acting Physician to the Birmingham and Midland Free Hospital for Sick Children.

WOODMAN, SAMUEL, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A.—Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

WYLLIE, WILLIAM, M.D., M.B., C.M.—Medical Officer for the Kirby Lonsdale District of Kendal Union.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Walter Reid, Staff-Surgeon to the *Active*, additional, for transport service; Henry A. M. Sedgwick, Staff-Surgeon, second class, to the *Duke of Wellington*, additional, for temporary service in the *Victory*, in lieu of a Surgeon; Robert Atkinson, Surgeon to the *Dromedary*.

WAR OFFICE—MEDICAL DEPARTMENT.—Surgeon Thomas Seward, M.D., retires upon temporary half-pay; Surgeon Henry Nugent is placed upon temporary half-pay; Surgeon Henry Harrison to be Surgeon-Major, *vice* William Ferguson, retired upon temporary half-pay; Surgeon James Martin to be Surgeon-Major, *vice* James Mee, who retires upon half-pay; Surgeon Winton Everet to be Surgeon-Major, *vice* Joseph Richard Kehoe, retired upon temporary half-pay.

BREVET.—Surgeon-Major James Mee, who retires upon half-pay, to have the honorary rank of Deputy Surgeon-General.

The local and honorary rank of Assistant-Surgeon conferred on Apothecary Daniel Wedgeberry, Subordinate Medical Department, Bengal Establishment, in the *Gazette* of April 29, 1873, has been cancelled, he not having retired.

The undermentioned Officers, who have retired upon full pay, to have a step of honorary rank as follows:—To be Deputy Surgeons-General—Surgeon-Major James Kirkpatrick, M.D., Madras Army; and Surgeon-Major William Aitken, M.D., Madras Army.

BIRTHS.

BARWELL.—On November 5, at 32, George-street, Hanover-square, W., the wife of Richard Barwell, F.R.C.S., of a daughter.

COOKE.—On October 30, at 16, Woburn-place, Russell-square, the wife of Thomas Cooke, F.R.C.S., of a daughter.

JOYNT.—On November 4, at Kingstown, the wife of Surgeon-Major C. Joynt, M.D., L.K.Q.C.P., Bombay Medical Service, of a son.

MARRIAGES.

ASHBY—HAIGH.—On November 6, at St. John's the Evangelist, Cheetham, Manchester, Alfred Ashby, M.B. London, F.R.C.S., of Grantham, youngest son of the late Frederick Ashby, of Staines, to Helen, second daughter of the late Henry Haigh, of Temple House, Cheetham-hill, Manchester.

FRIPP—SOYRES.—On November 6, at Clifton, Henry Edward Fripp, M.R.C.P. Lond., M.D., M.R.C.S. Eng., L.S.A., to Catherine Marianne, eldest daughter of the late Leopold de Soyres, Esq.

HAMILTON—NUTT.—On November 6, at St. Augustine's Church, Highbury New-park, Thomas Hamilton, M.B., F.R.C.S., youngest son of the late Sir William Hamilton, Bart., Professor of Logic and Metaphysics in the University of Edinburgh, to Helen, youngest daughter of J. W. Nutt, Esq., Highbury Quadrant.

JAMES—PRITCHARD.—On November 6, at St. Jude's Church, Southsea, Henry Northage L. James, M.D., L.R.C.P., L.R.C.S., Surgeon Army Medical Department, to Jane E. B. Pritchard, daughter of the late Captain Pritchard, R.N.

KIERNANDER—WATTS.—On November 6, at the Church of St. Mary of the Angels, Bayswater, William Coleridge Kiernander, Staff Surgeon H.M.'s Bombay Army, to Mary, only daughter of John James Watts, Esq., of Hawkesdale Hall, Cumberland.

TOMKINS—BADCOCK.—On September 23, at the British Consulate, Santos, Brazil, Alfred John, eldest son of Charles J. Tomkins, M.R.C.S., of Odiham, Hants, and grandson of the late Charles Tomkins, M.D., of Abingdon, Berks, to Rhoda, eldest daughter of Benjamin Badcock, also of the latter place.

DEATHS.

CHISHOLM, MARY, widow of Surgeon-Major Steward Chisholm, Royal Artillery, Deputy Inspector-General of Hospitals, at Charleston House, Inverness, on November 7, in the 79th year of her age.

COOKE, AUGUSTUS, L.S.A., late of Denmark-hill, at 9, Dover-terrace, Camberwell, S.E., aged 70.

DOBIE, ROBERT, Surgeon R.N., at his residence, Ampthill-square, on November 5, aged 80.

FEGAN, MARY CRANGLE, infant daughter of Richard Fegan, M.D., L.R.C.P., at 1, Charlton-park-terrace, Old Charlton, S.E., on November 10, aged 7 weeks.

FOOTE, SOPHIA, widow of William Henry Foote, M.D., at Streatham, on November 10, aged 76.

HARRIES, GWYNNE, M.D. & M.B. Lond., M.R.C.S. Eng., L.S.A., of the Medical Department, Local Government Board, at the London Fever Hospital, of scarlet fever, on November 8, aged 33.

KAY, JOHN, M.R.C.S. Eng., L.S.A., at his residence, 175, Old-street, St. Luke's, E.C., on November 9, in his 62nd year.

SCOTT, DANIEL, M.D., Inspector-General of Hospitals, and Honorary Physician to the Queen, at 19, Albany-street, Edinburgh, on Nov. 5.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BEDFORD GENERAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Committee, on or before December 10.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be Members of one of the Colleges of Surgeons of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Committee, on or before November 15.

BRISTOL ROYAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 20.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

METROPOLITAN DISPENSARY AND CHARITABLE FUND.—Physician. Candidates must possess a Diploma from a British University, and also be Fellows or Members of the Royal College of Physicians, London, or undertake to become so within six months after election. Applications, with testimonials, to the Secretary, before November 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, LOWER SEYMOUR-STREET, PORTMAN-SQUARE.—Surgeon to the Out Department. Candidates must be Fellows or Masters in Surgery, and registered. Applications, with testimonials, to the Secretary, on or before December 2.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician-Accoucheur. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before November 24.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

APPOINTMENTS.

Bishop Stortford Union.—Frank Edwards, L.R.C.P., L.F.P.S.G., L.S.A., to the Pelham District.

Horncastle Union.—Thomas Hobbes Cresswell, M.R.C.S.E., L.S.A., of the Wragby District.

Oswestry Incorporation.—Robert de la Poer Beresford, M.D. Glasg., L.R.C.P. Edin., L.R.C.S., L.R.C.P., to the Whittington District.
Peterborough Union.—Fergus Malcolm Brown, L.R.C.P., L.F.P.S.Q., to the Castor District.

ANALYST.

Reading Borough.—Mr. John Shea, M.D., as Analyst.

THE Kensington Vestry have appointed Dr. Dudfield their public analyst.

DR. TRIPE has been voted by the Sanitary Committee of Hackney £75 for his services as analyst for the year.

THE new regulations as to examinations in the Royal College of Surgeons, Ireland, have now been published. They have been already indicated in our number for September 20, in connexion with a letter from Dr. Jacob.

THE Cockermouth Rural Sanitary Authority has been appointed the Port Sanitary Authority for the harbour of Workington, until September, 1874.

MR. MUNDELLA, M.P., in answer to a deputation of the Sheffield Grocers' Association, on Monday,—who waited upon him to urge the Government to undertake the analysis of teas in bond, to prevent impure teas passing into consumption through the Custom-house—undertook to bring the matter under the notice of the proper authorities.

A MEETING of the Society of Medical Officers of Health will be held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Saturday, the 15th inst., when Dr. G. Ross will read a paper on "The Ventilation of Hospitals, Schools, and Public Buildings."

NEW SOUTH WALES COMMISSION OF THE PEACE.—His Excellency the Governor, with the advice of the Executive Council, has been pleased to appoint Dr. John James Hill, of Lambton, one of the magistrates of the territory.

ST. PANCRAS NORTHERN DISPENSARY.—Mr. Francis Mason, F.R.C.S., Assistant-Surgeon to, and Lecturer on Anatomy at, St. Thomas's Hospital, has been unanimously elected Consulting Surgeon to the above Dispensary, in the vacancy occasioned by the decease of Mr. John Bishop, F.R.S.

EXAMINATIONS. — The following were the questions submitted to the candidates at the Primary (or Anatomical and Physiological) Examination for the diploma of Member of the Royal College of Surgeons on Saturday last, viz :— 1. Give the anatomy of the prostate gland, describing its size, form, situation, connexions, and structure. 2. Describe the changes which occur, both in the position and the internal conditions of the eyeballs, during near and distant vision, mentioning the parts concerned in effecting those changes. 3. Describe the form, structure, and attachments of the valves in the heart and great arteries; and explain in what manner the valves perform their offices. 4. Describe the first, seventh, and twelfth ribs, mentioning their peculiarities. 5. Describe the astragalus, mentioning the bones with which it articulates, and the ligaments connecting them. 6. Describe the diaphragm, and its functions.

NEURALGIC ULCER OF THE LEG.—M. Terillon recently related to the Société de Chirurgie two cases of ulcer of the calf of the leg, attended by excessive pains, which yielded to no means employed, until an excision of a portion of the sciatic nerve had been performed. He refers to a case of M. Verneuil's, occurring in a young girl, and in which the pains were so incessant and had so exhausted the patient's powers, that amputation was had recourse to. The ulcer reappeared in the stump, and the pains recurred. Excision of a portion of the sciatic nerve caused the pains to disappear as by enchantment, and the ulcer rapidly cicatrised. These facts have led M. Terillon to conclude that the primary source of the ulcer was an altered condition of the sciatic nerve. M. Ledentu, reporting on the paper, observed that he could not adopt this conclusion absolutely, for he had himself lately met with a case of neuralgic ulcer of the leg, in which the pain yielded to hypodermic injections. M. Verneuil, too observed that conclusions from his case would be premature as the patient is now suffering from another relapse.—*Union Méd.*, November 4.

A MULTITUDE OF COUNSELLORS.—M. Faucon, of Amiens, having a very complicated case of multiple anchylosis which had not yielded to mechanical and other treatment, brought his patient to the Paris Society of Surgery, in order to ask its opinion whether he should persevere with the treatment, or what better could be suggested. The Amiens surgeon certainly cannot complain of any penury of advice, for this he had of every description. "I should not hesitate," M. Tillaux declared, "to try and re-establish motion by a sharp and sudden rectification." "Take care what you are about!" cried out MM. Marjolin and Paulet. "You will expose your patient to frightful accidents, and perhaps kill her. Proceed very slowly, and do not lose courage over the case." "The child is rheumatic," remarked M. Forget; "*noli tangere.*" "She is scrofulous," said M. Perrin; "modify her general constitution." "Give her sulphur-baths," exclaimed several members. "Send her to the seaside," said M. Trélat. M. Faucon retired with his patient, returning to Amiens rich in counsels, having only an *embarras du choix.*—*Union Méd.*, November 4.

NOTES, QUERIES, AND REPLIES.

He that questionth much shall learn much.—*Bacon.*

Nichol B.—The Orthopædic Hospital at Birmingham was established in 1817.

A Foreigner.—A paper by Dr. Von Jhering, "Zur Reform der Craniometrie," is in the last number of Bastian and Hartmann's *Zeitschrift für Ethnologie.*

MEMORIAL TO THE LATE DR. JOHN MURRAY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is proposed to place a bust and tablet in Middlesex Hospital as a memorial of the late Dr. John Murray. A small committee has been formed for this purpose, consisting of—Dr. J. Ford Anderson, Dr. Joseph Bell (Edinburgh), G. W. Callender, Esq., F.R.S., Dr. W. Cayley, Campbell de Morgan, Esq., F.R.S., Dr. Dyce Duckworth, Dr. Arthur W. Edis, Sir William Fergusson, Bart., F.R.S., Professor W. T. Gairdner (Glasgow), Sir William W. Gull, Bart., F.R.S., Ernest A. Hart, Esq., D. Hepburn, Esq., Dr. George Johnson, F.R.S., Dr. Robert King, Dr. Robert Liveing, R. H. Lucas, Esq., Dr. Morell-Mackenzie, Henry Morris, Esq., M.A., Dr. Charles Murchison, F.R.S., Dr. Richard Quain, F.R.S., Professor W. R. Sanders (Edinburgh), Dr. Alexander Silver, George Southam, Esq. (Manchester), Dr. A. P. Stewart, Dr. W. Stokes, jun. (Dublin), Lawson Tait, Esq. (Birmingham). Subscriptions will be received by Campbell de Morgan, Esq., F.R.S., Treasurer; or by Arthur W. Edis, M.D., 23, Sackville-street, W., and Henry Morris, F.R.C.S., 19, Bedford-square, W.C., Honorary Secretaries. The following subscriptions have been received and promised :—

	£	s.	d.
Dr. J. Ford Anderson ...	2	2	0
G.W.Callender,Esq.,F.R.S.	2	2	0
Dr. W. Cayley	2	2	0
Campbell de Morgan, Esq., F.R.S.	2	2	0
Dr. Arthur W. Edis ...	2	2	0
Ernest Hart, Esq.... ...	2	2	0
Dr. Robert King	2	2	0
Dr. Robert Liveing ...	2	2	0
Dr. Morell-Mackenzie	2	2	0
Henry Morris, Esq. ...	2	2	0
Dr. Chas. Murchison, F.R.S.	2	2	0
Dr. Richard Quain, F.R.S.	2	2	0
Dr. A. P. Stewart... ...	2	2	0
Dr. S. W. Sibley	2	2	0
Dr. Alfred Pullar	2	2	0
Mr. Francis Fowke ...	2	2	0
Mrs. Robert King... ...	2	2	0
A. Gavin Anderson, Esq...	2	2	0
J. G. Skelton Anderson, Esq.	2	2	0
John Anderson, Esq. ...	2	2	0
G. G. Anderson, Esq. ..	2	2	0
Rev. Alexander Anderson	2	2	0
Dr. Andrew Clark... ...	2	2	0
J. A. B. M'Combie, Esq....	2	2	0
Rev. Walter Walsh ...	2	0	0
Dr. J. Hall Davis	2	2	0
Dr. W. Rutherford ...	2	2	0
Erasmus Wilson, Esq., F.R.S.	2	2	0
J. W. Hulke, Esq., F.R.S.	2	2	0
Hy. Spenser Smith, Esq...	2	2	0
Prescott G. Hewett, Esq...	2	2	0
Colonel Warden, C.B. ...	2	2	0
James Anderson, Esq. ...	2	2	0
Dr. J. Warburton Begbie .	2	2	0
Colonel R. W. Fraser ...	2	2	0
The Students of the Middlesex Hospital	5	0	0
Dr. Joseph Bell	1	1	0
Dr. Dyce Duckworth ...	1	1	0
Dr.George Johnson,F.R.S.	1	1	0
R. H. Lucas, Esq.	1	1	0
Dr. A. Silver	1	1	0
George Southam, Esq. ...	1	1	0
Dr. Wm. Stokes, jun. ...	1	1	0
Lawson Lait, Esq.... ...	1	1	0
Maitland Burnett, Esq. ...	1	1	0
R. W. Edis, Esq.	1	1	0
Sherhard B. Burnaby, Esq.	1	1	0
W. Younger, Esq.... ...	1	1	0
William Draper, Esq. ...	1	1	0
Mrs. Catherine Wood ...	1	1	0
Dr. W. G. Curgenven ...	1	1	0
Captain Darley	1	1	0
Andrew Clark, Esq., ...	1	1	0
J. Ashburton Thompson, Esq.	1	1	0
J. Cooke, Esq.	1	1	0
Dr. J. C. Thorowgood ...	1	1	0
W. R. Anderson, Esq. ...	1	1	0
Dr. J. Whitmore	1	1	0
Robert Edis, Esq.	1	1	0
Alex. Anderson, Esq. ...	1	1	0
Archibald Hewan, Esq. ...	1	1	0
Dr. T. Clay Shaw	1	1	0
Miss Thorold	1	1	0
H. M. Evans, Esq. ...	1	1	0
Dr. R. Thorne Thorne ...	1	1	0
Horace Chaldecott, Esq....	1	1	0
Dr. F. J. Roberts	1	1	0
Marcus Beck, Esq.... ...	1	1	0
Dr. Vivian Poore	1	1	0
Jn. Gregory Forbes, Esq.	1	1	0
Joseph J. Clover, Esq. ...	1	1	0
Alexander Walker, Esq....	1	1	0
W. F. Bull, Esq.	1	1	0
R. Case, Esq.	1	1	0
E. H. Fenn, Esq.	1	1	0
H. Humphreys, Esq. ...	1	1	0
A. Hensman, Esq.... ...	1	1	0
Dr. H. Cooper Rose ...	1	1	0
C. S. Tomes, Esq.	1	1	0
F. H. Alderson, Esq. ...	1	1	0
R. Farquharson, Esq. ...	1	1	0
Principal Campbell, D.D.	1	1	0
Dr. John Latham	1	1	0
Dr. T. Lauder Brunton ...	1	1	0
Benj. T. Lowne, Esq. ...	1	1	0
Dr. W. C. Lucey	1	1	0
Dr. John A. Macdonald ...	1	1	0
George Eastes, Esq. ...	1	1	0
Timothy Holmes, Esq. ...	1	1	0
Sir William Fergusson, Bart., F.R.S.	1	1	0
Mrs.G.A.Malcolm Simpson	1	1	0
Alexander Moss, Esq. ...	1	1	0
Dr. Francis Hawkins ...	1	1	0
Thomas P. Hawkesley, Esq.	1	1	0
Dr. Samuel Wilks, F.R.S.	1	1	0
T. W. Gurney, Esq. ...	1	1	0
Sydney Coupland, Esq. ...	1	1	0
Dr. H. Rayner	1	1	0
Alfred Stowell, Esq. ...	1	1	0
G. Everitt Norton, Esq....	1	1	0
Charles W. Gibbon, Esq....	0	10	0
H. H. Smith, Esq.... ...	0	10	6
Dr. A. James Duncan ...	0	10	6
J. Wallis Mason, Esq. ...	0	10	6
S. R. Challice, Esq. ...	0	10	6
James Charlesworth, Esq.	0	10	6
Dr. W. Wilberforce Smith	0	10	6
R. H. Woodhouse, Esq. ...	0	5	0

A Bursary or Scholarship Fund has also been established in Aberdeen.

The London secretaries will receive any subscriptions in aid of this latter, as well as the memorial.

G. M. W.—The Senate of the Queen's University in Ireland has referred the question, whether under their charter women can be admitted to degrees, to the law-officers of the Crown.

Aqua.—The city of Venice is supplied with water from the Alps. The water is brought a distance of fifty-four miles. These waterworks have recently been inaugurated.

Cuvier, Belgravia.—A gentleman every way qualified, will, we believe, be appointed to deliver the lectures on Comparative Anatomy in the place of Professor Flower, now on his way to Egypt.

COMMUNICATIONS have been received from—

Dr. Hulme, Wigston Magna; Dr. Lionel S. Beale, London; Dr. Hughlings-Jackson, London; Mr. J. Chatto, London; Mr. T. M. Stone, London; Dr. Fayrer, London; Dr. Jacob, Dublin; Mr. Haynes, Swansea; Dr. R. G. Daunt; Surgeon-Major Joynt, Kingstown; Dr. Stainthorpe, Hexham; Mr. A. E. Bancroft, Cambridge; Mr. J. A. Bond, Polesworth; Mr. Richard Davy, London; Dr. Attfield, London; Mr. W. J. Cooper, Norwich; Mr. Valentin, London; Mr. Pletts, Ryde; Dr. Archer Farr, London; Mr. Sellars; Mr. Higham Hill, London; Dr. George Harley, London; Dr. Dowse, London; Dr. Suckling, Birmingham; Mr. A. R. Emmerson, Ramsgate; Mr. Eastes, London; Dr. Mapother, Dublin; The Secretary of the Statistical Society.

BOOKS RECEIVED—

Bellamy's Students' Guide to Surgical Anatomy—De la Médecine Capillaire, par le Dr. B. Riofrey—On the Training of the Mind for the Study of Medicine, by Robert Brudenell Carter, F.R.C.S.—Method of Examining and Recording Medical Cases, by W. R. Sanders, M.D.—Watson on Excision of the Thyroid Gland—Wells's Report on the Climatology and Epidemics of Pennsylvania—Whitmore's Report on the Health and Metcorology of the Parish of St. Marylebone—Roosa's Treatise on Diseases of the Ear.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Pharmaceutical Journal—Carlisle Journal—Gazette Médicale—Le Mouvement Médical—La France Médicale—La Tribune Médicale—Le Progrès Medical—Belfast Evening Telegraph—Gazette Hebdomadaire—Nature—Gazette de Hôpitaux—Allgemeine Medizinische Zeitung—Medical Press and Circular—London Medical Record—O Correio Medico—Revista Medico-Quirúrgica—Revista de Portugal e Brazil.

APPOINTMENTS FOR THE WEEK.

November 15. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 3½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

17. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Mr. Thomas Bryant, "A Case of Intestinal Obstruction and Gastrotomy." Mr. Wm. Adams, "On the Growth of Cicatrices from Wounds made in Early Life, and the supposed Wearing out of some Cicatrices." Mr. Spencer Watson, "A Case (with patient) of Cicatrix after Burn treated by Plastic Operation."

18. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

London Anthropological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. Dr. Goodhart—Mediastinal Tumour in Exophthalmic Goître. Mr. Butlin—Nerve showing the Effects of an Injury inflicted many years previously. Mr. Kesteven—Specimens of Disease of the Brain and Spinal Cord. Dr. Crisp—Intestinal Obstruction and Œsophagotomy in a Bird; Traumatic Aneurism in a Bird. Dr. Andrew Clark—Lymphoma infiltrating the Trachea in which Tracheotomy was performed twice. Dr. King—Large Abscess of the Liver, without Ulceration of Intestine. Dr. Moxon—Two Cases of Osteoid Cancer of the Lung.

19. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Harveian Society, 8 p.m. Dr. Farquharson, "On a Case of Habitual Constipation." Mr. Penning Baker, "On a Case of Enlarged Prostate." Mr. W. F. Teevan, "On Retention of Urine from Diseases of the Prostate."

21. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Medical Microscopical Society, 8 p.m. Dr. M. Bruce, "On Inflammation." Mr. J. Needham, "An Improvement in Dr. Rutherford's 'Microtome.'" Mr. Chippingdale, "On a Spectroscope."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 8.

BIRTHS.

Births of Boys, 1235; Girls, 1223; Total, 2458.
Average of 10 corresponding years 1853-72, 2191·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	926	906	1832
Average of the ten years 1863-72	718·6	678·0	1396·6
Average corrected to increased population	...	...	1536
Deaths of people aged 80 and upwards	...	...	70

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	9	2	1	5	1	3	2	2
North	751729	...	35	2	2	8	1	7	2	3
Central ...	334369	...	6	1	...	4	1	4	1	3
East	639111	...	34	8	1	15	3	2	...	7
South	967692	...	32	4	3	17	...	4	4	3
Total	3254260	1	116	17	7	49	6	20	9	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·364 in.
Mean temperature	44·9°
Highest point of thermometer	55·2°
Lowest point of thermometer	28·7°
Mean dew-point temperature	42·2°
General direction of wind	S.S.E. & S.S.W.
Whole amount of rain in the week	1·46 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 8, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Nov. 8.	Deaths Registered during the week ending Nov. 8.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2458	1832	55·2	28·7	44·9	7·17	1·46	3·71
Portsmouth ...	118280	12·4	45	39	58·0	35·2	48·0	8·89	1·12	2·84
Norwich	81677	10·9	62	48	53·0	31·0	43·2	6·22	0·32	0·81
Bristol	189648	40·4	126	97	...	...	...	...	...	...
Wolverhampton ...	70084	20·7	47	47	48·8	33·9	42·2	5·67	1·36	3·45
Birmingham ...	355540	45·4	266	190	50·3	33·0	42·7	5·95	1·19	3·02
Leicester	102694	32·0	85	48	51·5	29·2	42·7	5·95	1·50	3·81
Nottingham ...	89557	44·9	48	39	50·3	31·7	43·0	6·11	1·43	3·63
Liverpool	505274	98·9	370	260	48·8	35·0	42·6	5·89	0·53	1·35
Manchester ...	354057	78·9	245	170	52·0	30·0	42·8	6·00	0·60	1·52
Salford	130468	25·2	121	75	51·0	32·0	43·0	6·11	0·60	1·52
Oldham	85141	20·4	69	37	47·0	...	...	...	0·90	2·29
Bradford	156609	23·8	109	74	48·8	30·8	41·5	5·28	1·50	3·81
Leeds	272619	12·6	265	162	50·0	30·0	42·4	5·78	1·70	4·32
Sheffield	254352	11·1	192	143	51·0	32·0	42·5	5·84	1·82	4·62
Hull	128125	35·9	83	51	51·0	31·9	42·3	5·73	1·14	2·90
Sunderland ...	102450	31·0	54	41	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	95	85	...	...	...	...	...	...
Edinburgh	208553	47·1	126	78	53·4	27·3	41·3	5·17	1·14	2·90
Glasgow	498462	98·5	333	253	47·3	32·2	41·1	5·06	0·26	0·66
Dublin	314666	31·3	123	132	55·0	23·0	41·7	5·39	1·07	2·72
Total of 21 Towns in United Kingd'm	7507575	34·5	5322	3901	58·0	23·0	42·8	6·00	1·09	2·7

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·36 in. The highest was 29·82 in. at the end of the week, and the lowest 29·07 in. on Thursday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURE ON HOSPITAL PATIENTS, DOCTORS, AND NURSES.

By Dr. LIONEL BEALE, F.R.S.

(INTRODUCTORY TO HIS CLINICAL LECTURES AT KING'S COLLEGE HOSPITAL.)

GENTLEMEN,—In the first lecture of a session we are permitted, by custom, to introduce topics which could not be conveniently referred to in our ordinary lectures. This year, as on former occasions, I propose to say a few words upon our work here, and I shall refer to one or two other matters upon which, perhaps, some persons in authority may think I have no right to speak; but, as twenty years have passed since I became a teacher in this school, I think I may, without impropriety, claim the liberty to say what I think upon any matters that may be of interest to those who follow the medical profession; and, though my remarks may not be popular, I have no desire to say anything in a way that may offend those who differ from me.

Now, as regards the notions that have been put forward concerning the *nature of man*, the doctrines entertained *on the nature of disease*, the *management of the sick*, the *internal administration of our hospitals*, the *rights and duties of nurses, doctors, and students*—there has been, there is, and there will be, much difference of opinion. Your teachers, like yourselves, differ in the views they have formed upon many subjects. Men hold sacred very different principles, and think and work in different ways. Perhaps it would have been better if there had been no differences of opinion; but, there being differences, it is better that they should be acknowledged and known than that they should be simply hidden under a cloak of insincerity. I do not believe that any form of humbug is more evil in its results than the humbug of appearing to agree with principles which you do not believe to be true, or by silence sanctioning a policy which you deem to be wrong, and think likely to be disastrous if carried out.

Now, with reference to the poor patients under our care. How many ways are there of regarding them at this time? Some look upon a patient as a force-transforming apparatus more or less damaged, or as a force-conditioning machine which conditions irregularly or improperly, or as a molecular mechanism the equilibration of which has been disturbed. A sick man might be called a kynetic apparatus whose peripatetic property had been temporarily modified. Patients seem to have been looked upon by some as organisms, a part of whose natural history it is desirable should be carefully studied; by others as wicked beings suffering well-merited punishment for sins committed; by others again as the degraded consequences of a wilful pauper-producing middle class. But doctors and nurses possibly regard patients as sick and suffering persons requiring temporary care and help while they are ill and unable to work and earn wages. We know that patients are made like ourselves, and many of us feel very glad to be able to freely give them the benefit of all that we have been able to learn by study and gain by experience. We look upon sick people as being something more than mere matter. We know that they have organs, mental and bodily, which are not in the slightest degree like any machines of which we have knowledge or experience, or can form any conception.

With regard to the origin and nature of man we have for some years been inundated with a great deal of a new sort of cant,—and I believe the cant of people who pretend to be able to account for everything by *law*, when they can explain next to nothing concerning the simplest changes characteristic of a living being, to be the most pernicious of all kinds of cant. There are people who affirm that it has been demonstrated by science that miracles are impossible, that prayer is an absurd and useless formality, that there is no Personal God, and that honest and upright men must confess that they are no longer Christians. People who support these notions support philosophical cant. Every one of these assertions rests upon pure fiction; not one of them is in any sense true, or in the slightest degree approaches truth. Those who believe them are simply believers in philosophical and scientific blunders, or something worse.

Remember, gentlemen, that up to this day no one has explained how the particles of a blade of grass are piled one upon another during its growth, but yet there are many teachers who pretend to be able to account for the most subtle phenomena of our existence, and venture to assert in so many words that we have been formed by the sun, and that we think and feel and hope and work by reason of the properties possessed by the material particles of our bodies. Probably few who come face to face with sick people will be much influenced by such notions. If, however, they are absurd, it is time that they should be given up.

I am sorry to find the *Students' Journal and Hospital Gazette* dissenting from the practical and sensible views advanced by my colleague Professor Curnow, and quoting with approbation some of the extravagant remarks of one of the "soundest thinkers" and "most advanced" men of the day—"That man, I think, has had a liberal education, who has been so well trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold logic-engine, with all its parts of equal strength, and in smooth working order; ready, like a steam-engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations."

But what is there that is sound, or thoughtful, or advanced in comparing us with steam-engines? "The human body is a machine"; "Thought is as much a function of matter as motion is"; "We shall arrive at a mechanical equivalent of consciousness, just as we have arrived at a mechanical equivalent of heat"; "All things living are machines"; "It is because the body is a machine that education (the formation of habits) is possible,"—are texts from the same "advanced" syllabus, and I could give you more were it worth while to do so. Every one of the above propositions is unproved and unprovable. Their actual truth is, however, it is said, to be certainly demonstrated when we are all dead by some "clear, cold logic-engine" about to be. But if you desire to form a conception of the consequences to which all this miserable speculative dogma must surely lead, read the autobiography of Mr. J. S. Mill. In that interesting book you will find the confessions of a "clear, cold logic-engine"—if ever there was one,—and sufficiently unsatisfactory and melancholy you will find them to be.

In a review in the *Times* of November 10 it is well said with reference to the crisis in Mr. Mill's mental history, which occurred when he was about twenty, that "he sought comforters and found none. His father, he felt, would be the last to help him. In none of his friends had he the confidence of a thorough sympathy. Father and friends had all been working for the general happiness, not for a ease of individual misery. Continual analysis, he felt, had exhausted his affections, and the fountains of vanity and ambition had been dried up within him as completely as those of benevolence. Work was now mechanical." The same writer further remarks that "few readers of this autobiography will fail to see that John Stuart Mill was at fifty what he was at twenty, at twenty what he was at ten, and at ten just what his father—however fearfully and wonderfully—had fashioned and made him." (*Times*, November 10.) Is there an English father who would repeat upon his own son the experiment performed by Mr. James Mill? Is there an English son who does not feel thankful that he was not brought up like John Stuart Mill?

But now let us go to our wards; let us speak with the sick people, not as if they were machines, which we know they are not, but as they are—men who think and feel, and hope and despair, who suffer and ask for relief, though in language not exactly that of the logic-engine or the calculating-machine. Study them like sensible men. Picture to yourselves while at the bedside of the sick the phenomena that you know to be going on in a perfectly healthy organism, and try to make out what organs of the sick man are disturbed in their action and what are really changed in structure by disease, and the nature of the morbid changes which have given rise to the result. Above all, record the facts elucidated by your investigations. Take cases—whether they be "interesting" or "uninteresting," whether they be important or unimportant, slight or severe.

The medical attendants of the sick are, indeed, bound to

their helpless patients by no ordinary ties. The relationship has not been exactly defined by legal authority or precisely estimated by political economists. The duties and responsibilities alluded to are altogether different from, and cannot properly be compared either with, those which the merchant and the manufacturer are in honour bound to exercise in their dealings with their customers who confide in them, or with the contract entered into by workmen with their masters. The duties of lawyers to their clients, of teachers to their pupils, of the clergy to the members of their flock, are very serious, and it is very important that they should be conscientiously undertaken and faithfully discharged. But our duties differ from all of these, and in a greater degree than any one differs from any other. Nor is it easy to point to clearer evidence of the exercise of true courage than is afforded by the conduct of the clergy, doctors, and nurses during the prevalence of a serious outbreak of contagious fever in discharging the arduous work of attending the sick-poor, unless it be the conduct of medical officers on the battle-field.

"To my mind there is nothing so impressive, even amid the varied and startling scenes of the battle-field, as the group which is found round a wounded combatant. There lingers the friend, forgetful for a moment of glory; and there, with the bullets whistling round him, kneels an unarmed man, examining and dressing the wound, with clear head and steady hand, as if he were in the peaceful hospital."—(*Times* Special Correspondent, Cape Coast Castle—*Times*, November 18, 1873.)

I have known some who take, or profess to take, or have persuaded themselves that in order to be logical, and cool, and calculating, and unsentimental, and practical, and business-like, they ought to try to make us believe that they do take a purely business view of all matters connected with the poor and sick. Some appear to have made up their minds that they will not allow themselves to be influenced by what has been termed a sentimental consideration. But if sentimentality enables people to go and nurse and doctor the sick and suffering, in close dirty rooms in a fever-stricken town where several are dying day by day, there is surely not much to deplore if, looking from a purely business point of view, it should be found that such conduct might be characterised as "sentimental" in the highest degree. Whether it is utilitarian may be open to doubt, but that it is useful will be admitted, not only by the sufferers, but by all who are interested in them. Perhaps very many of the people of England who have not as yet undergone conversion into logic-engines and thinking-machines, may have sense and feeling enough left to perceive that medical work—especially amongst the poor—is not the sort of work that can be executed by a machine, or the sort of work that can be paid for by weight or measurement. But strange theories have been entertained concerning the duties and remuneration of those engaged in the service of the sick, though not, perhaps, more extravagant or more curious than many of the so-called *new* notions that have been advanced concerning the relationship of person to person,—some contending that we ought not to allow a human being to die if his life can be saved; others, less prejudiced, and perhaps less sentimental, considering that if an organism cannot provide for itself, or if it is distinctly useless, it may be considered unfit to survive, and be left to its fate. So far, however, there can be little doubt that we doctors and nurses do feel it to be our simple duty to save and protect life, and to prolong life to the utmost possible extent, if we cannot restore its possessor to health. And though it might be clearly proved by the very coldest and most engine-like logic that a given life was utterly worthless or even injurious to the material particles under its dominion, as well as to society; and although it might be scientifically demonstrated that the members of any particular class of human beings were utterly unfitted to survive, and had never been intended to live as long as they actually had lived, and had interfered with others more fit to live than themselves, it would, nevertheless, be our duty, as doctors, to preserve life to the utmost of our powers.

Considering the odd ultra-philosophical speculations that have been very fashionable of late, some of us do not feel astonished that the idea of euthanasia, among many other extravagant notions, should have been revived, and have excited considerable attention in purely intellectual circles. It must, however, be confessed that some little confusion of ideas seems to have existed with regard to the precise nature of an act to which the term "murder" has been applied by jurists, and there has also been some difference of opinion as to what constituted suicidal intention or tendency; while, on the other hand, the new arguments did not render it philosophically certain that it would be to the advantage of general society if what has been called murder, and has been regarded as a crime, was transformed into a virtue, legalised, and, under certain wholesome restrictions deemed perfectly safe, actually performed. The new laws that would become necessary have not, however, yet been drafted, and for the present medical practitioners must be contented to act as their predecessors have acted, and must save life and prolong life to the latest moment by every means at their disposal.

It is often most difficult to judge whether a patient will recover or not, and when you become practitioners you will be astonished every now and then to find a patient get quite well whose case you had considered almost hopeless. And be assured that you ought not to give up any case of acute disease as long as the slightest chance of improvement remains. I have known instances of fever patients, said to have been "given up" by the doctor, recover under the influence of beef-tea and brandy administered by non-professional advisers. You cannot be too careful to avoid committing yourselves too hastily to a gloomy prognosis in any case, but if you do so in acute diseases, especially in children, you will be often wrong. You have admirable opportunities of studying prognosis in our wards here, and you will find it very instructive to write down what you think will be the course of a given case, the time you deem it probable that the patient will live, and what you consider will most likely be the mode of death—of course taking care that the poor patient is kept in ignorance of your speculations. At the same time keep accurate notes of the actual facts as they are developed.

Case-taking must be conducted with intelligence, and everyone must prepare himself for the work. No one can take a case well until he has acquired much knowledge besides that which he is able to pick up in the wards of a hospital, or by carefully observing cases of sickness. You must bring to the assistance of the sick a mind well trained in scientific studies, for it is only after a preliminary scientific education that the mind becomes fitted for prosecuting practical medical work.

The scientific work of the early days of professional life is entirely unpaid, and too often underrated or unnoticed. It is of no value in the commercial market; nobody wants it; and, as a necessary consequence, it is treated with contempt by many self-satisfied arrogant persons, who have the will, but, happily, not the power in England, to crush out and extinguish every kind of work and thought which differs from what they can alone esteem—*business that pays*. Unhappily, scientific medical work and thought have had to encounter the determined opposition of some members of the profession itself, and in this way purely scientific men and unprofessional people, who know nothing whatever about the matter, have been prejudiced against doctors who prosecute any branch of science. Some Englishmen find it difficult to tolerate individuality, and detest intellectual independence; and such are often led to oppose self-denying workers whom, if they could but understand, they would certainly support.

I offer no apology for speaking thus. I have myself for more than twenty years worked at science in connexion with medicine, and at first under great difficulties. We who thus work are all occasionally snubbed by people who are for ever challenging every effort made by those who desire to work for the advancement of knowledge that will not pay, and which is therefore considered unpractical and useless. The unsympathetic inquiry of "What's the good of it?" is always being made. Those who propound it never wait for the answer, and would not listen to an answer, but go on and on in their own self-satisfied successful way, never thinking of the difficulties they would experience were the same sort of question proposed to them as regards their work from our point of view. But for a poor investigator even to think of questioning in this way would be universally condemned as a piece of gross impertinence, which would have to be put down by the united strong hand of a number of people empowered to act as a body, and able to do many things which not one would incur the responsibility of doing in an individual capacity. There are many who work very very hard in these days without enjoying either the advantages of pay, independence, or the power supposed to be associated with work; and if we are to be divided into two classes—those who are obliged to work in order that they may live, and those who can live without the necessity of working at all—the first class will include many who do not enjoy the privileges belonging to the working classes, but who work harder than any of them, and the second class will

comprise many who work harder for nothing than others do for pay.

It has been the lot of many in the medical profession to have performed a very large amount of unremunerative work, and everyone amongst us who hopes to add to existing knowledge must be content to do so. It seems but fair, since the work done may be of general advantage, that at least a place in which work can be conducted should be provided for those who are ready to give up their time to researches in connexion with medicine. For many years I had a laboratory and work-rooms of my own close to our hospital, where I was occupied in chemical and microscopical work that should have been performed in the hospital and on a larger scale. More than twenty years since, in the time of Dr. Todd, before our present building was commenced, many of us ventured to hope that the necessary work-rooms would be provided in the new institution. In every hospital there ought to be a good laboratory and a good microscope-room. The committee of this hospital a year or more ago purchased for us an excellent microscope, which has done good service; but there is at present no room warm and well lighted and otherwise well adapted for careful microscopical work. We have begged for this year by year. It has never been distinctly refused, but it has not yet been provided. Rooms exist in this building that might be applied to the purpose, but objections—trivial objections—have been raised. It has been hinted that the supporters of hospitals give their money for the relief of the sick poor only, and not for the examination of their secretions; but this idea is not the real source of the opposition in our case—it is much nearer home.

I have yet to learn that the subscribers to our public hospitals desire that the means required by the medical officers for the proper investigation of disease should not be supplied to them. My belief is that a very large majority are thoroughly disposed that we should have everything that is requisite—not only what is absolutely necessary, but that which is desirable and convenient. It is ridiculous to suppose that any sensible person giving money to a charity should stipulate that not a fraction of it should be devoted to the purchase of microscopical or chemical apparatus required by the physician. It is not reasonable to suggest that they would object to this any more than they would object to the purchase of surgical instruments. Less than the one-hundredth part of our annual expenditure in this hospital would provide all that we want. It seems a small thing to ask for; but we have asked, and for years in vain. So far from our condition having improved, it is worse than it was when I was a student in the days of the old hospital. Even urinometers cannot in these days always be obtained for our use, and objections are raised to furnishing the necessary supply of thermometers. It has even been hinted that some very influential persons, whose duty it is to see that the funds are carefully administered, are not convinced that the thermometer is of any practical use or required for the proper discharge of our duties to the sick. However, one thing is certain—that we must have thermometers; and if they cannot be provided for us, we must raise a subscription, and purchase these and other things for ourselves. What is the custom in other public hospitals I do not know, but it seems to me that very liberal provision ought to be cheerfully made for the requirements of medical officers who freely give their services for the benefit of the poor.

(To be continued.)

Municipal Honour.—Mr. Kirk, M.R.C.S., L.S.A., has been chosen Mayor of the ancient borough of Hedon, the second time in three years.

Health of Scotland.—During the month of October there were registered in the eight principal towns of Scotland the deaths of 2379 persons, of whom 1230 were males and 1149 females. Allowing for increase of population, this number is 54 under the average for October during the last ten years. A comparison of the deaths recorded in the eight towns shows that during October the annual rate of mortality was 20 deaths per 1000 persons in Edinburgh, 21 in Dundee and in Perth, 23 in Leith, 25 in Aberdeen, 26 in Glasgow, 35 in Paisley, and 45 in Greenock. Of the 2379 deaths, 995, or 42 per cent., were of children under five years of age. In Perth, 23 per cent. of the persons who died were under five years of age; in Edinburgh, 35; in Paisley, 40; in Dundee, 42; in Glasgow, 43; in Aberdeen, 44; in Greenock, 47; and in Leith 53 per cent.

ORIGINAL COMMUNICATIONS.

ACUTE ATAXY.

By THOMAS STRETCH DOWSE, M.D., F.R.C.P.E.,
Medical Superintendent, Central London Sick Asylum.

The following case is of especial interest, inasmuch as it represents by signs and symptoms exceptional conditions of actual morbid change, both in the brain and spinal cord, which changes are evidenced by alterations of function in mind and ganglionic centres. For instance: there was impairment of perceptive and intellectual power, there was the rigid and prolonged opisthotonos of tetanus, inco-ordinate and jactatory movements of the upper extremities, sometimes resembling chorea, the inability to stand unaided, and the absolute inability to co-ordinate the movements of the lower limbs in progression, with other conditions peculiarly analogous to posterior spinal sclerosis. These symptoms led me to consider it as an absolute lesion of the posterior columns and grey matter of the cord, not primarily of an inflammatory nature, but rather due to capillary emboli in the grey matter itself. I have therefore given to it the name of acute ataxy, as I have never seen anything comparable to it, and it certainly differs from any recognised form of nerve lesion which has found a place in the nomenclature of diseases of the nervous system.

C. S., aged 54, admitted into Central London Sick Asylum May 9, 1873; discharged November 7. Her history was as follows:—She was the mother of eleven children, five of whom are living. Menstruation had ceased at the age of forty-nine. Her health for years past had been good, but when fourteen years of age she was frightened into an attack of chorea, which lasted eighteen months. At the age of thirty she had acute rheumatism, which left no lesion of the valves of the heart. After this time her health continued good until she heard of the loss of the vessel in which her son was sailing, the effect of which news was to cause (as she called it) a heavy shock to her nerves, resulting in a succession of fainting fits, between which she would sit for hours gazing vacantly, and taking no heed of surrounding objects. Persons passing and repassing, or even speaking to her, would not excite her attention, but when touched she would suddenly start, and every part of her body appeared to be in violent agitation. After this her reason became affected, and she would wander for miles without eating, drinking, or speaking to anyone. In this state she continued for three or four days. She then resumed her employment, but at times suffered greatly from vertigo, and for a second or two she would lose consciousness, always having a tendency to fall forward during these attacks. Now comes the history of the present illness. It appears that she went to bed on the night of May 2 tolerably well in health, but suffering from great mental depression, on account of the loss of her son; and when she awoke in the morning found that she was totally unable to control her movements. She could lie perfectly still in bed, but when she attempted to exercise voluntary power the muscular actions were not only not under the direction of her will, but were subject to a series of movements not unlike those of chorea.

Upon admission into this Asylum, the condition just described was not manifest, and there was simply inco-ordination of voluntary movement both in the upper and lower extremities. This inco-ordination only resulted when the will was brought to bear upon and direct movement. She complained of having a sense of "pins and needles" all over the body, from the roots of the hairs of the head to the ends of the nails of both extremities. A few days after this she was seized during the night with intense pain along the whole course of the spine, producing tonic spasm with persistent opisthotonos, which was greatly relieved by the administration of chloroform. This was the first time she complained of spinal pain. On the following day grave constitutional symptoms set in; her temperature rose to 102°; there were acute lancinating pains darting from the occiput to the sacrum, with occasional tonic spasms of groups of muscles distorting the general conformity of the body; retention of urine; vomiting; and reflex spasms, confined especially to the upper extremities. The tongue was dry and brown; pulse 130; and the respiration weak and jerky. This condition continued for two or three days, and then passed off by degrees, when the following notes were made:—Memory very imperfect;

sight at times diploptic. She is quite unable to stand, and when she attempts to walk throws the legs about in all directions. Has a tendency to lie in a semi-dreamy condition, and when any part of the body is touched starts violently. Still complains of occasional shooting pains throughout the whole course of the spine, as well as the feeling of "pins and needles" all over the body. (It might be here remarked that the estranged muscular sense was in no way assisted by vision.) There is failure of grasping power of both upper extremities, equal in degree. She says the arms feel heavy, like lead, and the power of muscular co-ordination is completely lost in them. She can drag the limbs up in bed, abduct or adduct them co-ordinately, but these actions are performed with great slowness and apparent difficulty. There is no power to raise the extended legs from the heel. She is continually holding imaginary conversations with unseen people. At this time her temperature was 104°, pulse 105. A week after this it was observed that there was some improvement in the degree of co-ordinating power, yet she is unable to feed herself, and, instead of carrying the food to her mouth, holds it still, and moves the head forward to catch it. The feelings of prickings and shooting and cutaneous formication have passed away. She can now fasten her dress or pin her shawl without difficulty, but she is unable to stand without support, and even when thus assisted she has to be propped, so to speak, behind to keep her from falling on her back. The body is rigidly fixed, and the spine and head arched backwards. When she attempts to walk the legs are jerked upward, and the feet fall heavily down upon the heel. She says that the extremities feel like lumps of lead. So marked is this impression in her mind that, when lying down with her arms upon her body, she says that their weight is more than she can bear. There was no marked cutaneous anæsthesia, yet the muscular sense was undoubtedly deficient, producing a degree of numbness. There was no especial tenderness when the spines were gently percussed, but forcible pressure upon the dorso-spinal muscles caused great suffering.

From this time she gradually and progressively improved in health. The ataxy in the upper limbs had completely subsided in about six weeks after the commencement of the attack, and the same condition in the lower extremities became less evident day by day, so that at the time of her discharge she possessed scarcely a trace of the disease from which she had been suffering. When discharged the only points exhibited by her, and referable to the spinal lesion, were the inability to walk a straight line, for, when desired to walk a given distance of twenty yards, she invariably diverged to the right, always at about the same angle of thirty degrees. Also it was by an effort of enforced will that she was enabled to stand erect with the eyes closed; and during progression the feet were always kept some distance apart and the heel implanted on the ground prior to the sole of the foot.

Highgate.

OUTLINE OF OBSERVATIONS AND INVESTIGATIONS ON YELLOW FEVER.

By JOSEPH JONES, M.D.,
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No. I.—Notes upon the Early History of Yellow Fever.

(*Continued from page* 520.)

It is evident, therefore, that the origin of the American plague or typhus (*vomito prieto*, *fièvre jaune*, yellow fever) is involved in doubt, on account of the prevalence in the tropical and sub-tropical regions and temperate zones, both amongst the natives and foreigners, of some forms of malarial fever, often attended with jaundice, passive hæmorrhages, and black vomit. If it could be determined at what time this terrible disease was clearly recognised by the medical profession and historical writers as distinct from paroxysmal malarial fever, and as dependent upon a specific cause or upon a combination of causes peculiar to itself, a firm ground for the discussion of its origin and of its relations to the native population, as well as to the foreign elements, would be established. But it is well known that many of the descriptions given by various authors will apply as well to the severe forms of paroxysmal malarial fever as to yellow fever, and also that the distinction of the one from the other has been the result of comparatively recent labours; and even at the present time there are not a few physicians who hold to the identity of both diseases in their origin and essential nature.

The opinions in regard to the causes of yellow fever have been arranged by systematic writers under three heads:—1. That it is a disease induced solely and essentially by contagion. 2. That it is essentially of endemic origin. 3. That, being of endemic origin, it afterwards becomes contagious. The doctrine that not only intermittent, remittent, and congestive or pernicious paroxysmal malarial fever, but also yellow fever, assume more or less, according to circumstances, the type of one another, has been extensively entertained by the medical profession. Believing them to arise from essentially the same causes, variously modified, which assail the system through the same avenues, these fevers are regarded by this class of reasoners as essentially the same, modified by the intensity of the cause and by the prevailing constitution. And it has strangely been sought to maintain this position by the fact that the natives of southern cities, in which yellow fever is of such frequent occurrence as to be pronounced endemical, possess in a great measure an exemption from this malady, and suffer only from mild intermittent and remittent, whilst those lately arrived from northern latitudes so often fall victims to yellow fever that it has in some cities received the name of *strangers' fever*.

To sustain the opinion that yellow fever arises from miasmatic effluvia, the following facts have been frequently cited:—1. Yellow fever always appears simultaneously with bilious remittent. 2. A high range of atmospheric temperature is essential to the generation of its cause. 3. Its first appearance is almost always in the lowest and most filthy parts of towns, and in localities favourable to the production of miasmata. 4. The supervention of storms, heavy rains, or cold weather puts an immediate check to its progress.

It has been asserted that whilst at New Orleans, Charleston, Savannah, and Gibraltar the same individual is seldom twice attacked by yellow fever, in the West Indies and on the Coast of Africa it is said to secure no subsequent immunity. With some writers it is still even a disputed question whether certain fevers which have, or are supposed to have, their source in vegetable miasms or in effluvia from marshes, or from infusoria or fungi developed and propagated under certain combinations of heat, moisture, and putrefying vegetable and animal matters, are subsequently spread by contagion; whilst some writers contend that within the tropics yellow fever may at any time, under certain conditions of moisture and temperature, arise *de novo* in the impure atmosphere of the crowded and filthy ship or city. Others, again, as strenuously uphold the doctrine that it is a specific contagious pestilential disease, which, like small-pox or measles, may be transported and communicated from one ship or city to others, thus following the great avenues of commerce. Whilst a third class adopt and advocate a doctrine which embraces the main features of both propositions. Some who hold that yellow fever may be engendered *de novo* in the hold or atmosphere of ships navigating in the warm, moist tropical regions, have coupled with this view the doctrine that if this poisoned atmosphere be allowed to escape at the wharves of cities situated beyond the yellow fever zone, those only who come within the sphere of its influence will be affected; and its subsequent spread will depend upon conditions of filth and crowding of such localities, the disease never spreading endemically, and falling harmless among the inhabitants of a salubrious locality.

According to this view, the development of this malignant fever requires the conjoint operation of both local and general causes, constituting an endemico-epidemic, which is unsusceptible of propagation by specific contagion; and in the summer atmosphere of a city lying beyond the yellow fever zone there must exist some peculiar combination of circumstances, or some peculiar agency favourable to its development. In these cases it is affirmed that there is generally found an infected district, which slowly and regularly extends its boundaries, rendering all who come within its limits subject to this form of fever. It has been said that the experience of several centuries teaches us that the cause of this fever is perennially present in the tropical and sub-tropical cities of America; that it is indissolubly connected with climate; that it maintains the same relation towards the human system as the other malarious emanations of swamps and lowlands; and that it is liable to be developed at any time in different degrees of intensity by the combined operation of heat and other agents.

Amongst the most striking circumstances in the etiology of yellow fever are the marked geographical boundaries within which it is confined and the circumscribed localities in which it prevails, the disease being rarely met with south of the 35th or north of the 40th degree of latitude, and even between these limits being more frequent in the Western than in the Eastern Hemisphere; its almost universal limitation to commercial sea-ports elevated but a few feet above the level of the sea, although it occasionally spreads to towns and cities in the neighbourhood of the latter, situated in the interior country or on the banks of navigable rivers; and the fact that it is very frequently circumscribed within certain limited and well-defined portions of the locality or city in which it prevails. The shores of the Western Archipelago, and of the Gulf of Mexico and the Caribbean Sea, constitute the prolific hot-bed in which has been generated and propagated the mysterious poison of this disease, which has desolated cities, armies, and fleets, and destroyed the successive swarms of adventurers and invaders from Europe and the colonies of North America.

If it were possible to determine with accuracy the nature of the severe and fatal forms of fever which afflicted the first explorers and colonists of the tropical and sub-tropical regions of America, and even the very companions of Columbus, the question of the origin of yellow fever would be relieved of much uncertainty and doubt. If we are to credit the accounts of some authors, the first trace of yellow fever was observed at the end of the fifteenth and beginning of the sixteenth century at San Domingo and Porto Rico, in the continent of South America, and in the Gulf of Darien, at which latter place it is said to have prevented the Spaniards from settling. In November, 1493, Columbus landed at San Domingo with 1500 Spaniards, in order to found the city of Isabella. A severe and fatal fever carried off the greater part of them within a year after their arrival, and the disease is described as being "yellow as saffron or gold." From 1544 to 1568 there is no record of the disease having prevailed as an epidemic until 1635, when it appeared in Guadaloupe, and thenceforward it occurred at irregular intervals. In the seventeenth century it spread along the continent of South America to latitude 8° south, and in North America to latitude 42°, but only on the eastern coast of both. The first appearance of the disease in the United States was at Boston in 1693, and in Charleston and Philadelphia in 1699. It is said first to have appeared in the Gulf of Mexico, at Biloxi Bay in 1702, and Mobile in 1705; but Humboldt held that it had prevailed from the very foundation of Vera Cruz, and was indigenous to this city. It prevailed at Pensacola and Mobile in 1765.

In the eighteenth century it appeared on the west coast of South America in latitude 2° south. On the North American continent it spread to latitude 42° north; it extended even to Europe, and reached the Pacific and Madagascar. At the beginning of the nineteenth century it penetrated deeper into the North American continent than formerly, reaching as high as latitude 47° north, and in Europe it extended to latitude 48°, and prevailed in the Canary Islands and Leghorn.

Ever since yellow fever attracted attention it was recognised as a distinct disease from the remittent autumnal fevers of the temperate zone. It has prevailed as an endemic at Havana, raging epidemically from April to December, and occurring sporadically during the rest of the year. From time immemorial it has been endemic at Vera Cruz, in the Gulf of Mexico, where its chief victims are strangers who come from cold regions during the hot season, as well as Europeans and those natives who exchange the more elevated and cool regions of Mexico for the coast.

At the time when Spain possessed by far the best and largest portion of the American continent, extending from the north of California to the Straits of Magellan—a space of between 6000 and 7000 miles,—a system of commerce was established which appeared to be eminently favourable to the origin and spread of yellow fever. The Spanish galleons were, in fact, very large men-of-war, built in such a manner as to afford ample room for the stowage of merchandise, with which they were commonly so encumbered as to be rendered incapable of defence. The fleet of galleons consisted of eight such men-of-war, and generally convoyed from twelve to sixteen merchantmen. During times of peace the galleons sailed once a year regularly, though at no set time, but according to the pleasure of the King of Spain and the convenience of the merchants. They sailed from Cadiz to the Canaries, thence for the Antilles, and after reaching this longitude they bore away for Carthagena. As soon as they came in sight before the mouth of Rio de la Hacha, after having doubled Cape de la Vela, advice of their arrival was sent to all parts, that everything might be prepared for their reception. They remained a month in the harbour of Carthagena, and landed there whatever was designed for *terra firma*. They then sailed to Puerto Velo, where having stayed during the fair, which lasted five or six weeks, they landed the merchandise intended for Peru, and received the treasures and commodities sent from thence. The galleons then sailed back to Carthagena, and remained there till their return to Spain, which usually happened within the space of two years. When orders for returning home arrived, they sailed first to the Havana, and having joined the flota, and what other ships were bound to Europe, they steered northward as far as Carolina, and then, taking the westerly winds, they shaped their course to the Azores, when, having watered and victualled afresh at Terceira, they thence continued their voyage to Cadiz.

The Spanish flota consisted, like the galleons, of a certain number of men-of-war and merchant ships; there were seldom more than three of the former and sixteen of the latter in this fleet. They sailed from the coast of Spain some time in the month of August, in order to obtain the winds that blow in November for the more easy pursuing their voyage to Vera Cruz. They called at Puerto Rico on their way to refresh, passed in sight of Hispaniola, Jamaica, and Cuba, and, according to the winds and season, sailed either to the coast of Yucatan, or higher through the Gulf to Vera Cruz. The Spanish flotilla being intended to furnish not only Mexico, but the Philippine Islands also, with the goods of Europe, was obliged to remain in Vera Cruz for a considerable time, and sometimes found it necessary to winter in that port. This fleet usually sailed from Vera Cruz in the month of May, but was sometimes detained as late as August; it then made for Havana, and returned to Spain in company with the galleons.

The Spanish towns were generally built in low, unhealthy localities, surrounded by marshes and swamps, with narrow streets and high walls or fortifications, which not only compressed the towns within certain limits, and induced crowding and favoured the accumulation of filth, but also prevented to a certain extent the free circulation of air.

(*To be continued.*)

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, etc., etc.

(*Continued from page* 463.)

Case 7.—Stephen M., aged 9 years, was bitten on the left foot by a tiger snake (hoplocephalus curtus) at 2 p.m., January 28, 1869. He at once ran home to his mother, who put some salt into the bitten part. Noticing the boy getting giddy, she carried him to a neighbour, who scarified the place and burnt some gunpowder upon it. He then carried him on horseback to Mr. Henshall, chemist, who treated the boy with brandy and ammonia and Underwood's antidote (a decoction of fern applied locally). By 7 p.m., the boy getting worse, he was taken to Mr. Stillman, chemist, who immediately applied a pledget of lint saturated with strong liquid ammonia to the wound, and administered brandy, ammonia, and hot coffee internally. At 9 p.m. the boy was evidently sinking, and Mr. Stillman having been joined by Mr. Henshall, they decided upon using the injection as recommended by Professor Halford. A half-ounce glass syringe having been carefully charged with diluted ammonia, in the proportion of two parts of strong ammonia to ten of water, Mr. Stillman opened a vein at the bend of the elbow, from which dark, thick blood oozed slowly. Mr. Henshall inserted the nozzle of the syringe, and slowly injected upwards towards the shoulder about half the contents of the syringe. On the syringe being removed, the thumb was kept pressed over the orifice till a pledget of lint saturated with cold water was bound on the arm. The effect was instantaneous: the boy, who had been in a state of stupor, at once rallied, and the wound in the foot bled afresh, the blood being brighter in colour and less thick. Afterwards friction was applied to the icy cold extremities, and hot coffee given *ad libitum*. At 2 a.m. the boy was so far recovered as to sit before a fire and play with a kitten. It was remarked that whereas the ammonia and brandy that were given by the mouth were almost instantly rejected, he retained the hot coffee very well.

We were first made acquainted with this case by Mr. Sturt, police magistrate, of Melbourne. Another police magistrate, Captain Panton, had seen the boy when overpowered by the poison, and afterwards when so rapidly recovered. I was anxious to be certain that Messrs. Henshall and Stillman had really injected the ammonia into a vein. The following letter will, I think, satisfactorily set this at rest:—

"Seymour, February 26, 1869.

"Dear Sir,—You can rely that the vein of the arm was opened, and the nozzle of the syringe was inserted into the vein; also that the ammonia was injected into the cavity of the vein and passed upwards through the channel of the vein. My reasons for certainty are, not only having deliberately injected it myself, but the trace of swelling or inflammation which was distinctly to be seen by the red appearance assumed along the whole line of the vein from the orifice to the shoulder. The boy had pain along the vein when touched for the space of three days afterwards. There can be no doubt in our minds of the perfect efficacy of your discovery, and also that this was a real case of snake-bite pushed to the last extremity. The boy is now perfectly recovered, and does not suffer the least inconvenience. I shall be most happy to send any further information required in my power.

"Your obedient servant, S. H. Henshall, M.P.S.
"(Countersigned) A. Stillman."

The points in this case which pleased so much at the time were the successful manner in which the little operation had been performed by these two gentlemen, the fact of so young a boy being so instantaneously relieved, and the wound in the foot recommencing bleeding, showing the relief to the peripheral circulation, to which I have before alluded.

Case 8.—A boy, aged 9 years, putting his hand into a hole to get a rabbit, was bitten (as he said) by an opossum. It was no doubt by a snake; but it was twenty-seven hours after the accident that he was brought to the Kyneton Hospital. Five minims of liq. ammoniæ fortior, with twenty-five minims of water, were injected into the basilic vein. Before the injection the pulse was intermitting, the extremities cold, and the pupils dilated and insensible to light; there was also lockjaw. Four hours afterwards a similar dose was again injected. No apparent effect followed the use of the remedy, and the child died, remaining perfectly sensible to the last.

There are points about this case which it will be useful to touch upon. The first unfavourable thing to mention is the great length of time between the bite and the use of the injection; the second is the age of the patient. We might ask whether the dose was not too small for so severe and prolonged a case. But we shall find further on other cases presenting the singular symptoms of perfect consciousness with dilated and fixed pupils, with more or less of tetanic symptoms, from which it would appear that these are symptoms that should cause greater anxiety than the most profound coma. It is true that consciousness accompanied by dilated pupils need not excite too much anxiety, but when to these are added pains about the neck, and trismus, then I think the case should be looked upon as very grave. The fixed, dilated pupil necessarily, by loss of accommodating power, interferes with vision, but in addition there may be also affection of the internal seats of sensation, and the following interesting facts show that they are occasionally joined to affections of the seats of general or common sensibility. This would not surprise us if we are to regard the optic thalami as actually those seats, and the corpora quadrigemina as those of vision, seeing that being so closely connected they might be similarly affected.

Mr. Clement Hodgkinson, Deputy Commissioner of Lands in Victoria, furnishes the following facts:—

"In 1841, when employed on Government surveys in the northern part of New South Wales, I was bitten by a large black snake. The venom of this reptile did not, however, produce any unconsciousness or mental confusion, and I was therefore able to note all the symptoms displayed, which were as follow:—1. Slight numbness in the part punctured by the fangs, but no local pain or swelling. 2. General feeling of lassitude, and weakness of the muscles of the neck. 3. Insensibility to the effect of pungent salts when held to the nostrils, and to pinches inflicted on me by some of the on-lookers, who desired thereby to prevent me from falling into a comatose state. 4. Deprivation of sight. About two hours after I was bitten this symptom attained its greatest intensity, and I was then scarcely able to distinguish the features of the persons near me. The treatment under which I recovered in about three or four hours after I was bitten consisted in the suction of the punctures by some aborigines (who successively took spells in performing this friendly office), and in making through the punctures a cut, to which was applied some nitric acid."

These are most interesting facts, and show the very general benumbing influence of the poison, and the value of quick and repeated suction in mitigating the symptoms. At the same time the case stands almost in contradiction to what I have just said relative to similar symptoms when attended with stiffness of the neck and trismus; but yet it was not tetanic symptoms Mr. Hodgkinson relates, but weakness in the muscles of the neck and general lassitude. In this seems to be the difference between the cases. My object is not so much to be right as to record all worthy facts on so perplexing a subject.

Case 9.—This case I take from a letter of Dr. William Rae, of Bacchus Marsh:—"About noon on July 17, 1869, a robust man, aged 23, while stooping on his hands and knees to drink from a water-hole, felt a sharp stinging pain on the inside of the palm of the right hand, which he at the time supposed was caused by a thistle. On getting up, however, he saw a snake, about eighteen inches long, getting into the water immediately under him. The man at once ran to an adjoining hut, where the bitten part of his hand was freely excised with a razor. The wound bled profusely. He then rode to my residence (a distance of six miles), where I saw him. Suction was employed, and the wound cauterised. As there was no appearance of general systemic disturbance, he was sent home, with instructions to send to me at once should drowsiness or any other untoward symptom appear. I did not again see him until five o'clock in the afternoon. In the interim he had kept pretty constantly on the move, but about three o'clock numbness of the right arm, oppression about the chest, impairment of vision, and drowsiness set in. No vehicle was at hand, and he set out on horseback to see me again, accompanied by two friends. On the way the disposition to sleep became so great that one of his friends had to support him on the horse, while the other kept up pretty severe flagellation with a stick. When I saw him he could scarcely be roused. Shouting and shaking only elicited from him an occasional monosyllable. The pulse was feeble and intermittent, and the pupils dilated and fixed. I ascertained that, with the exception of one glass of brandy, which he had been induced to take about three o'clock, and before the symptoms had become very urgent, he had had no stimulants or other medicine. The case seemed a favourable one for testing the value of Professor Halford's method, and accordingly the median cephalic vein of the right arm was exposed, and twelve minims of liq. ammon. fort., in a drachm of warm water, carefully injected into the blood-current by means of a hypodermic syringe. Within a minute indications of returning consciousness were apparent, and in about ten minutes he had sufficiently recovered to walk out in the open air unassisted. He was kept under notice for a few hours, when he went home, no unpleasant symptoms having occurred in consequence of the treatment adopted. The man called upon me on the following day, when he was quite well. The notable features in the case are—first, that of the injection of the ammonia alone having been relied on; and, secondly, the permanence of the good effect obtained by a single application of the remedy."

This case shows how little we can depend upon the so-called excision of the bitten part by anyone but a surgeon; it is usually little more than scarifying that is done. This is not to be wondered at, and it is only necessary to draw attention to it, since in many of the recorded cases the same thing is said to have been done, and it is as well to know its value.

Shortly after this case occurred, Dr. Rae was good enough to call upon me and give me the fullest particulars, and I have only to add to his account his great astonishment at the immediate result of his treatment. He assured me that riding home in the evening, and seeing so great a crowd surrounding his house, he could not guess its meaning, when, to his surprise, he saw the man, who had been bitten in the morning, now apparently dying. He had the man carried under the verandah of an hotel opposite, and there, surrounded by the excited crowd, injected him, with the result stated above. Dr. Rae assured me that I should hear of many similar cases if only people would now believe as he did. His words have come true.

Something must be said, also, about the unusual time of

year—viz., winter—for snake-bite to occur. It so happened that about this time there had been many warm and sunny days, that on which the accident happened having been one of the most delightful. At such times one might possibly meet a snake near a water-hole, and it is a habit, I believe, with bushmen to look carefully about such places before they stoop down to drink. Mr. Knefft, a great authority on the habits of snakes, says—"The general habits of snakes will be found much alike in similar climates, whether north or south of the line. Where frost occurs, all the reptiles retiro underground into the burrows of various animals; but in the more genial regions, where the thermometer seldom or never ranges below freezing-point, they select sunny hill-sides abounding in flat stones, through which the rays of the sun easily penetrate, and beneath them make their winter quarters. They do not fall into a dormant state, since bright warm days will bring them out a few yards at least from their hiding-places."

Case 10.—A boy, aged 17, was bitten on the foot by a small whip snake (hoplocephalus flagellum, or H. coronoidis), about eighteen inches long; he was freely dosed with brandy and ammonia. On arrival at the Creswick Hospital he was very drunk, but not insensible; the pulse was rapid, but not weak. To be on the safe side, Dr. Hyde Starke injected twenty minims of liq. ammon. fort. mixed with forty of water into the median cephalic vein. Within half a minute he complained of great pain in the eyes and head. On being put to bed he recovered most unusually quickly from the drunkenness, and continued well.

In this case Dr. Starke could find no symptoms of snake-poisoning, and the case is only recorded as an instance of the relief of symptoms of drunkenness by a double dose (twenty minims) of liq. ammon. fort.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. GEORGE'S HOSPITAL.

CASES UNDER THE CARE OF DR. OGLE.

Cerebral Affection, apparently of Syphilitic Origin.

Rachel G., aged 52, a married woman with eight children, and who had also had a miscarriage, had been suffering for three months with pains in the head and limbs and loss of appetite, and two months before admission into the Hospital (under Dr. Fuller's care at that time) had had some kind of fits. Over the left side of the forehead and also over the right clavicle were encrusted ulcers, and there was slight dropping of the upper eyelid of the left eye and slight internal squint of the same eye, the pupils being equal. It seemed that of late the patient had greatly lost her hair. She was placed on iodide of potassium. It was very soon found that there was some loss of power over the sphincters, and that she had occasionally difficulty in expressing herself correctly. Under treatment she became quite rational; the pain in the head greatly diminished; and after being five weeks in the Hospital she left, and returned home. Six weeks later she came again to the Hospital under the charge of Dr. Ogle. At this time she was constantly dozing and was dull and stupid, complaining at the same time of great pain in the head. The pulse was quick and the breath fetid, as if she had been salivated. The dark-crusted sore on the forehead existed as on her former visit, and was evidently connected with diseased bone. Dr. Ogle gave her fifteen grains of the bromide of potassium three times a day, and obtained from Mr. B. Carter an ophthalmoscopic examination, by which it was found that both discs were obscured in outline (neuritis descendens), and the right retina was studded with small hæmorrhages. The stupor became greatly aggravated, and after a time she lay in almost a comatose state for some days, apparently about to die, unable to speak, and passing urine and evacuations unconsciously. She was then put under the influence of ten-grain doses of the iodide of potassium three times a day (which was not given earlier owing to the apparent salivation), and she soon improved, so that in nine days she was quite sensible and easily roused to talk, though still inclined to sleep. The patient was seen by Mr. H. Lee, with a view of ascertaining whether anything could be done to the diseased frontal bone; but he did not think it desirable to interfere with it. She greatly improved under the continued use of the iodide of potassium, and no longer was drowsy, though some pain in the head remained; and she went home, able to attend to work, at her own request. The condition of the eye and eyelid remained unaltered. Dr. Ogle considered that this case showed well the benefit arising from the iodide of potassium in the disease, and believed that the drowsiness and semi-coma were owing to serous effusion which was absorbed under the influence of the drug. It was to be regretted that the patient could not remain in the Hospital, so as to have continued its use.

Excessive Epistaxis in a Girl, aged six years—Anæmic Bruit at the Apex of the Heart.

The girl, Rachel E., otherwise healthy and of healthy family, had had an attack of epistaxis one year before, and for two months previous to admission had been out of health, with loss of appetite. The present attack had existed four days, and after nausea and vomiting of blood she was brought to the Hospital exceedingly pale and anæmic, and complaining of great giddiness, but with no pain. The heart was beating forcibly and rapidly, and the pulse was 180 and almost inappreciable as to force. She was bleeding freely from the nose, which was at once plugged. On examination a loud systolic bruit at the apex of the heart was audible, and the jugulars of the neck were full and pulsating, but nothing wrong was found with any of the inner organs. Ice was applied to the forehead and given by the mouth, and small doses of tincture of digitalis every four hours, and milk, eggs, and beef-tea. The hæmorrhage had ceased on the plugging, and the patient's pulse and general condition improved, and the plug was removed. For a few days she went on well, but the epistaxis recurred, and again the patient was blanched and became almost lifeless in appearance, the pulse being hardly discernible. Brandy had to be given in addition to the use of ice, and the tincture of perchloride of iron was given every four hours. On one or two occasions blood was brought up by vomiting. The patient eventually quite recovered her looks, but the action of the heart remained irritable, and for some time the cardiac bruit remained very loud. Digitalis infusion was given, and a belladonna plaster applied over the heart. The bruit gradually became fainter, and was looked upon by Dr. Ogle as anæmic in character, but was somewhat audible even after the child had been to the Wimbledon Convalescent Hospital. Dr. Ogle considered it was interesting and somewhat unusual to have an anæmic bruit confined to the apex of the heart. As to the exact character of the bruit, Dr. Ogle found some difficulty in establishing whether it was mitral or tricuspid; but from the jugular pulsation, etc., he was inclined to look upon it as being tricuspid, bearing in mind the observations on so-called anæmic murmurs by Dr. Parrot in the *Archives Générales* for 1866, (a) who supposes them to result from inefficiency of this valve, owing to enlargement of the right side of the heart as a consequence of atony.

Pulmonary Phthisis, with High Temperature unaffected by Quinine.

The following was one of several cases in which observation was taken as regards the influence of remedies upon temperature in disease:—

The patient, Richard D., aged 18, was admitted on March 20 with physical signs of consolidation of the upper parts of both lungs, cough, increased action of the heart, and much redness of the tongue. Cod-liver oil with good diet, and wine with cascarilla and the compound tincture of camphor, were given. Subsequently the cough became more troublesome, as also the palpitation, and much small crepitation became audible at the apices of both lungs.

At this period (April 5) the temperature was 102° in the evening, being the next morning 103·4°, and the pulse 120. Iodide of potassium and salines were given, and afterwards squill and cinchona bark. This treatment was continued until the 15th, when the temperature was registered as follows:—15th: a.m., —; p.m., 101°. 16th: a.m., 100°; p.m., 100·2°. 17th: a.m., 100°. 18th: a.m.: 100°; p.m., 100°. 19th: a.m., 101·4°; p.m., 100°.

On the 20th sulphate of quinine was given in doses of six grains three times a day, and the temperature, as measured afterwards, was as follows:—20th: p.m., 102·4°. 21st: a.m., 102·2°; p.m., 101°.

(a) See vol. ii., p. 129.

On the 22nd the quinine was increased to ten grains each dose, and the temperature taken was as follows:—22nd: a.m., 102°; p.m., 101°. 23rd: a.m., 103·4°; p.m., 101°.

On the 24th some diarrhœa came on, and the quinine was omitted. The temperature continued as follows:—24th: a.m., 102°; p.m., 101·4°. 25th: 102°.

On the 27th the patient left the Hospital at his own request, as he felt so well that he said he must be going to work.

Dr. Ogle contrasted the above with several others showing that temperature in many cases of phthisis was lowered by the use of quinine.

BRITISH SEAMEN'S HOSPITAL, CONSTANTINOPLE.

SKIN GRAFTING.

(By JOHN PATERSON, M.D., Surgeon-Superintendent.)

Skin-grafting has been successfully practised for three years at this hospital in nearly all cases of chronic ulcers. The process is simple. A piece of skin is nipped up with the forceps, and snipped off with scissors. It is then spread out on the surface of the ulcer, and with the point of a knife pushed partially or wholly under the granulations. A piece of perforated linen wrung out in cold water is then applied over the part, and covered with oiled silk or gutta-percha tissue. Perfect rest and cleanliness are all that is afterwards required. At first the grafts were merely laid on the surface of the ulcer, and kept in position with isinglass plaster, but displacement of the pieces often occurred, even after they had adhered. Several grafts are inserted at a time, or at intervals of forty-eight hours. They are taken from the patient himself, or from any healthy subject willing to give them, and from any convenient part—generally, however, from the upper arm or inner part of the thigh. Grafts the size of a large millet-seed are found to answer best; the larger ones do not succeed so well, as the epidermis swells and then disintegrates, and often causes irritation, producing unhealthy looking little perforations. The nucleus of germinating tissue however remains, and takes on a healthy action after the *débris* has been washed off and the irritation has subsided. It would seem that the reproductive power of a graft is limited, for in no case have we seen a large ulcer heal with one or two grafts. Seldom does a graft increase beyond the size of a sixpenny-piece, and the progress of growth in each graft is slower when there are only a few, and placed at a greater distance from each other. Adhesion of the graft takes place, though slightly, in twenty-four hours, as observed when grafts were laid on the sore, and without dressings. In other respects the process observed closely corresponds with that described by M. Reverdin and Mr. Pollock. That a general stimulation of the sore is produced cannot be doubted; the edges soon begin to show a healthy action. In very callous ulcers, which have resisted other treatment, this is often well marked; exuberant granulations have been observed to arise forty-eight hours after the insertion of the grafts. The newly formed tissue from grafts is easily influenced by any disturbance of system. In one case intermittent fever occurred during the process: the growth of the grafts was suspended for several days, and a portion of the new formation was absorbed or disintegrated. In another case active diarrhœa supervened, with a like result.

In the case of a lad, aged 16, severely scalded, the system was much lowered by the excessive suppuration; several of the grafts grew to an unusually large size. As he improved in health and the nutritive powers became active, nearly all the pieces disappeared; they afterwards grew afresh, but did not again reach their former size. Black skin seems slower than white to take on the action, as observed in three cases where alternate rows of black and white grafts were inserted at different periods. In no case tried could a hair be grown when transplanted on the graft, nor did epithelium when freely sprinkled over several large ulcers produce any result. A piece of skin, half an inch square (cut from an amputated foot after it had lain an hour and a half in cold water), was applied to a large ulcer on the back. It slightly adhered in twenty-four hours; in forty-eight hours it was soft and swollen; the surface then began to wrinkle and contract; in four days it was disintegrated to half the original size; in seven days it was reduced to a morsel not much larger than the ordinary-sized millet-seed graft; it then grew as usual. Grafts applied to unhealthy ulcers do not always fail, but the process is much slower, and they often healthily stimulate the sore. A negro with a large chronic ulcer over the tibia had alternate rows of black and white skin engrafted. The white grafts grew quicker than the black. When cured, the cicatrix presented a mottled appearance—the black grafts produced dusky, and the white bright fawn-coloured tissues. Grafts from a negro inserted into an ulcer on a white gave a deep fawn-coloured cicatrix. About four months afterwards the colour of the cicatrix had become much lighter. In several cases the grafts, after progressing favourably for many days, entirely disappeared when no constitutional disturbance could be traced, though probably it did exist.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 22, 1873.

HOSPITAL MEDICAL OFFICERS AND HOSPITAL COMMITTEES.

The great increase in the number of the so-called medical charities during the last forty years has rendered the relation of the honorary medical staffs of those institutions to the institutions themselves and to their governing bodies a matter of the highest and most general professional interest. Unfortunately an idea has been allowed to gain strength in some quarters that the physicians and surgeons who constitute the professional staffs of the numerous hospitals and dispensaries, which have sprung up in London and in all country towns, are a set of persons who, although seemingly they give their services gratuitously, are really amply paid by the honour and glory and practice which they derive from their positions; and are, therefore, in some sense the remunerated servants not merely of the institutions, but of the president, vice-presidents, treasurers, committees—even, indeed, of the paid officers who manage the funds which a benevolent public places at their disposal. Moreover, recent events at a London hospital, to which we shall presently refer, serve to show that this idea has obtained the very startling embodiment of a requirement that the medical officer not merely should do his duty as physician or surgeon to the institution in which he holds a post, but that it is also his duty to place himself under the surveillance of the governing

body, who have the right to gag his mouth if he express an opinion out of doors which they may choose to regard as inimical to the interests of the institution, or rather to their management of those interests; and even to compel him to submit any anonymous articles which he may contribnte to the periodical press of the country to their censorship, and in case of his incurring their displeasnre to inflict on him the penalty of summary dismissal.

We need not say that any such view of the relations of medical officers to medical charities is almost too ridiculous for serious discussion. No medical practitioner, be he physician or surgeon, who possesses a spark of self-respect, or who is in the slightest degree alive to the honour of his calling, would consent to submit himself to the espionage of a hospital committee or to barter his right of free speech, free action, and of free writing (within, of course, the limits of morality and propriety) in public journals, for the reward of being allowed to exercise his profession by gratuitously treating the sick. Certainly no English surgeon or physician who is presumably a gentleman would accept a hospital appointment on such terms. But the following facts, to which our attention has been called by a non-medical contemporary—the *Pall-mall Gazette*,—prove that it is on terms like these that the medical officers of the Metropolitan Free Hospital are expected by the governing committee of that Hospital to hold their appointments. The simple fact, as we gather it from a letter in our contemporary, is that a physician on the staff of that Hospital—Dr. John Chapman, a gentleman distinguished in literature and science—has been summarily dismissed from his office by the Governing Committee of the Metropolitan Free Hospital because he was the author of some unsigned editorial articles in the *Pall-mall Gazette*, in which he exposed the abuses of the out-patient system in the London hospitals in general, and cited the Metropolitan Free Hospital as one of his examples. Now for the details of the process.

From the able and temperate letter published in the *Pall-mall Gazette* of the 13th inst., headed "The Metropolitan Free Hospital," and signed "T. J. P. Jodrell"—a gentleman well known as a munificent subscriber to various medical charities, including the Metropolitan Free Hospital itself,—we learn that several articles on the "Abuses of Medical Charity" were published in the *Pall-mall Gazette* during the last summer, and in one of them, adverting to the dispensaries and to the out-patient department of the hospitals of the metropolis, the writer said—"the out-patient waiting-rooms of the different institutions, unless exceptionally large and exceptionally well ventilated, are, as a rule, crowded to excess, and during the summer months almost to suffocation." This statement was supported by a description of the waiting-rooms of four hospitals—viz., St. Bartholomew's, the Children's Hospital in Great Ormond-street, the Royal Free, and the Metropolitan Free—a description known to be true by every professional man who visits them. The passage relating to the Metropolitan Free is as follows:—

"At the Metropolitan Free Hospital, during the early part of each week, not only is the waiting-room so densely packed with patients that anyone would find it a somewhat difficult task to force a passage through it, but the lobbies and staircases are equally crowded. At this Hospital the men are seen before the women, so that many of the latter often wait several hours before reaching the consulting-room."

Having described the waiting-rooms in question, the writer remarks—

"Considering the average length of time which patients have to wait before they are prescribed for, and the frequently crowded state as well as the insufficient ventilation of the rooms in which they are pent-up meanwhile, we cannot help thinking that many of them, besides losing their time (which in a large proportion of cases is equivalent to losing their wages for the day), experience more harm than good from their visit to the Hospital."

The statements we have quoted concerning the Metropolitan Free Hospital gave offence, it seems, to its managing committee, which summoned the medical staff to its presence, and instituted an inquiry concerning the authorship of the article. The physicians first interrogated declared themselves ignorant who had written it, but when it came to the turn of Dr. Chapman, one of the Assistant-Physicians, to be questioned, he, after protesting against the propriety of the question, and finding it useless, under the circumstances, to insist on his privilege, avowed that he was the author. Subsequently a meeting of the Medical Committee (which consists of the eleven members of the professional staff) was called, and five out of the eleven attended. These gentlemen passed a resolution "expressive of the deep regret of that Committee that an article calculated to do such serious injury to the Hospital in the opinion of the charitable public should have emanated from one of their colleagues, and their great surprise that he should deem it consistent with the feeling of honour to continue to hold the appointment of Assistant-Physician to a public charity which he deliberately and anonymously in the public press disparages." With this resolution in their hands, the General Committee requested Dr. Chapman to resign his appointment. Acting according to the advice of several gentlemen holding the very highest rank in the profession, he refused to do so, and was then summarily dismissed.

"With respect to the article in question," says Mr. Jodrell, "I am told that three of the most eminent men in the profession, whose names I only forbear to mention because I have not the honour of being personally acquainted with them, have expressed the opinion in which I cordially concur, that there is nothing in the article itself which a medical officer of any of the hospitals mentioned in it might not with propriety have written." We heartily agree with him and the "eminent men" he refers to; and further, we think the thanks of the profession are due to Dr. Chapman for his efforts in promoting a reform, which, at a meeting of a large number of metropolitan practitioners, presided over by Sir William Fergusson, was declared to be urgently needed, and especially for advocating that reform so effectually as he has done in a journal exercising an extensive influence over public opinion, and capable of reaching a considerable proportion of the subscribers to our hospitals and dispensaries, who are alone able to *enforce* a change for the better.

Viewing the matter as we do, we should not have been surprised if, when Dr. Chapman's colleagues heard of the unprecedented conduct of the Committee in first asking him to resign, and, on his refusal to do so, in dismissing him, they had all resigned together. But we confess to a feeling of utter amazement in learning that a certain number of them at once proceeded most unenviably to distinguish themselves by passing the resolution already quoted, and thus supplied a colourable but wholly unjustifiable pretext to the General Committee for dismissing Dr. Chapman because he had dared to call public attention to what he believed to be a glaring and undeniable mismanagement of the trust confided to the Hospital managers by the charity-giving public.

We confess we feel ourselves puzzled as to the intellectual and ethical standard accepted by those medical men who passed the resolution we have quoted, but we experience some slight relief in observing what Mr. Jodrell rightly designates a significant circumstance—viz., "that though the Medical Committee comprises the whole medical staff of eleven members, five only were present on this occasion, the three Surgeons and the two other Assistant-Physicians, one of whom only, with the three Surgeons, signed the resolution, and he (Dr. McNalty) a very young man, not yet admitted a Member of the College of Physicians. The three principal Physicians were conspicuously absent." Dr. Partridge did not sign the resolution.

We would willingly draw a veil over this part of the story. It is always our custom to try to be "a little blind" to the faults, failings, and follies of our professional brethren, but we confess we are at a loss to find an excuse for the action of the moiety of the Medical Committee in this matter. If the resolution was intended to obtain the favour of the General Committee or of any of its members, all we can say is that the procedure was simply pitiable.

Of the conduct of the General Council itself in this matter we have already intimated our opinion. We only hope that the subscribers to the Hospital will convene a meeting to express their opinion of this unprecedented piece of petty tyranny. It is either true that the out-patient rooms of the Metropolitan Free Hospital are unhealthily crowded in summer, or that they are not; of this Dr. Chapman is a far better judge than any one of the Hospital Committee. But supposing that he was mistaken, and that the odours of Paradise and the balmiest breezes refreshed the poor wretches huddled together in those waiting-rooms, the public press was as open to the Governing Committee to correct the statement as it was to Dr. Chapman. But instead of a dignified denial, and an invitation to the public to inspect their admirable arrangements, and to judge for themselves, the Committee avenge their righteous cause on Dr. Chapman by turning him out of the institution, where his only fault had been that he had used his talents in the most telling way in his power to convert it into a hospital for the cure, and not for the spread of disease.

This matter wears—as we at first intimated—a serious aspect for the whole medical profession. If honorary officers to medical charities are to be subjected to the treatment which Dr. Chapman has suffered, the public will certainly be the losers, for there will very soon be no medical charities. But we hold that the precedent is a most dangerous one, and should arouse the indignation of the whole profession. We certainly do not estimate highly the value of an appointment to the Metropolitan Free Hospital, but we do estimate in its full significance the fact that a Hospital Committee has dared to turn out of his appointment a physician for the sole act of contributing to a leading paper some anonymous criticisms upon hospital management in general, and that of the hospital with which he was best acquainted in particular. Such tyranny is probably without precedent in England in any society of gentlemen, and if we want to produce its analogue we must look for it amongst the outrages of trades-unionism.

THE PHYSIOLOGY OF VISION.

II.—The Propagation of Light.

Resting on our oars in a gently agitated sea, we note that with each successive wave the boat we are in rises and falls again from the crest to the trough of the sea; but, with all this, each succeeding wave finds us in exactly the same place as regards surrounding objects. The excursions of the boat have only been upwards and downwards; there has been no lateral motion; and so it has been with each particle of water composing the wave itself. The wave seems to travel in a given direction, but the motion of its component particles is always at right angles to this; and so it is of light. With sound this is not so: sound-waves are not waves of elevation and depression, but of condensation and rarefaction, so that the motion of the vibratory particles is to and fro in the direction pursued by the sound-wave, not at right angles to it, as in light. The waves of both light and sound tend, if not deflected, to travel in straight lines, and in every direction from their origin.

Falling upon any surface, even of the most transparent body, a beam of light is broken up. Some of its component rays pass on, but certain others are bent back or reflected, and it is only by these reflected rays that the object becomes visible. If all rays passed on through it, none could reach the eye, and so no picture or image of the object could be formed there. The laws of reflexion are well known; the angle which the incident wave forms with the perpendicular to the surface on which it falls is always equal to the angle at which it is again reflected—a principle which has been utilised in many optical instruments incidental to our calling, especially the laryngoscope and ophthalmoscope. But the light which passes on through the transparent body does not follow an even course; it is deflected—bent out of its track—or refracted, and this too in accordance with certain laws. If the transparent body has its surfaces parallel the one to the other, the deflection of the incident ray is exactly neutralised by the deflection of the emergent ray, and so no permanent deviation of the ray from its course is observable. But if these two surfaces are inclined to each other at an angle, as in the wedge-shaped piece of glass we call a prism, the effect of the one surface is not to neutralise, but to intensify the deflection caused by the other; so that the ray of light is bent permanently out of its path. If a double prism is employed, two rays of light originally pursuing divergent paths may be made to converge, and to meet in a point called a focus. An ordinary convex burning-glass is only a multitude of such inclined surfaces; it acts essentially in the same way as the double prism. In nature we know only of two kinds of rays—those pursuing a parallel course (as those from the sun) and those following a divergent course (as seen issuing from a candle-flame): but by the use of such a glass as we have mentioned both of these may be made to converge. An optical apparatus of this kind we encounter in the eye itself, and with its imperfections are associated some of the most important defects of vision.

If a ray of light (such as is allowed to pass through a pin-hole in a piece of paper) be made to fall upon a prismatic piece of glass, and its image examined beyond, we shall no longer see a bright white dot, but instead a streak disclosing the gorgeous array of colours seen in the rainbow. The white light is resolved into a series of rays, beginning with red, passing on through yellow to green, and from green through blue to violet. The same thing inevitably happens with all ordinary simple lenses, and such an influence must be exerted by the optical arrangement in our eyes, yet we are not at all aware of it. True, such an effect may be avoided, and is avoided nowadays in what are called achromatic object-glasses, used in microscopes where the lenses are not composed of one kind and piece of glass only, but are built up of plate and flint glass. No such arrangement exists in the eyes, yet to all intents and purposes our eyes are achromatic; not absolutely so (as will be seen hereafter), but achromatic to such an extent as to seem to be so.

The eye as an optical apparatus is well likened to a photographer's camera. The box which gives shape and rigidity to the whole is the sclerotic. In front lies the optical apparatus, which in the eye consists of the cornea and the lens. Behind, when the photographer is at work, is a plate of ground glass on which fall the rays of light, and on which, when the camera is properly adjusted as to distance, an image is formed; the glass plate being moved nearer to the lens or farther away from it till an exact and perfect picture is seen on the glass of the object to which the camera is directed. This picture is, however, evanescent; to render it permanent the place of the ground glass is taken by a properly prepared and sentient plate, whereon the light itself may paint a picture. This sentient plate in the human eye is represented by the retina. Only one thing seems deficient in the eye—that is, the means of focussing, as it is called; but that, too, exists, in the form of the ciliary muscle. To the structure and functions of these various parts we must next draw attention.

THE ASHANTEE WAR.

The suspense and uncertainty which have prevailed for the past few weeks as to the ultimate steps which would have to be taken for the subjection of the Ashantees, are gone at length, and before these lines are published the little expedition which has been restlessly waiting for orders to embark will be on its way to reinforce Sir Garnet Wolseley. The result of the preliminary skirmish, particulars of which reached us by the last mail, has been to show that, however useful our native allies may be as auxiliaries to take the heaviest duties—such as transport—off our European troops, to depend upon them when actual fighting begins would simply be to invite a repetition of the disasters which up to the present have invariably characterised any operations undertaken by us against the Ashantee power.

The satisfactory reports recently received as to the health of the settlement at Cape Coast Castle, are again more than confirmed. The fugitives who had thronged into the town during the rainy season having left, small-pox has almost entirely disappeared, and throughout all ranks there is very little sickness. Two or three slight cases of fever amongst the members of the staff which arrived with Sir Garnet Wolseley have been notified, but with this exception the new arrivals have not suffered. There is, however, reason to fear that the appointments to the African Commissariat Department have not been very judiciously bestowed, the last batch of officers sent out to this arm of the service consisting of very young men; and as the statistics of most tropical stations show that young and growing lads suffer far more severely from climatic influences than more matured men, it must not be considered surprising if a large percentage of sickness should occur in this branch.

The recent skirmish in the Bush has been of vast service to the heads of all the departments on the Coast; it may, in fact, be looked upon in the light of a rehearsal for the more important work which is to follow. Deputy Surgeon-General Home, V.C., although still in rather delicate health, elected to accompany Sir Garnet Wolseley as principal medical officer of the small army; this consisted of about 400 men in all, barely half being Europeans. Surgeons-Major Jackson and Moore were also attached to the troops, and by their exertions earned the hearty approbation of their chief. The *Times* correspondent, who was present throughout the day's proceedings, passes a very graceful eulogium on the conduct of all the medical staff present. He points out that not the least interesting sight to be seen during the operations was the conduct of the medical officers when any of the men chanced to be hit; the coolness and dexterity with which they manipulated the patient whilst a heavy and continuous fire was going on all round was especially deserving of praise. And it must not be forgotten that the present exceptional campaign will place the doctor on a much more level footing with the combatant officer than has ever been the case before. The whole column is compelled to proceed almost in single file through the Bush, and as it is next to impossible to say on what part of the line an ambuscade may at any moment fall, it results therefore that the medical officer is as much exposed to danger as every man in the whole force; and it is to be hoped that this fact will not be lost sight of when the rewards are distributed, at some distant day, for what we all hope will turn out to be successful operations against the enemy.

The result of the experience gained during this small *reconnaissance* is most satisfactory. Although the day was intensely hot, scarcely any of the men were compelled to fall out, and it must be borne in mind that few of the force had enjoyed much sleep during the previous night, whilst some of the Marines engaged, through an oversight were unprovided with their proper rations. Under the most difficult circumstances, with all the fighting thrown in, fourteen miles at least were accomplished by the main body, and some portion of the force covered about two-and-twenty. The Marines had been cooped up for three months on board ship, and could scarcely be said to have been in first-rate condition for undertaking such a distance under a tropical sun. The pathway was by no means adapted to continuous pedestrianism; in some places being so bad in the centre that the men had to walk with their legs straddled wide apart, whilst in others there was nothing for it but to wade through a noisome bog halfway up to the knee, the disturbance of the oozy slime causing a fearful stench to arise resembling sulphuretted hydrogen. Careful observation has forcibly demonstrated one most important fact: if an advance to Coomassie be definitely decided on, it will be essential to have a large number of staff officers of all kinds to accompany the troops. The peculiar nature of the country to be traversed renders it impossible to keep more than a handful of men in sight at one time. The ordinary contingent of officers therefore could not possibly hold their men under supervision during the march, and the services of the surgeon might very possibly be urgently required at a spot some distance from where he would at the moment be posted.

Taken as a whole, the accounts received of this affair from all quarters may be said to bear out the opinion which we have from time to time expressed as to the exaggerated nature of the difficulties to be encountered in an advance upon the Ashantee capital, always provided that the proper season be chosen. The casualties attendant upon this preliminary trial of arms are certainly not greater than what might be expected under similar circumstances in any tropical climate, and all accounts agree in representing the district for some miles from Cape Coast Castle as the most difficult to traverse in the whole one hundred and ninety miles to be covered before reaching Coomassie.

Some vigorous attempts are to be made to render Cape Coast Castle and its vicinity less deadly to Europeans. A sanitary staff has been appointed, who will ruthlessly combat native prejudices and filthy customs; and if by their endeavours the death-rate of this pestilent coast be only slightly reduced, the present difficulty will not have been without its advantages to that portion of the community who are compelled to brave the dangers of its much-dreaded climate.

At home the dispatches of Sir Garnet Wolseley have found the authorities thoroughly prepared; the *Tamar* and *Himalaya* have sailed to embark the troops who had been for some days awaiting the signal to go on board. Each of the vessels carries all the necessary fittings to receive sick and wounded men, after the landing of the troops they take out, at Cape Coast Castle. It appears to have been definitely determined that the sick and wounded shall not be kept for a longer period than is absolutely necessary on the Coast; hence every transport which has already left or will hereafter leave the country is to be made available for bringing home invalids. Preparations will be made for receiving some of these at Liverpool, whilst others will be landed at Gibraltar should it be found that the mild temperature of that place would be in any way instrumental to their recovery.

The principal hospital-ship for the station, the *Victor Emmanuel*, has been pushed on in all her arrangements with the greatest despatch. She has just been commissioned, and it is to be hoped that before many days are over she will be despatched to her destination. Doubtless a great deal of necessary work had to be got through to fit her for her new occupation, but as it is extremely improbable that Sir Garnet Wolseley will allow much time to be lost after the arrival of his reinforcements before taking the field, it is surely important that this vessel should be in a position to receive casualties, which may be expected to occur as soon as his forces have commenced operations; and it would have seemed to be more in the order of things if the departure of this vessel had been

identical with the sailing of the transports conveying the troops. Her arrangements for the sick are said to be of the most complete description, and medically she will be under the charge of Surgeon-Major Bleckley. The War-office authorities are about—with what object does not appear—to appoint a military officer to the chief command on board. As the ship is to be employed ostensibly as a hospital, it would surely have been sufficient to place her in the hands of the medical staff without increasing existing dissatisfaction by nominating a combatant officer to a post in which he can be of little real use. She has been fitted by Messrs. Savory and Moore, of London, with a surgery, in which are included all the most convenient facilities for dispensing; and from her great size this most necessary department is roomy and commodious (unlike the small cupboards usually set aside for this purpose on board ordinary ships), a very complete operating-table forming a portion of its equipment.

As we have before stated, the heads of the Medical Department at Whitehall have thoroughly accepted the grave responsibility which the requirements of the present war have thrust upon them; and if—as we have no reason to doubt—the results should be found to be commensurate with the activity and forethought displayed, the country will be able to congratulate itself that this most important portion of the arrangements has been well and satisfactorily carried out.

THE WEEK.

TOPICS OF THE DAY.

The acceptance of the Postmaster-Generalship by Dr. Lyon Playfair will create a vacancy in the seat for the Universities of Edinburgh and St. Andrews. Dr. Lyon Playfair has already issued an address to the electors. It remains to be seen whether he will be returned without opposition. Putting aside political differences, if the University of Edinburgh is determined to oppose the formation of a Conjoint Board of Examinations in Scotland, they cannot have a better or abler representative of their views than Dr. Lyon Playfair.

Mr. Disraeli's address before the University of Glasgow on the occasion of his installation as Lord Rector will, we think, add even to his reputation. The practical lesson given, that in order to success in life two things are necessary—a just knowledge of the extent and character of a man's own powers, and a knowledge of the spirit of the age in which a man lives,—have all the simplicity and force of truth. The first is an old lesson (how seldom soever learnt) in the mouth of a thousand teachers, but it has not often been taught with the second. The one is the key-note of philosophy, the other of utility. Mr. Disraeli, with the sagacity of a statesman, enforces them together. It would be out of place in a medical journal to reproduce the splendid generalisation on the spirit of equality —civil in England for centuries past, social in France, but now physical and material, which is rising and threatening society—which terminated his address. We can only commend it to those of our readers who have not yet read it.

The election to the Presidency of the Royal Society is creating some discussion. A large party of naturalists and others in the Society are in favour of conferring that honour on Dr. Hooker, of Kew Gardens. His appointment, however, is opposed, on the ground that being already in his position at Kew a public officer, his presidency would prevent the Government consulting the Council of the Society upon the reorganisation of the natural history collections at South Kensington.

The Rev. Mr. James M. Joass has written to the *Times* a letter giving an account of the supposed sea-serpent. Mr. Joass writes like a naturalist and a person who is well acquainted with marine sights and appearances. He corrects some misapprehensions in the former correspondence. The appendages, which were described as ears like those of a horse, he believes to have been diaphanous and nearly semi-circular flaps or valves overarching the nostrils, which were in front. The cavity of the eye seemed to be considerably further back, and a peculiar glimmer in it, together with the sudden disappearance of the creature under water, presented the only signs of vitality.

Mr. Charles Beke, writing in the *Times*, announces that Dr. Livingstone may be shortly expected in this country. The news brought by the last African mail was that Livingstone was reported to be about thirty or forty miles from St. Salvador, or about 200 miles from the West Coast.

Dr. Murchison, in acknowledging the vote of thanks given to him by the Vestry of Marylebone, in reference to his services in discovering the cause of the late epidemic of typhoid, has very honourably and gracefully remonstrated with the Vestry for omitting all public mention of the services of their own medical officer, Dr. Whitmore, on that occasion.

THE GUINEA FEE.

In a recent letter the London correspondent of the *Dundee Advertiser* comments on the demand for advanced professional remuneration. He says—"The rise of prices which prevails in so many trades is about to be extended to the learned professions. Both the lawyers and the doctors are moving, and it is indeed surprising that the former at least have not already seen fit to increase the charges on their unfortunate clients. The case for the doctors has been stated with great ability and force by the *Medical Times and Gazette*." After cordially admitting the justice of the claim which we have advanced for a modification of fees, the correspondent adds—"If the addition to the guinea fee were to be strictly proportioned to the rise in prices, I am afraid that it might at once ascend to five guineas. I hope, however, that our medical friends will be moderate in their demands, and that they will for the present be satisfied with doubling their fees. We can no more do without doctors than we can do without coals, and we are as much at their mercy as that of the colliery owners and the coal merchants. If they are satisfied with simply turning the guinea fee into two guineas, their considerate mercy will be duly appreciated by a benevolent public."

THE ROYAL SOCIETY MEDALS.

The Copley Medal and the two Royal Medals in the gift of the Royal Society have this year been awarded as follows:—The Copley Medal to Professor Helmholtz, the distinguished physiologist, physicist, and mathematician, of Berlin; a Royal Medal to H. E. Roscoe, F.R.S., Professor of Chemistry in Owens College, Manchester; and a Royal Medal to Dr. Allman, Professor of Biology in the University of Edinburgh.

LONDON ANTHROPOLOGICAL SOCIETY.

At a meeting of this Society, held at 37, Arundel-street, Strand, on the 18th inst., the President (Dr. R. S. Charnock, F.S.A.) in the chair, the following business was transacted:—1. Extracts from letters from foreign correspondents were read, one of which announced an alleged discovery of a Phœnician inscription of the fourth century B.C., near Rio de Janeiro; and one from Captain Burton, mentioning the discovery at Maeshowe, in Orkney, of Scandinavian inscriptions in Arabic letters. 2. "Personal Observations of the Sae-lies or Flathead Indians of North America," by J. Simms, M.D., of New York. The discourse treated of the manner of fashioning or deforming the head, the customs, dress, diet, disposition of the dead, etc. Dr. Simms also gave a brief description of the Quatsino Indians who inhabit the north-western coast of

Vancouver Island; the mode of fashioning their peculiar sugarloaf form of heads, their superstitions, food, etc. He also gave a very interesting account of the Digger Indians of California, their colour, form, dress, manner of living, general habits (including badges of mourning), food, etc. The Snakes, Utes, Piutes, Foxes, Siouxs, and other tribes were also briefly described. Dr. Carter Blake, Mr. A. L. Lewis, Dr. Kaines, and the President took part in the discussion.

AN IRISH VERDICT.

THE adjourned inquest on Ellen Sexton, who was murdered in Limerick, was concluded on Tuesday. The police did not produce the woman accused of the murder. The coroner having summed up the evidence tendered by the Crown, the jury returned the following verdict:—"We find that Ellen Sexton met her death by wilful murder on Sunday night, November 9, and that it was caused by some person or persons unknown. We also wish to express our dissent at the Crown having refused to give more evidence."

DR. ALFRED CARPENTER ON SANITARY LEGISLATION.

THE paper read at the Norwich Congress of the Social Science Association, last month, by Dr. Alfred Carpenter, on "Administrative Areas for Sanitary Purposes," is now before us in the form of a pamphlet. It is a clever disquisition upon the subject. It treats with considerable ability on the defects of previous, and the obvious requirements of future, sanitary legislation. We agree with the following practical observations of Dr. Carpenter, that he would not entirely repudiate the good which has resulted from the permissive plan of legislation which has been adopted, and which in recent years has marked the progress of sanitary knowledge.

"Whilst those who acted as pioneers of hitherto much-neglected sanitary work differed among themselves as to the best kind of practice, it was no wonder that our legislators were themselves at sea; and, as a natural sequence, they left local authorities to use their own judgment and act according to their light. This permissive plan is visible throughout the whole of the Public Health Act of 1848. The experience gained in those places which put that Act in force within their borders enabled Parliament to make much of that which was permissive in 1848 become compulsory in 1872. It is to be expected that much which remains permissive in the Act of 1872 will be compulsory in the next Public Health Bill. It is evident that there should be a commander-in-chief—a Minister of Public Health—as distinct from the destitution authority, and who should not be one with the destitution authority, but who should have official control over all matters connected with the public health, portions of which are now regulated by the Home Office, other portions at the Local Government Board. Next, there should be inspectors, having jurisdiction over one or more county areas, responsible to their chief. The county areas should be subdivided into such union or water-shed areas as may best meet the sanitary exigencies of the case. Over these the county authorities should appoint medical officers of health, who should in most instances give their whole time to the duties of their office, sending their reports to, and being obedient to, the instructions of those local authorities who exercise jurisdiction over the area supervised by them. The district supervised by the health officer should include the whole of a particular town, without reference to the borough or parish boundaries, taking, when convenient, the crests of the hills or sets of houses draining into one watershed or into one branch of a given stream. This arrangement can in most cases be easily carried out if the county is taken as the basis of elective authority. The area to be supervised must not be larger than one man can personally inspect at least twice in the year, and this independently of those special inspections which should always be made when there is evidence of disease which may spread. Efficiency requires this actual inspection, and it is a mistake to suppose that the work of the health officer should be guided by the health reports alone, and that there is no need of inspection unless disease has put in an actual appearance. There must be the regular as well as the irregular inspection. The frequency of the latter will be determined by the evidence afforded by the outbreak of disease. To obtain this evidence the health officer must be in intimate relationship with the union medical officer, who should have positive instructions—indeed, it ought to be to his interest—to communicate the required intelligence to the health officer as soon as it arises."

TAKING THE "BULL BY THE HORNS."

THE duty of a public analyst is no doubt sometimes unpleasant, and even invidious. There are some honest, conscientious tradesmen. The enforcement of the Adulteration Act on such for selling articles which have been found by the public analyst to be adulterated, but which they sold in the same condition as bought from the wholesale dealer, is clearly a hardship. This hardship has been recognised and felt, especially in the article of "tea." We are glad to observe that several chambers of commerce and other public bodies have already petitioned the Government to undertake the analysation of tea in bond before its sale and dispersion to the public. This seems to be a reasonable proposal. The Government enforces a duty of 6d. a lb. on it as "tea," and should therefore take the responsibility of ascertaining its condition. Such protective action on the part of the Government would save much bitterness and injustice, and relieve the public analyst, in many cases, of a very invidious position. We trust these efforts to remedy this critical position of the retail dealer will succeed. It has the further recommendation of striking at the root of the evil. We fail to perceive the difficulties that are said to surround the plan proposed. The milkdealers of London have taken "the bull by the horns," and have formed themselves into an association to protect them from being supplied with an adulterated article by the proprietors of dairy farms. Already they have obtained a conviction, which will operate as a warning to others. It seems an absurdity to analyse the water of a brook while we neglect to ascertain the purity of the spring from which it is supplied.

MORTALITY FROM OVERCROWDING.

DR. LANKESTER, in his last report to the St. James's Vestry, stated that the death-rate during the past twelve months in the Berwick-street district (occupied chiefly by the poorer classes residing in the parish) had been 25 per 1000, as compared with 14 per 1000 in the district of St. James's-square; and he added, "till the time comes when it shall be seen necessary to erect proper dwellings for the poor of London, overcrowding, with all its physical degradation and moral pollution, must be submitted to as a lesser evil than driving men, women, and children into the streets and to places far away from their work and the exercise of that industry by which alone they can be kept from destitution and pauperism." The comparison in the death-rate of two of the districts in this parish, which Dr. Lankester makes, is very striking. The vast number in this metropolis of similar poor districts to that of Berwick-street, St. James's,—the consequent waste of human life, and that too from preventable causes,—is, even after all recent sanitary reform, appalling. If the healthy condition of the poor is to attract attention proportionate to their numbers, the question of suitable dwellings for them will become a primary one, and more ample legislative powers must be given to deal effectively with a subject so vast and so important.

RECENT PRESENTS TO HARVARD COLLEGE.

DR. EDWARD WIGGLESWORTH, a lecturer in the medical school of Harvard College, has presented to the school a very valuable collection illustrative of diseases of the skin. Dr. C. Ellis, the Dean of the Medical Faculty, has given the microscopes

to the school, to be lent, under the direction of the Professor of Pathological Anatomy, to medical students who are too poor to buy such instruments for themselves—a very liberal arrangement, and such an one as might be imitated with great advantage in other medical colleges.

ARMY MEDICAL OFFICERS FOR THE GOLD COAST.

THE following list shows the names of the Army Medical Officers (as far as we have been able to collect them from various sources) who are now on their way or about to embark for service on the Gold Coast:—

Surgeons-Major.—Bleckley, Kelly, Turton, Elliott, T. B. Reid, Woolfreyes, Julius Wiles (attached to the 2nd Battalion, Rifle Brigade), Sydney Alder (attached to the 2nd Battalion, 23rd Regiment), D. Fraser, J. Fanght, and Finnemore.

Surgeons.—Smith (with Royal Artillery), Murphy (with Royal Engineers), Bolton, Macrobin, MacCrystal, Eagar, Purdon, Wilson, Brown, Low, Weir, O'Brien, Doig, Hannagan, Turner, Lowe, Beattie, Catherwood, Clarke, Heather, Brown, Hanrahan, Fleming, Hughes, Croker, Supple, Wade, Ward, Venour, Robertson, and Gray.

We believe that the majority of the foregoing gentlemen are volunteers, and the alacrity which has been shown to accept service in the present war augurs well for the execution of the important duties which it is generally expected will fall to the lot of the medical officers in the forthcoming campaign.

HONESTY IN THE NORTH OF LONDON.

TOUCHING the appointment of a public analyst for Hampstead—an appointment which it appears the Vestry has delayed in making up to the present time,—a chemist in the parish writes to the *Hampstead and Highgate Gazette* as follows:—He states that, "knowing as we do that we are all honest men in Hampstead, and that no single article of food or medicine is nor can be at commercial prices absolutely and chemically pure, ought we not to profit by others' experience, and show a little discretionary wisdom, taking time to consider what can and what cannot be done in this most difficult and vexations Act of Parliament before appointing a public *persecutor*, whose time is to be spent in worrying his neighbours to commercial death by fines and imprisonment for accidents of which they are perfectly innocent, and in which errors of analysis may quite possibly be the principal contributors."

WARMTH AS A PREVENTIVE OF DISEASE.

DR. WHITMORE, Medical Officer of Health for Marylebone, in his last report to the guardians refers to the high price of coals, and says—"The value of the means employed for preventing the diffusion of epidemic contagious diseases may be open to question, but there cannot be two opinions as to the efficacy of bodily warmth in resisting a class of diseases which unfortunately are but little thought of, and which as a rule are ten times more destructive of life than the most fatal epidemics." He recommends, as constituting the most urgent sanitary requirements of the poor at the present time, coals, blankets, and food.

THE CREAM OF A JOKE.

OUT of six samples of milk examined by the Public Analyst for Limehouse, one was found to be pure, whilst all the others were pronounced to contain an excessive quantity of cream! The Medical Officer reported to the district Board of Works that there could be no doubt but that the vendors of milk knew their customers when the samples were procured. The Committee resolved to leave in the hands of the analyst the best arrangements to be made for procuring genuine samples.

FROM ABROAD.—SANITARY CONDITION OF PARIS—POISONING BY COFFEE—ASPIRATION IN STRANGULATED HERNIA—CAPILLARY EMBOLI IN CHOLERA.

M. BESNIER, in his quarterly report on the health of Paris, states that this, which during July had been as favourable as during the preceding months of the year, in August and beginning of September underwent a sudden modification, as exhibited in the great increase of mortality from cholera and typhoid fever. This modification was very remarkable, not only for the rapidity with which it was produced, but for the universality and uniformity of its manifestations alike in the town and in the hospitals, and among the civil and military population. As in former reports, he gives detailed tabular views of the corresponding atmospherical conditions, but believes that it would be premature to draw any conclusions from their approximation. Notwithstanding these epidemic visitations, which sensibly raised the mortality during September, the sum total of deaths occurring in the Paris hospitals during this quarter has been lower than that of the corresponding quarter of any of the six preceding years. During the whole three months, however, *diphtheritic affections* remained extremely frequent, and did not undergo the diminution which they have usually manifested at this period of preceding years. The number of deaths were more than double the number of patients in that quarter of 1867. Of the *eruptive fevers*, measles alone acquired some intensity, while scarlatina prevailed very slightly, and small-pox continued, as in the former quarter, to be absent, not a single case occurring during the whole quarter. *Typhoid fever* underwent its usual seasonal exacerbation, which in this year coincided with the appearance of the earliest cases of cholera. The number of cases has not exceeded the mean of former years; but the circumstance which has characterised the epidemic of this year is the elevation of its mortality from 27 per cent., the mean of the corresponding quarter of former years, to 33 per cent. The cases of *cholera* have been reported to the Hospital Medical Society as they have occurred; and a general summary will be given in the last quarterly report for the year. *Diarrhœa* was less prevalent and more mild than usual during the month of July, and but little increased in August. It suddenly increased in September, the cases exceeding in number those of the same quarter of all preceding years. The mean mortality was returned as less, probably from most fatal cases being reported as deaths from cholera. The tables of the *puerperal affections* show that, as in former years, there is always a diminution of mortality during the summer months. The women who were delivered in the hospitals furnished a mortality of 3·30 per cent., those delivered at the homes of *sages-femmes* 1·26 per cent., and those delivered at home 0·35 per cent.

Dr. Curschmann, of Berlin, relates (*Deutsche Klinik*, No. 41) the following case of poisoning by coffee:—He was called, in the afternoon of August 10 last, to a tailor's wife, aged 27. It seems that, believing herself to be in a state of pregnancy, of which she had a great fear, she had two hours before drank a very strong decoction of coffee, in the hope of inducing abortion. This she had prepared by boiling 250 grammes of fresh roasted and finely ground coffee in about 500 grammes of water. The decoction was then forcibly pressed through a woollen filter, and the whole of it she drank off at once, without any addition being made to it. A quarter of an hour afterwards the symptoms began to appear, the great increase of which caused the reporter to be sent for. He found her sitting on a sofa, with a pale countenance expressive of the deepest mental anguish. She complained of want of air, and a sensation as if her chest were compressed, and clung convulsively to articles of furniture or the persons near her, moving constantly from place to place and trying to get up, but sinking down

again quite powerless. The limbs, and especially the hands, were affected by chorea-like movements, so that the patient was unable to hold either a glass or spoon. She recognised those about her, and was aware of the cause of her sufferings, but still her sensorium was evidently not quite clear; and next day she retained only a very obscure recollection of what had occurred. Plain or connected answers were not obtainable from her, and only after much effort and persuasion could her attention be engaged at all, she continuing to incessantly repeat the same phrases in the most dolorous tone. The pupils, somewhat enlarged, acted normally, and there was neither disturbance of vision, headache, or singing in the ears. The forehead was cold, and the temperature of the other parts of the body did not seem raised, but the excessive restlessness of the patient prevented the application of the thermometer. Corresponding with the patient's complaint of a feeling of suffocation and excessive breathlessness, the respiration was painful, short, and rapid, counting from 24 to 30. Auscultation indicated no abnormality. The patient complained also of distressing palpitation, and the excessive impulse seemed almost to raise the chest; but although the sounds were loud and penetrating, they were pure. The pulse was 112. An hour after taking the coffee severe diarrhœa commenced, which continued to recur about every half-hour for long afterwards. But more distressing to the patient than this was a frequent desire to pass urine, which came on every quarter of an hour. The urine, having a specific gravity of 1014, was considerably increased in quantity. The patient remained in the same state for several hours, becoming somewhat more quiet later in the evening, under the influence of morphia; yet, upon the whole, a very restless night was passed. In the course of two or three days she entirely recovered, the menstruation reappearing, the absence of which had led her to believe herself pregnant.

At the Société de Chirurgie, M. Dubreuil read a report on a paper by M. Dieulafoy on "The Treatment of Strangulated Hernia by Aspiration." In this he relates twenty-seven cases, showing the great utility of this procedure in many cases, and its innocuity in all. It is true that it implies that a diseased intestine may be returned, but the same remark applies to the taxis. M. Dubreuil cannot accept all the conclusions of the author. He does not admit that aspiratory puncture should be the first means resorted to, believing that moderate taxis, which is always inoffensive, should be first tried; but he does not hesitate to recognise that aspiration constitutes a real progress in the treatment of strangulated hernia. Both MM. Verneuil and Trélat also admit that in certain cases aspiration is very useful, as when the strangulated hernia is complicated by effusion into the sac, the withdrawal of this liquid by aspiration much facilitates exact diagnosis, and allows of a hernia being reduced which had previously resisted numerous efforts by the taxis. This can be brought to bear directly on the intestine, which is no longer masked by the presence of the liquid. Aspiration thus becomes at once explorative and curative. M. Trélat took the same view of the utility of aspiration; but M. Sée stated his opinion that all that is necessary may be effected by means of a trocar. M. Verneuil pointed out that the evacuation of the liquid by means of a fine trocar is a matter of difficulty, while this is easily accomplished by aspiration. M. Desprès, the irreconcilable adversary of aspiration, predicted for it a sinister future. In his opinion there is no other treatment for strangulated hernia than operating.

M. Bouchut read, at the Académie des Sciences, a second communication on "Capillary Emboli and Hæmorrhagic Infarctus observed in Cholera." He observes that in his former communication he pointed out a lesion which he has met with in cholera that has not hitherto been described; and additional observations upon the subject are the cause of the present communication.

In all cases of cholera which are severe enough to cause death there are formed capillary emboli characterised by hæmorrhagic infarctus variable in size and in number. They are met with in the subcutaneous capillaries, and in the small vessels of the endocardium, the pericardium, the lungs, the kidneys, and the intra-muscular conjunctive tissue. M. Bouchat has never met with them in the brain, although he believes that in some cases of sudden death after cholera they have existed. These emboli take on the form of apoplectic kernals, or sanguineous infarctus, varying in size from that of a small pin-head to that of a large pea. When beneath the skin, they are indicated by a violaceous livid-red spot, which does not concern the substance of the dermis. They are formed in the subcutaneous conjunctive tissue by a sanguineous effusion, the centre of which is of a deeper blackish colour. An injection of water propelled by the central artery of the limb, and returning by the veins, does not remove this hæmorrhagic deposit, nor does it traverse the obstructed vessels. These subcutaneous emboli have been met with eight times in eight autopsies. In the kidneys the infarctus, a centimetre in breadth, are found placed superficially under the fibrous envelope, penetrating to about three millimetres into the cortical substance. They consist of a blackish sanguineous infiltration of a very deep colour. These have been met with only once in eight autopsies. In the lungs the infarctus, which are hard, black, and superficial, assume a slightly conical appearance, having their base turned outwards. Injection of water by the pulmonary artery exerts no effect upon them. In the eight autopsies they have been met with twice. In the heart these infarctus are small, miliary, and placed in the interior of the organ under the endocardium, scarcely penetrating the muscular substance. They have also been met with on the walls and the columns, and on the large column giving attachment to the tendons of the mitral valve as many as eight have been counted. They have been met with three times in the eight autopsies. In one case they have also been met with at the exterior under the pericardium, being very small.

The heart itself always presents important alterations either in its internal membrane or its cavities, whether this be valvular endocarditis at the free edge of the valves or a more or less old cardiac thrombosis, characterised by whitish, adherent, fibrinous coagula mingled with yellowish, semi-transparent, gelatiniform coagula, and soft, black, cruoric clots of recent formation. The endocarditis may be absent, but the thrombosis is always present.

"It is probable that it is to this commencing valvular carditis, and especially to the cardiac thrombosis, that we should attribute the production of these capillary emboli and hæmorrhagic infarctus. This anatomo-pathological discovery seems to me to furnish the explanation of the mechanism of those secondary phlegmasiæ which are so grave during the stage of reaction of algid cholera. In fact, after the stage of cyanosis and of general vascular stasis, when reaction becomes re-established, the blood propels before it the thromboses which form obstructions here and there, and induce fatal meningites or pneumonias. The course of the blood cannot be re-established, obstructed as it is by the emboli proceeding from the heart, and hence result local congestions followed by more or less decided phlegmasiæ."

The Gray's Inn-road Workhouse, which is used as the hospital of the Holborn Union, is so full of patients that the Holborn Board have resolved that the board-room at the Workhouse be prepared for the reception of patients.

In Calcutta, in the week ending September 27, six deaths from cholera were returned. In Paris, two deaths from cholera were recorded in the week ending the 14th inst. One fatal case of cholera was registered in Brussels in the week ending the 8th inst., and in Vienna during the same week eight deaths from the same cause were returned.

CLINICAL REMINISCENCES.—No. IV.

By PEYTON BLAKISTON, M.A., M.D., F.R.C.P., F.R.S.

Auscultation.

At the time when I entered the profession as a dresser at Addenbrooke's Hospital, in 1820, but little was known about auscultation in this country, although Laennec's discoveries had been for some time past promulgated in France. The Professor of Medicine, it is true, exhibited a stethoscope in his lecture-room and talked about the theory of auscultation, but he knew very little of its practical application to the discovery of disease. So slow was the progress of its adoption into general use that fourteen years later the friction-sound occurring in cases of pericarditis was heard for the first time by a leading physician of one of our largest metropolitan hospitals, under whose notice it was brought by a gentleman recently arrived from Paris; and another physician of the same hospital, who had the reputation of being a skilful auscultator, failed to discover the existence of an aneurism of the aorta, the signs of which were pointed out to him by the same gentleman.

For some years some of the senior members of the profession failed to recognise its value in practice, and some tried to sneer it down; the juniors, in the meantime, endeavouring to make themselves acquainted with it in the best way they could, the most zealous of them who had the means going to Paris for that purpose. It was my good fortune to come under the notice, and subsequently obtain the friendship, of Baron Louis, at that time Physician of the Hôpital de la Pitié, and through his kindness to obtain the *entrée* of the Hospital at all times. I generally went there in the afternoon, when the wards were quiet, and, by the aid of a few kind words and an occasional small *douceur*, I found myself always well received by the patients, and was enabled to practise auscultation at my leisure in almost every form of disease to which it was applicable. By attending the physician in his rounds next morning, and by an occasional question addressed to him or to one of the *internes* (always kindly and satisfactorily answered), I was enabled to test the correctness of the conclusions I had drawn from my own observations.

In the course of time the value of auscultation was fully recognised in our own schools and hospitals, and those pupils who were disposed to make themselves acquainted with its practice had opportunities of doing so; so that at the present day the generality of practitioners have a knowledge of its principles, and are enabled to turn it to a good account in the discovery of disease.

In the intermediate time, however, before these students had got into practice, public opinion having pronounced in favour of auscultation, whilst some practitioners frankly confessed that, not having been educated in its use, they did not feel themselves competent to employ it in practice, others less conscientious, who held truth in less estimation, although ignorant of its use, made a pretence of practising it. This gave rise to a very dangerous state of things: the patients and their friends being led to suppose that they had been skilfully examined, when a mere farce had been performed, and a gross deception practised.

The observations of Laennec were so extensive and accurate, and his treatise was so exhaustive, that, to the best of my belief, no additions, with one exception, have been made to them having any important bearing on the practice of auscultation. As regards the theory, however, the matter is different. For instance, the causes of the natural and morbid sounds of the heart have been investigated by various persons, and have given rise to much discussion. Some persons are of opinion that the question relating to the cause of the first or systolic sound is still unsettled. Dr. Williams I believe still holds that it is caused by muscular contraction, and I formerly was of opinion that it entered into the formation of the systolic sound in conjunction with the unfolding and tightening of the auriculo-ventricular valves. Of late years, however, the additional experiments of Dr. Halford and Messrs. Chaveau and Moray have convinced me and many others that both sounds are caused by valvular tension, as held by Dr. Billing in the first instance.

The manner in which sound is produced by the air entering and leaving the lungs has also given rise to much investigation and discussion. This subject was treated at some length in my work on "Diseases of the Chest," where it was shown that Laennec's views respecting the manner in which bronchial to-and-fro sound was produced by a solidified portion of lung are untenable; and in a paper read before the British Association in 1839 some experiments were detailed which tended to explain how it is that the voice assumes a coarse buzzing character when heard through a solidified lung—the vibrations of the walls of the bronchial tubes being more freely conducted to the ear, and thereby made to combine in a larger proportion with the vibrations of the air with them. It would be out of place here to enter more fully into the various discussions which, since Laennec's time, have taken place in respect to the theory of auscultation.

The exception to which I referred as having occurred in respect to the practice of auscultation has reference to a discovery—made in the wards of La Pitié, by Dr. Jackson, of Philadelphia—of the prolongation of the expiratory sound when heard over a portion of solidified lung; but he too failed in detecting the true cause of this modification of the expiratory sound. This is a valuable sign, and often furnishes the earliest indication of tubercular deposit or congestion of the lungs.

It would fill a large volume were I to detail all the cases which have fallen under my observation, in which the want of a practical knowledge of auscultation has wrought misery and trouble—of persons taken out of a lucrative profession or business and sent to winter at Madeira or some other southern climate, for the alleviation of pulmonary phthisis, which after all proved to be chronic bronchitis, and in no way calculated to shorten their lives, providing they were prudent and careful. Of some, on the other hand, being treated for rheumatism, and advised to continue a laborious occupation when suffering all the time from an incurable aneurism or a malignant tumour—their end being thus hastened. Let us hope that this state of things has in a great measure passed away, but let our young members lay it to heart, and strive hard to qualify themselves to become skilful auscultators. Very great expertness and extraordinary quickness of perception and soundness of judgment in deducing an accurate diagnosis in cases of obscurity are of course rare; but in what pursuit is excellence easy of attainment? A few cases illustrative of the above remarks may possibly fix their attention, and assist in confirming their resolution to overcome the difficulties which they may encounter.

Some years ago I attended a lady in consultation during a very severe illness which terminated favourably. In consequence of this I was consulted by her when she was suffering from some distressing symptoms evidently connected with the state of the uterus. As on former and somewhat similar occasions she had been in the habit of consulting a very eminent physician-accoucheur in London, I advised her doing so again. He considered her symptoms were occasioned by congestion of the uterus, and recommended the internal application of leeches. On her return she requested me to take charge of her whilst she was undergoing this line of treatment. I advised her, however, to return to London, and place herself under the immediate care of her physician-accoucheur, or if she could not do so to wait some time longer before commencing the treatment he had recommended; because her case did not exactly fall within the line of my usual practice, and also because I could not help thinking her symptoms might be occasioned by pregnancy, and were not so urgent as to prevent her waiting; whereas if she proved to be pregnant the treatment might have induced abortion. She preferred to wait. Next time I saw her I suspected more strongly than ever that she was pregnant—if I remember right, from hearing the *bruit placentaire*. I sent her off to London again. Her physician held to his opinion, and sent down a special nurse to apply the leeches. She, however still hesitated, as I declined to sanction the treatment. In the meantime she increased in size, and I distinctly heard the sound of the fœtal heart. She again went to London, and her physician (who, by-the-by, was as deaf as a post) was wroth, and ridiculed the idea of her being pregnant. Upon this her husband took her to another gentleman, who at once confirmed my view of the case, and in due time delivered her of a child.

It will hardly be believed that at Birmingham within a period of eighteen months six cases came under my notice, in three of which tumours were supposed to exist, and in the other three pregnancy. The diagnosis in every case proved to be incorrect, the tumours turning out to be children, and the

supposed children tumours, the true state of things being in each case revealed by auscultation.

In some cases I have known auscultation fail to lead to the discovery of disease, not from any want of skill in its employment, but in consequence of its having been trusted to solely, without sufficient attention having been paid to other circumstances. Thus, in one case the patient, whether sitting, walking, or sleeping, invariably leaned forward, in consequence of his inability to remain a moment in the upright or recumbent position without being harassed by a fearful and incessant cough and a sense of suffocation. His chest had been examined by physicians of undoubted skill in Edinburgh, and nothing elicited which could enable them to diagnosticate the nature of his disease. I examined him myself in his usual position, and the one in which he had been examined in Edinburgh, with similar results; but having, with great difficulty, persuaded him to remain upright for a few seconds, the respiratory sound became coarse and whistling, and could be heard at some distance off, and on placing the ear on the chest there was found to be complete absence of respiratory sound over the upper third of the right side of the chest. It was clear, therefore, that there was a *movable* substance between the trachea and the anterior walls of the thorax, near the bifurcation, which gravitated on to and compressed the trachea and a bronchial tube leading to the upper third of the right lung when the patient was in an upright or recumbent position, and fell away from it when he was leaning forward. As a cancerous or strumous tumour would have been fixed, an aneurism with a narrow neck springing from the right of the arch of the aorta alone remained as the possible cause; and this was the diagnosis given, although not one of the usual signs of an aortic aneurism was present. A few weeks afterwards death took place during a violent fit of coughing, and a post-mortem examination confirmed the correctness of the diagnosis, the absence of the usual physical signs being accounted for by the fact of the pouch never having reached the surface of the chest.

A middle-aged gentleman, a member of a mercantile firm engaged in very extensive transactions, had been suffering for some time with flying pains in various parts of his body, but more particularly affecting his chest and arms. His medical attendant in the country, who was a first-rate surgeon, was doubtful about the nature of the case, and, as some very important matters were in the course of arrangement, on account of which it was very desirable to ascertain whether his complaint was one from which he was likely to recover or not, he proposed a consultation with a physician in a neighbouring large town, who had the reputation of being a skilful auscultator. He pronounced the chest to be free from disease, and considered the case to be one of chronic muscular rheumatism, recommending the patient to go for a time to the southern coast, as the weather at that time was very cold and raw. On visiting him the character of the pains in the chest and arms at once excited my attention, being described by him as radiating from the upper part of the sternum and from between the shoulders down both arms; so I requested him to remain in bed the following morning, with a view to a thorough exploration of the chest. On stripping him to the skin a curious appearance presented itself, the chest being covered with small veins, swollen almost to bursting, and in places resembling minute worms. It was evident, therefore, that there was an impediment to the return of the venous blood from the surface of the chest and upper extremities, and that it must exist at the vena cava superior. Auscultation failed to discover any decided signs of disease, but I thought I detected slight dulness on percussion and feebleness of the respiratory sound to the right of the upper portion of the sternum. The rheumatismal character of the disease was therefore at once dismissed, and its seat placed within the thorax. In a short time the signs of a mediastinal tumour became unequivocal, but whether aneurismal or malignant was doubtful. It increased rapidly in size, and another formed in the liver, both proving to be cancerous. When, however, the true and serious nature of the disease was discovered, it was too late to remedy the very great inconvenience that had arisen from it having been mistaken before the patient left home. I ascertained that he had not been stripped when examined previous to his coming to the seaside.

Failure in diagnosis has also not unfrequently occurred from a false interpretation of the sounds heard and the signs observed.

About twenty years ago a gentleman, aged 60, of powerful intellect and studious habits, placed himself under my care. His case was considered to be one of chronic pulmonary phthisis, and he had consequently been sent to Madeira during three consecutive winters. As his disease during this time seemed stationary, he determined to try a winter on the south coast of England. I found signs of chronic bronchitis and emphysema, but none of phthisis. I could only account for the misinterpretation of the physical signs by supposing that the unusually clear sound brought out by percussion over the emphysematous portions of lung had been mistaken for the normal resonance, and that consequently other portions of the lung comparatively dull were considered to be absolutely so, and to have been the result of solidification. I found, as often occurs in such cases, that the chest symptoms were much aggravated by dyspepsia, in its turn owing in a great measure to error in diet. Attention was therefore directed to this point, and after a time he regained a very fair amount of good health. He was enabled to complete a very important scientific work, which had been delayed for some time by his ill-health; and he lived nearly ten years longer, spending every winter at the south coast, and suffering more or less from the chronic bronchial affection, but still enjoying life.

A very unpleasant occurrence once took place in consequence of a misinterpretation of the physical signs and the want of caution in the medical attendant, and I give it as a warning:—I was called in to see a young lady in consultation with another physician and a general practitioner. They told me they had repeatedly examined her chest without discovering any marked signs of disease. Her face was puffy, her lips purple, and she was suffering from intense dyspnœa and a constant dry, hacking cough. Her pulse was very feeble, 130. She had rapidly lost flesh, and was restless, irritable, feverish, and very weak. All that could be discovered by auscultation was here and there a slight cooing sound and a trace of very fine crepitation, but no absolute dulness of one part as compared with another, and there were no morbid cardiac sounds. I pointed out to the medical attendants that the absence of physical signs of any ordinary disease of the lungs or heart, coupled with the existence of general signs of great pulmonary derangement, clearly pointed to the existence of some extraordinary disease, which could be none other than acute phthisis, the lungs being stuffed with innumerable unsoftened miliary tubercles and grey granulations, and that she had only a few days to live. After our consultation the brother of the patient came in, and asked me, amongst other questions, whether I considered his sister to be in any danger, to which I replied that I considered her to be in the greatest danger; and, turning to Dr. A., said, "That is our opinion, is it not?" Upon his replying in the affirmative, the brother turned round savagely upon him and said, "Good heavens! Dr. A., how could you tell me only this morning that there was no danger?" The scene that followed may be better imagined than described. It was no discredit to Dr. A. that he should have failed to discover the nature of the disease, which was one of such extreme rarity that in all probability he had never seen it; but it was very incautious of him to have stated there was no danger when the general signs indicated the existence of some serious and obscure affection.

I once saw justice very nearly miscarry in a similar case of acute phthisis.

About thirty years ago an insurance company whose chief medical adviser was a very old man, having been about forty years old when Laennec's discoveries were announced, disputed a policy of insurance on the ground that an important symptom of pulmonary consumption had been wilfully suppressed. I happened to be in court at the assizes where the cause was tried, the medical advisers on each side being pure surgeons! One of them, who was on the plaintiff's side, having caught sight of me soon after the trial commenced, and being nervous about the matter, advised the solicitor to retain me to assist in prompting counsel. A country practitioner was called to prove that in an illness of the person insured, previous to his policy being effected he had spat some blood. He gave his evidence very fairly, stating the attack to be one "of inflammatory cough," allowing that he had seen similar attacks with spitting of blood in persons in no way consumptive; that the patient completely recovered, and showed no symptoms of any chest affection afterwards. Another medical man deposed to attending him in his last illness of about six weeks' duration, and to opening the body afterwards. He said the lungs were stuffed full of small unsoftened tubercles; that as there was so much disease, in his opinion it must have been of long standing. In cross-examination he allowed that he had never

seen a similar case, nor heard it described as acute phthisis, and that he did not know the usual symptoms indicative of such a disease. Asked how the patient could have breathed for a long time past, when nearly all the air-space was occupied by solid tubercles, he completely lost his presence of mind, and owned that he had never thought of that. It also came out that the local medical referee of the company, a very skilful practitioner of high character, had auscultated the chest when the man had been referred to him for examination, and had reported him to be in sound health; he was not, however, called as a witness. The plaintiff's counsel was advised to impress strongly on the judge and jury that his client's case had been proved by the defendant's witnesses; that his last illness was acute phthisis, the duration of which hardly ever lasts more than six or seven weeks; that his previous illness was acute bronchitis, and in no way connected with phthisis; and to dwell strongly on the fact that the company had not called their own medical referee. The plaintiff, who had purchased the policy during the life of the insured, gained his cause; but without efficient medical prompting the facts elicited in cross-examination would never have come to light, and justice would have miscarried.

The medical adviser of the company, knowing nothing of auscultation or acute phthisis, doubtless told the directors that pulmonary consumption was slow in its course, and that blood-spitting was one of the most frequent signs of its existence, and altogether ignored the report of the local medical referee. The medical man who attended the insured in his last illness was equally ignorant respecting the form of consumption in this case, yet ventured to express an opinion in the witness-box as to the time it had existed—an opinion which he was forced to admit only showed his ignorance of the subject.

Now, however valuable auscultation may be in most diseases of the chest, yet there are some in which it fails to reveal to us the seat and nature of the affection—as, for instance, in thoracic aneurism within the pericardium, and sometimes in the commencement of the descending aorta; so also in the following case:—

A young lady suffered from severe fits of coughing, and lost flesh, appetite, and spirits. Auscultation, frequently practised, failed to elicit any abnormal sound. It was therefore supposed that some central irritation might exist, possibly seated in the bronchial glands or the interlobular pleura. No diagnosis, but an unfavourable prognosis was given. She went from home for change of air, and one day suddenly died, expectorating—and, in fact, suffocated by a large quantity of purulent matter. There was no post-mortem examination.

Another young lady has been suffering six or seven years with much the same symptoms, and I have always confessed my inability to discover the exact nature of her disease.

Again, it sometimes happens that auscultation fails to indicate the existence of disease in consequence of those who practise it not knowing exactly what to expect in certain cases. Thus, in an early stage of cardiac dropsy arising from the dilatation of the heart, the walls of which are in a state of fatty degeneration, some practitioners, misled by the writings of certain authors, would expect to hear a rasp or bellows sound, and to see venous pulsations in the neck if there were tricuspid regurgitation; and not meeting with one or the other, would conclude that the cause of the dropsy did not lie in the heart. But the fact is that tricuspid regurgitation scarcely ever gives rise to abnormal sounds, particularly when the walls are weakened by fatty degeneration, and little or no venous pulsations are rendered visible in the neck when the heart is in this state, a feeble current being met by an equally feeble regurgitation,—so that they would have been looking and listening for that which they had no reason to expect. What they probably would have found, had they looked for it, would have been an increase in the extent of præcordial dulness on percussion, and also an extension of the normal sounds produced on the left side of the heart quite to the back of the thorax.

I cannot close this subject without offering the same advice to students of the present day as I did to those of the last generation thirty years ago, because my experience has taught me that it is equally required now as then. I would, then, strongly recommend them, soon after commencing their professional studies, daily to auscult the chest of healthy persons of various ages for six months, thus making themselves thoroughly acquainted with its normal sounds; then to commence the study of abnormal sounds whenever an opportunity offers itself, but more especially in the wards of a hospital, when they are quiet, and where they will have opportunities of having the accuracy of the conclusions they have been inclined to draw from their own observation confirmed or corrected—employing not merely the stethoscope, but also the ear laid immediately on the chest, as I have been in the habit of doing myself for many years past. Percussion at first will appear to them very easy of performance; but they will find that this is far from being the case. In fact, a person well skilled in its practice can at his pleasure cause the chest to enact either a clear, resonant, or a dull heavy sound—in the former case striking lightly, and quickly withdrawing the finger with a spring; and in the other giving a heavy stroke and allowing the finger to rest on the one struck, thus deadening the vibrations of the walls of the chest. Thus it will be found that great practice is required in order to acquire the expertness necessary for the formation of a correct diagnosis.

I trust I may be pardoned if I add one word to teachers, which is, that they simplify as much as possible their nomenclature of sounds, in order not to confuse the young student, describing them chiefly by words in ordinary use—as splash, gurgling, rasp, bellows, creaking, rubbing, etc.,—and also that their clinical teaching take the form of examination on cases taken by the students themselves rather than that of lectures, by which means they will learn to educate themselves, and will be materially assisted and enabled more easily to retain that which they have thus practically learned.

INDIVIDUALISM.

AN INTRODUCTORY ADDRESS DELIVERED BEFORE THE MEDICAL SOCIETY OF KING'S COLLEGE, LONDON, ON OCTOBER 16, 1873.

By JOHN CURNOW, M.D. Lond., M.R.C.P.,
Professor of Anatomy in, and Hon. Fellow of, King's College.

Mr. President and Gentlemen,—I feel under a twofold disadvantage in having to read to you this year's introductory address. In the first place, I have been privileged to hear a larger number of these addresses than any other acting member of our Society. Of these, some dealt so exhaustively with the great medical or intellectual questions of the day, whilst others treated so fully of the history and objects of our Society, or were so replete with the special mental characteristics of their authors, that the remembrance of what I had heard almost deterred me from undertaking a similar task. Secondly, even while writing this, I was occupied with the anxieties attendant on the preparation of another introductory address, and the arrangement of the lectures for my first anatomical course. However, I determined not to fail in my duty as your senior Vice-President, knowing that under such circumstances I could depend on your favourable consideration.

I purpose to consider briefly one of the prominent features of our present age in its bearing on our general and technical education, and its more remote effect on our Society. For running counter to some ideas and theories at present widely prevalent, and for rebelling against some eminent orthodox opinions, I feel justified by the fable—

> "The mountain and the squirrel
> Had a quarrel;
> And the former called the latter 'Little prig;'
> Bun replied,
> 'You are doubtless very big;
> But all sorts of things and weather
> Must be taken in together,
> To make up a year
> And a sphere.
> And I think it no disgrace
> To occupy my place.
> If I'm not so large as you,
> You are not so small as I,
> And not half so spry.
> I'll not deny you make
> A very pretty squirrel track.
> Talents differ; all is well and wisely put:
> If I cannot carry forests on my back,
> Neither can you crack a nut.'"

This great characteristic, then, is the spirit of competition; competition for material wealth, in industrial enterprise, in every profession and occupation, and for every situation of honour or emolument. Undoubtedly the same motive has always actuated the human race, but organised competition

belongs especially to our own period, and it is only in the present generation that we have been asked to bow down and pay homage thereto. Formerly, for instance, scholarships and fellowships were founded to furnish men with the means of pursuing their studies mainly according to their individual bent; now, however, in a noteworthy speech delivered by the "apostle of competition," the present Secretary of State for the Home Department, on the presentation-day at the University of London in 1872,(a) we are told that students are almost to make scholarships and exhibitions their end, and that beneficent individuals are to found them, and so run no risk of their charitable intentions being altered by future Education Commissioners, inasmuch as such endowments could not possibly be abused.

As a logical outcome of this position, he proceeded to argue that the highest function of a university was not to teach, but to examine; and that professorships and fellowships should be disendowed, because the best and most successful teachers would get plenty of pupils, assuming that their chief object was "to cram" for examinations, and that the advancement of knowledge by originality of idea or experiment and by accuracy of research was of little importance. That competition in reading addresses and in rapidity of delivery is a fair test of the fitness of a telegraph or postal messenger for his situation is quite true, but whether every Government post of trust and responsibility should be filled on a system similar to that lately advocated by the Right Hon. Robert Lowe, before a select committee of the House of Commons, is, I think, open to question. I refer to this general topic because I find the same ideas making rapid strides in our own profession; and although up to a certain point competition is not only useful but necessary, we should carefully keep before us the special dangers attached thereto. The most recent example is afforded by the Council of the College of Surgeons in calculating, to two places of decimals, the claims of every medical school to public support. By this means they will probably succeed in "levelling-*up*" the teaching of the various professors and lecturers to the necessary standard for their membership. In addition they should work out to the same nicety the particular subjects in which candidates fail, and publish the results in the *Times* as well as in the medical journals, and then "cramming" would once more quickly take its due position in the education of the medical student.

But turning to our higher examinations, the competition that is engendered and encouraged has some great drawbacks, which, I fear, are not sufficiently considered. In the first place—and this is particularly true of our own profession—we can only test one side of a candidate: viz., his powers of acquisition and the facility with which he can reproduce the facts and theories stored up in his memory; whilst other qualities, such as accuracy of observation and readiness of action in emergencies, must be entirely overlooked. The acknowledgment of the element of chance in all our examinations at once shows this most conclusively, and a correct criterion of a man is frequently not obtained, although his future career is so largely dependent thereon.

Again, competition leads men in exactly the same groove, and renders them fac-similes, good or bad, of each other, or of their more immediate and successful teachers. This competition, in the case of the University of London, is spread over so long a part of that period of life when habits once formed are with great difficulty reformed, that many persist in the same line of acquiring the views of everybody else on every subject, without having any judgment of their own or the power of forming it. They are consequently at the mercy of every specious doctrine, and ready to hold any outrageous idea of disease and its treatment, or to doubt the efficacy of the most potent remedies in cases the most suitable for their administration. Books are read and lectures attended, not for their intrinsic merits, but for "what will pay," inasmuch as the practical benefits to be derived from the system of payment by results are as quickly appreciated by the student as by its older advocates. At a recent discussion by the Convocation of the University of London, on the substitution of German for Greek at the matriculation examination, after much bathos about the homogeneity, complexity, subtilty, richness, and power of the former language, the advocates of the change came to the great practical question, "Which will pay best?" And so a language that can be mastered by a residence of a few months in a neighbouring country is to be put on a footing of equality, as a means of higher education, with one which contains works that have done more to develope true culture (so essential in these days of exact science and mechanical detail) than all other writings since, those of Shakespeare, Dante, and Goethe alone perhaps excepted. Although "the University has no wish to discourage Greek," this will practically cause its removal from the curriculum of a large number of our schools; leading one almost involuntarily to apply to their subsequent scholars the touching words of Milton in reference to his blindness:

> "And Wisdom at one entrance quite shut out."

Too little insisted on, also, is the tendency of these severe competitions to foster men who are more ambitious of honours than their health or talents warrant, and who, instead of cultivating their powers of observation, and striving to obtain that technical knowledge which would make them of the greatest use as individual practitioners, fritter away their time in trying to learn theories which they cannot grasp, and to collects facts too numerous for their retentive powers. In this way much positive harm is done, and instances of this must flash across the minds of all the older members present; while it seems to me doubtful if the best men are improved, or even come scathless out of the ordeal. The mathematical honour lists at Cambridge show that the first men do not always turn out best in their future careers, and generally others who occupy a lower position come eventually to the front with fuller and more matured powers, and surpass those who, having so early exhausted their mental vigour, can do no more good work in the advancement of knowledge. I am afraid that, as in the domain of practical politics, so in that of intellectual thought, we are too rapidly following in the footsteps of our cousins across the Atlantic, who, since the War of Independence, having taught every child to read and write, have produced from amongst them one thinker only of acknowledged power and originality—Emerson.

I am particularly influenced in making these remarks at the present time by the fact that a man of so much authority as Professor Todhunter, in a recent work, entitled "The Conflict of Studies,"(b) awards the palm, among branches of general education, to the mathematical rather than to the experimental or the natural sciences, not solely on account of their mental effects, but he adds the monstrous reason, that attainments in the latter cannot be so readily tested by examination, forgetting that the aim of all education should be, not to communicate a result, but to impart a power. Moreover, as examinations cannot but be imperfect, education, whose proper object it is "to lead the mind to discern for itself, and not to rest on memory for rules to guide our art and practice,"(c) should be sedulously watched and guarded, and hold its due place as the primary factor in the production of the individual both as a man and as a medical practitioner. The obliteration of the individual in averages, and the sifting of competition, may be necessary ingredients in the great natural law of the "survival of the fittest," but the process is at best a very harsh one, and I am not satisfied that the result is as certainly beneficial as the well-known lines of the Poet Laureate would seem to imply,—

> "Knowledge comes, but Wisdom lingers, and I linger on the shore;
> And the individual withers, but the world is more and more."

On the contrary, I look on Individualism as the necessary, and indeed only, protest against the present all-pervading spirit of competition, with its "payment by results," and consequent copying of our teachers and successful fellow-students, for, as Dr. Paris says,—

"It is an instinct in our nature to follow the track pointed out by a few leaders; we are gregarious animals in an intellectual as well as in a physical sense, and we are addicted to routine, because it is always easier to follow the opinions of others than to reason and judge for ourselves; and thus do one-half of the world live as alms-folk on the opinions of the other half."(d)

To develope this Individualism, we should assiduously cultivate many of our attributes, which cannot be weighed scientifically, but which mark out and differentiate our particular intellectual character and mode of thought, and seem to depend on so many complex causes—such as hereditariness, temperament, early education, &c. In criticising a man's mental structure, we are much too apt to over-value the cold

(a) The *Times*, May 17, 1872.

(b) Page 6, *et seq.*
(c) F. W. Newman, "Miscellanies," p. 302.
(d) "Pharmacologia," edit. ix., p. 77.

impartiality of the intellectual or scientific reasoner, and to forget the great advantages of a certain amount of faith and enthusiasm in literature and in medicine, even if we are forced to make some allowances in weighing the conclusions. These qualities have been largely possessed by the greatest and most illustrious men in our profession, whereas the tendency of pure intellectualism has been to develope the general scepticism which has marked the medical teaching of late years. They have pre-eminently characterised those physicians who have achieved the most lasting reputations as teachers; and here I would especially refer to one of the founders of the medical school of this College, the late Dr. Todd, whose memory is so much venerated by the elder generation of King's men, who so freely acknowledge the great benefits derived by them from his teaching and example. As a corrective to the rigidity of the purely scientific mode of thought, the æsthetic side of art, literature, and science must not be lost sight of, as this is of vital importance in any attempt to reach the perfection of the individual character; for true culture, to quote the words of Mr. Matthew Arnold, "leads us to conceive of true human perfection as a harmonious perfection, developing all sides of our humanity;"(e) and though we shall never grasp the fulfilment of this ideal, we must strive to attain thereto, remembering that he who never despairs seldom completely fails.

As Individualism is of great importance in the formation and preservation of the highest intellectual thought, so it is also a primary influence in maintaining a high standard in medicine, which, as was so well expressed by my friend, Dr. Baxter, in a former introductory address, is "to us, not only an occupation but a life."(f) It has led the wisest and best men in our profession to think out for themselves the great problems of health and disease, and has prevented them from becoming mere physicists, chemists, or morbid pathologists, instead of true clinical physicians. The insistence on the observation of the phenomena of disease during the life of the patient is especially opportune and necessary just now, when on all sides we have inferences drawn concerning its nature, and suggestions made for its treatment, from laboratory experiments or post-mortem appearances only. These, of course, are extremely valuable as physiological or pathological studies, but, when forced into opposition to careful clinical observation, occupy a position which they are not warranted in assuming.

It is curious and interesting to watch the different phases of medical literature, and see how, with new means of investigation, and with more complete knowledge of each science, and of its peculiar methods, that science becomes the theoretic pivot on which our practice is made to turn. Thus in so short an experience as my own we have had four distinct schools claiming to govern our therapeutics—viz., the expectant, the statistical, the chemical, and now the physiological.

Of these the "expectant" has been of extreme value, by teaching us to examine the phenomena of disease as they occur, and without the introduction of disturbing elements. By it we have learnt the course, duration, and termination, or "natural history" of the more acute diseases, and the harm that is frequently done by interfering with their normal evolution. "Cutting fever short" is now hardly ever mentioned, even by the public. On the other hand, the practice was often allowed to run to an extreme, and to paralyse our treatment; for we must not forget that lives have undoubtedly been saved by using remedies judiciously and promptly, even in acute affections—*e.g.*, in pneumonia, erysipelas, diphtheria, etc. The expectant plan is but the revival of an ancient system, for the disciples of Ernst Stahl followed nature so implicitly that their practice was named, "a meditation upon death."

The "statistical" method has been pushed beyond all precedent by Hughes Bennett, to enforce his so-called restorative treatment of pneumonia,(g) as if all cases called by this name were exactly alike, and as if a few cases described minutely were not worth more than any number of incomplete observations heaped promiscuously together. The fallacies of this method, when thus applied, are so glaring, that one wonders at its ever being resorted to in the decision of individual therapeutic problems.

To the "chemical" school we are certainly indebted for the knowledge of the action of those remedies whose behaviour in the organism and in the laboratory is similar, and whose decompositions can be readily followed. Besides the chemical antidotes and escharotics, they are, however, limited to the groups of Antacids and Antilithics or Lithontryptics, and deal only with the secondary effects of the diseases in which they are employed, and so are apt to make us lose sight of the necessity of endeavouring to ascertain the conditions causing the ailments we are treating. This school, although temporarily obscured by other doctrines, has had a long period of supremacy, for its present disciples owe the fundamental ideas of their system to Basil Valentine, Paracelsus, Van Helmont, and their successors, whose extravagances should have been a warning against such unwarranted claims in its behalf as have recently been advanced.

I well remember how greatly I was charmed in my early student-days with the simplicity of disease and its treatment, as shadowed forth in a book, then at the height of its popularity. Writing in 1857, the late Dr. Bence Jones says, "that the theory and practice of medicine are in a transition state, and that the ground is being cleared for a new structure, based on the theory of the conservation of energy."(h) He divides diseases into mechanical and chemical, and the latter into diseases of suboxidation and peroxidation,—the latter class containing affections as remote as Bright's disease and hydrophobia. He assumes that he has satisfactorily explained by animal chemistry, hypertrophy, atrophy, and fatty degeneration, and looks forward sanguinely to the detection of the difference in chemical composition which he is sure must exist between an ordinary epithelial cell and an epithelial cancer-cell.(i) He includes the whole art of therapeutics in questions merely of diet and drugs acting chemically, and rest acting mechanically; and at the end of the work refers the reader to papers on twenty-two groups of substances, of which, to one's great surprise, only two or three have ever been used in medicine. The human body is literally looked on as a laboratory or a watch, and the necessity of the administration of food to postpone the fatal termination of a case of chronic gout is thus singularly pointed out:—

"Thus the original chemical disease of suboxidation of the urates may cause such an entire loss of mechanical power that not even a crumb of food can be raised to the mouth, or a fly can be driven away from the skin, and death would soon result from the debility of starvation, if external force was not made to compensate for that which cannot be produced within."(k)

I had thought that this school had altogether given way to the physiological one, now coming into prominence, but a curious link between them is to be found in some lectures delivered by Dr. Fraser before the Royal College of Physicians, Edinburgh, and published last year in the *British Medical Journal*, in which (following Blake and Rabuteau) he enunciates the following conclusions:—(l)

α. Salts of the same base have analogous actions. The exceptions to this law are so numerous, and depend on so many other conditions, that it is really not worth laying down—*e.g.*, compare ammonium carbonate with ammonium chloride, or sodium sulphate with sodium chloride.

β. Isomorphous substances produce similar effects; but chloride, fluoride, bromide, and iodide of potassium are isomorphous, so are the sulphates of zinc, iron, and magnesia, and also the phosphate and arseniate of soda.

γ. The metals are more active physiologically according as their atomic weights are more elevated. Passing over the puzzle as to how the activities of substances producing the most diverse physiological effects can be relatively compared, he illustrates this law by the examples of sodium, potassium, and thallium. "Sodium, with an atomic weight of 23, is inert; potassium, 39, is active in moderate doses; while thallium, 204, is a dangerous poison." He omits lithium—a more manifest member of the alkali group than thallium—which is so strongly recommended by Dr. Garrod for its activity and the smallness of its combining number, 7. Again, compare copper, 63·5, with lead, 207; mercury, 200, with bismuth, 210; or, even more striking still, arsenic, 75, with antimony, 122. Fourcroy in the last century expressed an idea of equal value when he said that the virtues of mercury were due to its specific gravity.

(*To be continued.*)

(e) "Culture and Anarchy," Preface, xvi.

(f) "Medicine and the Allied Sciences," p. 16.

(g) "Clinical Lecture on Medicine," 3rd edit. p. 287, *et seq.*

(h) "Lectures on some of the Applications of Chemistry to Pathology and Therapeutics," p. 274.

(i) *Vide supra*, p. 257.

(k) *Vide supra*, p. 147.

(l) Vol. i., p. 371, *et seq.*

REVIEWS.

Essays on Diseases of Children. By Wm. Henry Day, M.D., etc. London: Churchill. 1873. Pp. 191.

This little book, the author tells us, is composed of papers which have already appeared in the pages of the *St. Andrews Graduates' Association Journal*, or in the columns of our weekly contemporaries, or which have been read before the Harveian Society of London. The first essay contains some general remarks on the study of children's diseases, which, if they cannot be characterised as novel, are nevertheless true and valuable. In the present age of refined diagnosis and of multiplied diagnostic instruments, it is well that the practitioner should occasionally be reminded that treatment directed to the constitutional state is that which is often most likely—in patients of all ages and both sexes—to control disease. Especially in children, in whom it is far less easy to determine the extent and degree of local mischief than in adults, is it not seldom better to rely upon the evidence derived from general condition than to trust to the uncertain knowledge to be obtained from doubtful local signs. Not that we should omit the endeavour to investigate the local affection, whatever that may be, with exactness; but he will be the most successful practitioner who, whilst he makes his differential diagnosis with all the care in his power, looks beyond the local malady to the general condition which has given rise to it, and on this founds both treatment and prognosis. The remarks on the general hygienic management of children in the essay are generally reasonable; the observations on medicines also would be endorsed by most practitioners.

The second essay is a short one on debility in children—a functional impairment of the vital processes, which may sooner or later pave the way to organic change. The two most common attendant symptoms, Dr. Day thinks, are headache and pain in the epigastrium—signs of debility in the brain and stomach. He gives a vivid sketch of a condition which is very common amongst the children of the poor in London.

The next essay is on infantile remittent fever, which he identifies with typhoid, and on the febrile state in general. He especially argues that the varying characters which typhoid, gastric, and remittent fevers assume afford no ground for assigning to them a diversity of causation.

Other chapters follow on an obscure case of cerebral disease, on headaches in children, and on laryngeal and tracheal irritation and croup. Perhaps the most valuable of these, as it is the longest, is the essay on headaches. Headaches in children the author classifies thus:—1. Cerebral headache, attributable to injury or to chronic or acute inflammation. 2. Gastric headache, from intestinal and hepatic derangement, known as bilious headache. 3. Epileptic headache. 4. Febrile headache. 5. Headache from anæmia, neuralgia, etc., constituting nervous headache. 6. Headache depending on some intricate change in the cerebral membranes or tissues of the brain. The cases of headache depending on obscure cerebral conditions which the author has recorded prove him to be an intelligent clinical observer. If Dr. Day's book does not give evidence of minute pathological research, or of the observation of disease on a widely extended scale, it at least affords proof of honest use of the materials within the reach of the London physician, and of independent thought and observation.

Egypt as a Health Resort; with Medical and other Hints for Travellers in Syria. By A. Dunbar Walker, M.D. London: J. and A. Churchill. 1873. Pp. 139.

Readers of the admirable letters of our well-known correspondent at Madras, and of the very clever sketches which we have published under the title of "A Doctor's Log," from the pen of an army medical officer, will already have learned something of the pleasures and annoyances, the benefits and disadvantages, of the voyage to the land of the Pharaohs. There can be no doubt that in the scale of health resorts Egypt has been for some years steadily rising, and it has certainly attractions—apart from its climate—which throw those of most other sanitoria into the shade. In the little book before us the author chiefly treats of the hygienic advantages to be derived from a sojourn in Egypt, and this rather in a general way, without much attempt at scientific comparison of Egypt and other localities supposed to be specially suited to the invalid. Neither does he give much local information that would be of use to the visitor in the land of Ham. The book will therefore neither supply the requirements of the physician who may wish special scientific information as to the climatic conditions of Egypt, nor those of the delicate traveller who may hope to find in it a Murray's guide with a medical adviser. Still it contains many hints which will be useful to patients, given in an easy, colloquial, unpretending style. The hints to travellers in Syria, which form the concluding section of the little book, are worth reading. Amongst other things, the author tells us that about two-thirds of the inhabitants of Syria are afflicted with intestinal worms, of which the most frequent is the round worm, *ascaris lumbricoïdes*. Boiling and filtering the drinking-water, santonin and scammony and calomel pills, are the prevention and cure. To reach Egypt, Dr. Walker recommends that most invalids should take the voyage from Southampton in preference to the land route. For sea-sickness he distrusts all remedies. He has no belief in ice to the spine, which, although it will not cure sea-sickness, will very probably produce lumbago. In a popular medical handbook we think an author's religious opinions are better left out: a section of readers at least would only be irritated by his remarks on Malta and his criticism on the course taken by "Protestant England" in allowing the religion of the inhabitants to be "rampant" there.

Lectures on the Clinical Uses of Electricity. Delivered in University College Hospital. By J. Russell Reynolds, M.D., F.R.S., etc. Second edition. London: J. and A. Churchill. 1873. Pp. 116.

We have so recently, in our articles on "The Medical Uses of Electricity," referred to Dr. Russell Reynolds's valuable writings on the subject, that we shall content ourselves with little more than an announcement that a second edition of the lectures has just appeared. Of all modern works on electricity in medicine these lectures seem to us second to none in practical value. They tell us what electricity can and what it cannot do, both as an aid to diagnosis and as a therapeutical agent, and this in clear and precise language. The present edition has been revised, and it contains some additional matter, but it does not differ in the main from its predecessor. A great charm of the lectures is the frank, unpretending, but thoroughly scientific style in which they are written. They convey the impression of being really intended for the instruction of the student—an aim which seems to us conspicuously wanting in not a few works on the same subject.

On Elephantiasis Græcorum, or True Leprosy. By Robert Liveing, M.D., etc., Physician to the Middlesex Hospital. Longmans. 1873.

The author, in his preface, tells us that the greater part of this little work constituted the Gulstonian Lectures for 1873. His object has been to collect from various sources a short account of the past and present history of leprosy, and to combine with this his conclusions regarding the causes, nature, and clinical features of the disease, drawn from the facts recorded, and from his own observation on several cases under his care. It needs but a perusal of the work to show that the author has succeeded in his object, and justified his opening remarks. The subject is one that has been of interest to mankind from time immemorial, and the frequent reference to it in Scripture history, together with the precise rules laid down for its diagnosis, proves how important it was considered to limit as far as possible this terrible scourge of humanity. Far from leprosy being a thing of the past, Dr. Liveing shows us that it is still prevalent, and that there is no disease that has a wider geographical distribution—"it is found both in the northern and southern hemispheres, and in almost every latitude from the poles to the equator." He discusses at length the several causes that combine to its production, and enters fully into the question of its hereditariness and contagiousness. The three different forms—the macular, the anæsthetic, and the tuberculated—are carefully differentiated, and illustrative cases given; allusion being also made to the allied diseases, morphœa, and white or Jewish leprosy. The subject is exhaustively treated, and reflects great credit on the author for the manner in which he has condensed into a most interesting work all that is known of the history, symptoms, and treatment of this dire disease.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, November 11.

The Introductories (*continued.*) — Mater Misericordiæ Hospital—School of Physic, Trinity College—Catholic University—Ledwich School of Medicine.

The session at the Mater Misericordiæ Hospital was inaugurated on Monday, the 3rd inst., by an address from Dr. Valentine Brown, the recently appointed Assistant-Physician to the Hospital. The chair was occupied by the Right Hon. the Lord Mayor of Dublin; and a vote of thanks to the lecturer was proposed by Mr. P. J. Smyth, M.P. for the county Westmeath.

The first lecture in the School of Physic, Trinity College, was delivered on Saturday, November 1, by Dr. B. G. MacDowel, Professor of Anatomy. Several of the profession and a large number of students attended. Dr. MacDowel made a touching allusion to the great loss the School had sustained in the death of his colleague, Dr. R. W. Smith, Trinity College Professor of Surgery, who had been one of his oldest, best, and most trusted friends.

Dr. Robert D. Lyons, Professor of Medicine, delivered the opening address of the medical session, 1873-74, of the Catholic University, at the School of Medicine, Cecilia-street, on the afternoon of Tuesday, the 4th inst. The earlier part of his discourse was altogether devoted to the question of university education in Ireland. Having expressed regret at the collapse of the University Bill in the last session of Parliament, the lecturer explained to his auditory that the Catholic University was now undergoing a great reformation. Colleges and schools in all parts of the country were being affiliated to it; and with regard to the central university institution, he announced that the authorities had lately associated with them "the great body of Jesuits." This elicited mingled hisses and applause from the student portion of the audience. He further mentioned that he was authorised to contradict the statements of the *Times*, *Spectator*, and other papers, that the claim for a public grant to the University was now given up. The remainder of the lecture dealt with medical topics exclusively, and was admirably calculated to encourage and enlighten those entering upon their medical curriculum.

On Saturday, November 1, the sixty-fourth session of the Ledwich School of Medicine was inaugurated by an address from Dr. Arthur Wynne Foot, the Lecturer on Medicine in the School. Having acknowledged his sense of the dignity and responsibility of the position to which he had been recently elected in the School, Dr. Foot alluded to the removal within the past year of both his predecessors—one by death, the other to a different post of labour, each having gained a crown of laurel in the profession. Such addresses as he was then entering upon were frequently regarded as a kind of medico-theological or medico-political discourses—wearisome, meaningless, and listened to only as the lugubrious moaning wind when there was nothing else to listen to. That was because of the subjects treated of—these having, in the vast majority of cases, no interest for those who wanted to know the first principles of a profession in which they were but young disciples. He would not delay them in proving the already proved excellence of that School, nor introduce politics, nor call up whole legions of learning: he was a student himself, and preferred putting before them on that impressive occasion—the annual turning point, which gave each year an opportunity of repentance for past waste of time, and of renewal of energy for time to come—the fundamental ideas of industry, enthusiasm, and earnestness of purpose. He counselled them to work these golden threads into the web of their life as it issued from the loom of time, and to persevere in the task till they stood as shining lights in professional perfection. For any of them to do a thing rightly he should have three things—a wish to do the thing, a knowledge of how he ought to do it, and a will to make himself do it.

Having dwelt on the two former of these subjects, the lecturer alluded to the variability in the force of different persons' wills, to weak wills and strong wills, and to the differences between a wish and a will. He always thought that a great want in the education of medical students was the neglect to take means to make their wills active living forces, and for this neglect he in a large measure blamed those who had the supervision of them. But not wishing to discourage any, he proceeded to excite the interest of all by a brilliant picture of the duties and privileges of a medical life; and having shown that excellence in the profession would bring with it honour and gain, he dilated upon the reasons why they need not fear monopoly, nor be deterred by competition. He then addressed the various students according to their classes, pointing out that the application of the principles of industry, enthusiasm, and earnestness placed excellence within the grasp of men of moderate capacity, and within the reach even of those more heavily handicapped by extra sources of anxiety, as well as in the power of those who passed for the intellectual giants of a large and highly distinguished school. He warned them against being deterred from competition with "geniuses," men of fitful effort, who could do all things by turns, and nothing long. He recognised no definition of genius but "the transcendent capacity for taking trouble." (Applause). He urged on students to aim at success in the earliest beginning of their studies, by concentrating their force on all difficulties as they meet them. Little by little that goal must be attained.

Reviewing, in a most interesting manner, the causes of failure in students, he could find apologies for all shortcomings except the mildew of idleness. He would fearlessly proclaim from the outset the most uncompromising hostility against idlers, and would invite all true students to join him in the crusade. It was idlers who had made a byword of the name of medical students, and brought into disrepute a class of men braver, more generous, more tender, truer to all the truest instincts of human nature than were to be found among the students of any other profession. Thanks to idlers, and to them alone, the name of medical students had been traduced with systematic exaggeration by those who never knew the sentiments of the really representative men of the class. Having referred to the student's hospital life, his self-forgetfulness of danger in volunteering to carry in his arms with gentlest care the cholera, typhus, or small-pox patient, or to stand for hours daily in the very focus of pestilence, he said it was the foolish freaks of a few idlers, disclaimed by the majority, which had smirched their fair escutcheon and given to their enemies cause to blaspheme a name which was the embodiment of valour and disinterested virtue. He held out, however, hope of reformation, even to those who had slept far on into the morning of their lives—hopes of shaking off the nightmare of sloth which was threatening them with professional asphyxia. Even at the eleventh hour he would not withdraw the rainbow of hope, and would cast a rope to those who were about to sink, perhaps for the third time, in the seething flood of their own follies; let them catch it, and hold it, and be brought safe to land, and so be saved from suicide. He had always thought that a peculiar value in these periodic addresses at critical stages in their student-life was, that while the working and industrious men could be refreshed with encouragement and further stimulated by approbation, there was an opportunity, perhaps, of arresting the downward career of those who were sliding fast into the bottomless pit of idleness. Having touched on many other matters, all bearing on the students—their hopes, their fears, and their interests—the lecturer concluded with a brief recapitulation of the great principles he had advocated, and of the issues resulting therefrom.

GENERAL CORRESPONDENCE.

CLINICAL TEACHING AT EDINBURGH.

Letter from Professor Laycock.

[To the Editor of the Medical Times and Gazette.]

Sir,—I observe that our University Club has had its attention drawn to the early clinical teaching at Edinburgh, and it has occurred to me that the subjoined letter from a valued friend now dead would interest many Edinburgh graduates. The writer, Oswald Allen Moore, was a much esteemed practitioner in York, and Lecturer on Botany at the York Medical School. His grandfather, after whom Mr. Moore was named, and his father, were both surgeons. Dr. Withers was brother-in-law to his grandfather, Oswald Allen, of York. He graduated in 1772, and is best known by his treatise on "Asthma." There is a like MS. copy of Dr. John Rutherford's lectures in the library of the College of Physicians here, of date 1750; I understand copies were made for sale. I subjoin an extract

from the introductory lecture as an illustration of the style and method. Dr. Rutherford was appointed the seventh Professor of the Practice of Physic in 1726.

Edinburgh, November 17. I am, &c., T. Laycock.

"Dear Laycock,—In looking over some books formerly belonging to my great-uncle, Dr. Withers, of York, I found two MS. volumes of Clinical Lectures by the first (I believe) Professor of the Practice of Physic in the University of Edinburgh.

"You are aware that four Professorships of Medicine (in its various branches) were instituted in this University about the end of the first quarter of the eighteenth century, and that Dr. Rutherford was one of them: and as Professor of the Practice of Physic(a) he began in 1748 to deliver clinical lectures on the most remarkable cases in the Hospital, a practice previously adopted as respects surgical cases by Professor Monro.

"Although there is no title-page, I have other MSS. which prove the authorship, and also that the selection was made by some of the *alumni* of the University from lectures delivered between 1750-56. You will also see that I have been able to supply the date in many instances, and in one case even the name of a patient omitted in the report.

"If not too cumbersome, will you kindly allow them to act at least as lay-books to fill up a shelf or keep their companions tight.

"Accompanying my note I send an engraving of Professor Cullen. . . . . .

"I remain, my dear Professor, yours very sincerely,

Oswald A. Moore.

"15, Colliergate, York, October 10, 1855."

Extract from Professor John Rutherford's Introductory Clinical Lecture.

"But a true physician is acquainted with ye fundamental parts or principles of his art, who understands ye animal œconomy, and not only knows what health is, but can trace out ye causes of diseases and ye rise of ye symptoms. He likewise knows when and where nature makes an effort, supports her when weak, and co-operates with her in all her actions and operations as far as he can. He may be said to be her minister. He follows her as his guide, varying his practice as ye indications change. In short, he hits with reason in everything. Hippocrates desires us to follow Nature as our guide, and do nothing without her, tho' 'tis evident ye same diseases in different persons will produce different effects and symptoms, and require different methods of cure. From ye reasoning and practice he may be called a rational practitioner and physician. An empiric undertakes ye cure of diseases in a much easier manner. He despises all learning, and practices by wrote, and does not adapt ye remedies to ye nature of ye disorders. He takes all his intelligence from ye names, barely asking whether 'tis a fever, cholic, etc.; and without considering ye constitution of ye patient and other circumstances, he gives medicines which he only imagines to be good in such and such cases. Thus he goes on till ye patient either dies or recovers, paying no regard to ye different constitutions and diversity of shapes which disorders put on, whence arise so many indications and contraindications. This is a ready way to cure diseases by ye lump, and a much easier method than ye former.

"Ye method I propose to pursue is, to examine every patient before you, lest any circumstance should be overlooked. I'll conduct this by a plan which is ye most useful I know of:—1stly. I'll give you ye history of ye disease in general. 2ndly. I'll inquire into ye causes of it. 3rdly. I'll give you my opinions how ye disease is going to terminate; and 4thly. I'll lay down ye indications of cure. As I shall give you my mind freely, if you find me mistaken I hope you'll excuse me, as ye *ars medica* is not infallible."

CLINICAL TEACHING IN LONDON.

[To the Editor of the Medical Times and Gazette.]

Sir,—With regard to the question, "In what British medical school did systematic clinical teaching originate?" it might be interesting to your readers to know that Sir Benjamin Brodie considered himself to be the first clinical lecturer in London. In his autobiography, published in 1865, page 78, he says, speaking of his labours at St. George's Hospital in 1813—"I also began to deliver clinical lectures, and I believe that these were the first lectures of this kind which were ever delivered in a London hospital." Although this does not strictly answer the question mentioned, yet it decides it so far as London is concerned. I enclose my card.

November 15. I am, &c., St. Bartholomew's.

(a) *Vide* Monro's Works, 4to ed., 1781, pages xii. to xiv.

THE GENERATION OF TYPHOID.

Letter from Dr. C. G. Logie.

[To the Editor of the Medical Times and Gazette.]

Sir,—So much has been written regarding typhoid fever being generated by milk, and so strongly, too, have some urged upon us this theory, that they would almost lead us to call the disease the "dairyman's fever." But we know that typhoid may arise without the use of milk; and I know from inquiries last month, as in my student days in Edinburgh, and also while stationed afterwards in Portobello Barracks, that the families near those sewage meadows between Edinburgh and the barracks continue healthy on milk from the cows fed on those meadows. Again, it is a strange thing that if you give milk, pure from the cow, to many, they do not like it; mix it with water, and they appreciate it.

Now, I am not going to advocate allowing the dairyman to add the water from his probably contaminated sewage well (thanks to powerful legislation, this is put a stop to), any more than I should allow anyone to add water to my whisky; but I beg most particularly to call attention to the gross ignorance, or rather unintentional mistake, of our engineer department in the building of houses with regard to the pipes connected with cisterns, in so preventing us suiting our own tastes in this or any other respect with safety. Pray walk along by the backs of houses in streets and see for yourself. You can mark the soil-pipe, with its branches from every closet, on each flat, and in the cheaply built houses the scullery-pipes also connected with them. Now examine your cisterns indoors. You will discover what is called a waste-pipe sticking up in the corner. Where is the other end of this pipe? You will find it conveyed very neatly into the soil-pipe or nearest drain. As this waste-pipe is solely meant for the purpose of preventing an overflow (should anything go wrong in the ball-cock), it is, I may say, 364 days out of the year empty. It serves as a most excellent ventilator for all horrible gases from the soil-pipe or drain (most probably the main sewer in the street) to the surface of the water in your cistern, there to be greedily absorbed. Bath-rooms also suffer to a very great extent—baths being usually supplied with hot and cold water by the same orifice, from which it is emptied into the soil-pipe, the trap below the bath being, I think, not sufficient to check the foul air in the majority of cases from want of space.

The remedy for these glaring defects is very simple. Arrange so that you can see the other end of the waste-pipe alluded to; also of that of your bath. The latter can be so managed that the water from the bath may be utilised for garden purposes, whilst that from your cistern should be in the open air, and at some distance from any drain, fitted with a simple gutta-percha valve, preventing ingress of air, but allowing free outlet of water. While on the subject of valves, I beg most respectfully to call the attention of those connected with waterworks companies to the advisability of having valves (of a tricuspid shape) at certain parts of the various mains for the purpose of preventing regurgitation, and also for localising disease, so far as water may be concerned, if originated by other causes. I am, &c.,

Cosmo G. Logie, M.D., F.R.S.E.,
Surgeon-Major Royal Horseguards.

Regent's-park, N.W., November 14.

H. C. CUTCLIFFE, F.R.C.S., SURGEON-MAJOR BENGAL ARMY, OFFICIATING PROFESSOR OF SURGERY, CALCUTTA.

Letter from Dr. Fayrer.

[To the Editor of the Medical Times and Gazette.]

Sir,—The *Times* of a few days ago contained one of the brief and cruel telegrams such as those interested in India are and will be at times fated to hear. It ran thus:—"Dr. Cutcliffe is dead." This melancholy intelligence concerning one who was so recently in the prime of life and in the full exercise of

mental and physical powers of no ordinary character, unaccompanied as it was by details of any kind, whilst it caused the greatest anxiety and sorrow to his friends, yet left a shadow of hope that there *might* be some mistake. Alas! the mail of this morning has dispelled all uncertainty, for it brings the sad news that Henry Charles Cutcliffe died in Calcutta, of œdema of the larynx, at 2 a.m. of October 24 last.

A correspondent—a mutual friend and colleague, who was with him in his last moments and throughout his illness—writes—"I have only time for a few hurried lines to inform you that poor Cutcliffe died this morning, October 24, at 2 a.m. He was taken ill only on Monday last, the 20th, with a violently inflamed sore throat. I saw him first on Wednesday, and then there was a suspicious-looking patch on the right tonsil and the soft palate, looking something like a diphtheritic exudation. It never spread, however, and was not I think really diphtheritic, but a superficial slough, the result of an application of strong caustic solution on the Monday. From the commencement there was marked tendency to œdema, and this rapidly spread to the trachea and at last into the bronchial tubes, and ultimately caused death. Tracheotomy was performed, but gave little, if any, relief. You may imagine the shock to us all has been a terrible one." It has indeed! and to many more also in England who, beyond the immediate circle of his own family (to whom the loss must be irreparable), knew and appreciated his talents and his worth.

There are many who, having known him longer, could say more of the merits and promise of his early life than I can; none, I think, who more fully appreciated the realisation of that promise in his mature age. He was a skilful and scientific surgeon, a painstaking and impressive teacher, an officer well qualified to uphold the dignity of his service and profession, and to those who had the privilege of knowing him well a true and loyal friend. His place will not be easily filled, nor will his memory readily fade in the College where he taught so well.

More than one sad event of a similar nature has recently shocked our profession and the public in England. As it was, I believe, said of the eminent young physicians so early snatched away, that they had died like soldiers faithful to their trust, and at the post of duty,—so, indeed, has it been with Cutcliffe; for the disease of which he died was surely the result of exposure to evil influences when depressed by severe work in an exhausting climate—such influences, too, as he had himself long and ably laboured as a sanitarian to ameliorate or remove. He had worthily reached the post he most of all desired, and has lived, though the time has been so short, long enough to prove how admirably he could fill it, and how great a loss his premature death will cause to medical education, his service in India, and to a large number of sorrowing friends, in India and at home.

I feel, Sir, that I but imperfectly express the sentiments of all my colleagues in Calcutta in the few words in which I have communicated to you the sad details of Mr. Cutcliffe's death. I can only add that the deepest sympathy will be felt for his young widow and bereaved family. I am, &c.,

London, November 17. J. Fayrer, M.D., C.S.I.

HOW TO GROW *EUCALYPTUS GLOBULUS* IN ENGLAND.

Letter from V. F. Benett Stanford.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has been drawn to an article of yours which was copied into the *Daily News* of November 8, in reference to the health-giving properties of the *Eucalyptus globulus*—or blue gum tree. As I have successfully reared from seed two dozen of these trees, and as they are now growing well out of doors, I think some of your readers would like to know how I succeeded. I obtained the seed five years ago from South Australia, and forced it in a hot-house; in one year it was four feet high, and now, in its fifth year, it is growing rapidly in a sheltered position in the park, having attained a height of thirty feet. The first three years the tree must be taken under cover every winter, and the fourth and fifth years should be protected for several feet up with wisps of hay or straw. When the trees are kept indoors in winter, it should be in an orangery or very high greenhouse, with plenty of light and little water. I have sent specimens of my five-years-old gum trees to Milton Abbey, in Dorsetshire, and to Donhead Rectory, in Wilts, where I believe they also flourish.

I am, &c., V. F. Benett Stanford.

Pyt House, Tisbury, November 18.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Saturday, November 15.

Dr. Letheby, President, in the Chair.

Dr. George Ross read a paper "On the Ventilation of Schools, Hospitals, and Public Buildings," of which the following is an abstract:—"Good ventilation" is a comprehensive phrase; for it involves the consideration of the causes of noxious gases of all kinds, and of the best methods of dissipating and destroying them. My present object is more limited than this; for I do not intend to deal with the numerous sources of malaria, nor to advert to the various chemical means in use for purifying the atmosphere: I propose simply to consider the natural laws and methods by which air is distributed, and to point out the mechanical agencies by which the operation of these laws and methods may be assisted in our structural arrangements. Under the 132nd section of the Metropolis Local Management Act, by which medical officers of health are appointed, they are required "to point out the most efficient modes for the ventilation of churches, chapels, schools, lodging-houses, and other public edifices within the parish or district"; and I have thought that, in view of the proposed construction of a large number of new schools by the School Boards, this would be a suitable time to bring the subject of ventilation under the notice of this Society. The subject has, indeed, received a large amount of public attention, and many distinguished men have favoured us with their opinions upon it. Much practical good has, no doubt, been derived from their suggestions, but as yet general and even professional opinion is in a vague and hazy state upon the matter. In point of fact, the public are in despair as to the possibility of any successful method of ventilation, and there is a general disposition to fall back upon the open sash-window and open fireplace. With a view to ascertain which was the generally accepted system of warming and ventilation, I have visited a school-house, a workhouse, and a hospital—three institutions which have been recently erected, and which may be supposed therefore to represent the most advanced science in this respect. The school-house was one in my own neighbourhood, the workhouse was the new Lambeth Workhouse, and the hospital was St. Thomas's. For the sake of brevity I shall confine my observations to a single room, either occupied or intended for occupation, in each of these buildings. In the school-house the room for boys was at the top of the building. It measured 68 ft. long by 18½ ft. wide and 15½ ft. high, equal to 19,499 cubic feet, and, being intended for eighty children, provided a reasonable space. Fresh air was admitted directly from the outside by windows opening near the ceiling, and by the door when open. Foul air escaped by seven ventilators of perforated zinc in the ceiling, each about two feet square. The escape of the foul air was supposed to be assisted by five gas-lamps, each acting through the ventilators. There were three fireplaces. The fireplaces and the gas-lamps drew their supplies of air from the atmosphere of the room, and when lighted must of necessity deprive the children of the full supply intended for them, or otherwise must create a considerable draught from the windows, to the detriment of their comfort. As the gas-lamps would be rarely lighted, the advantage expected to be derived from their action must be considered as nugatory. The ventilation therefore practically amounted to this: that the fresh air, on favourable occasions, came in at the windows, and the foul air escaped by the same apertures. The ventilators in the ceiling could be of little use. When the external air was of a higher temperature than the air in the room, the descent of the fresh air and the ascent of the foul air, being left to the operation of natural forces, would be so trifling that a due ventilation could not take place; and even on September 15, when I visited the room, on a comparatively cool day, a distinct animal odour pervaded it. In the Lambeth Workhouse a day-room for males was 72 ft. long by

36 ft. wide and 12 ft. high. It was warmed by six fireplaces, all drawing their supplies from the room. The fresh air was introduced through revolving hit-aud-miss gratings in the middle of the floor, which admitted cold air from the outside. It could be also admitted, as a matter of course, by the windows. The foul air escaped by small perforated zinc openings in the ceiling, assisted by gas-burners, the vapour from which passed through the foul-air tubes. The gas-burners were supplied with air from the room. In principle and method, then, the ventilation of the workhouse was precisely the same as that of the school, but much more inefficient, inasmuch as the room was too low to afford sufficient capacity for the number of persons who will probably occupy it; and the hit-and-miss gratings for the admission of fresh air were so small as to be mere apologies for ventilation. It will be necessary to open the windows on most occasious, or the atmosphere will become offensive. With respect to St. Thomas's Hospital, I shall merely describe the arrangements of a single ward, thus giving the results of the method of warming and ventilatiou adopted in that building, and avoiding as much as possible controversial points. I went over this institution on September 16 at 4 p.m.—a fine temperate day, with a strong westerly breeze blowing. Fresh air was admitted into the ward by open windows, and as the wind was high outside it came into the ward in gusts, making cross-draughts and eddies iu all directions. Although numerous windows were open, I should not say from a rough calculation that there was more open space for the admission of air than was required for the health of the patients; but the air rushed in in a little gale instead of being admitted at a steady equal rate, as it ought to be under a good system of ventilation. I felt a draught about my ears and neck whilst I remained, and after I had left had a sense of coldness on the top of my head and a slight coryza, which troubled me on my way home. There were three large shafts passing through the ward, consisting of a smoke-flue surrounded by a hot-air shaft; and the ventilators by which the foul air escaped were iu the ceiling surrounding the shafts, the air being supposed to be assisted in its ascent by the heat from the shafts; but the shafts on the day I was there were not sufficiently warmed to effect this object. There were other small ventilators at the ends of the ward. There were three stoves and several gas-burners in the ward, all supplied when burning by the air in the room. All these well-intended arrangements were inoperative on September 16, for the iu- and out-passage of air was amply provided for by the open windows, which were the only real ventilators. The principle of this method of ventilation is the same as that of the other two institutions described; and whilst it falls far short of what I consider a good and sufficient principle, it nevertheless, as carried out in practice in St. Thomas's, gives too much air rather than too little. Iu point of fact, the principle is overridden for the purpose of getting a free supply of air; hence its insufficiency is practically admitted. In order to base a method of veutilatiou upon sound principles, it will be necessary, in the first place, to determine the quantity of pure air required for consumption by a single person within a given time; after that to ascertain the couditions and agencies for the supply of that quantity, so as to avoid draught, over-heating, and impurities. It is a well-ascertained fact that about thirty cubic inches of air are changed by an adult at each act of breathing. There are about fifteen inspirations in the minute, consequently 450 cubic inches are inhaled and exhaled each minute. Here, however, other facts come under consideration. The air at each inspiration is spoiled by losing 5 per cent. of its oxygen and gaining 5 per ceut. of carbonic acid. Air so deteriorated is poisonous. Conceding, as is generally allowed, that 1 per 1000 of carbonic acid might be breathed without being injuiious, theu each person would require about fifty times more air, or 22,500 cubic inches per minute, which is equivalent to thirteen cubic feet. As it is always prudent iu calculations of this nature to be on the safe side by allowing too much rather than too little, I would fix sixteen cubic feet as the due quantity for a single person per minute—960 cubic feet per hour, and 23,040 cubic feet per day. It is a maxim generally received that each person should be supplied with fresh air at the rate, at least, of 10 cubic feet per minute. The Royal Commissioners appointed to iuquire into the sanitary condition of barracks reported, in 1857, that the supply of air per minute for each man in his sleeping-room should not be less than 20 cubic feet. Our next point, then, is to consider what should be the size of the opening to admit thirty cubic inches of air, which is the quantity required for each respiration. These thirty cubic inches equal a body $3\times3\times3\frac{1}{3}$ inches, or a cross-section of 3×10 inches. An aperture, therefore, three inches wide and ten inches long would afford ingress to thirty iuches of air in one-inch cubes. This, however, does not entirely state the case. A human lung whilst respiring acts through a given period, and during that period the air travels about one foot, so that about twelve cubic inches would enter by the aperture instead of one. Hence the opening really necessary would be about one-twelfth of the size of that last stated—say half an inch wide and two inches long, or, to err again on the safe side, one inch wide and two inches long. In order to avoid draughts it is expedient that the velocity of the admitted air should be fixed at about two and a half feet per second, or teu feet each four seconds, that being the period of a respiration. Assuming that there are 100 persons or scholars in a room, each requiring 16 cubic feet per minute, the whole number would require 1600 cubic feet in that time, or about 107 cubic feet each four seconds; and inasmuch as these 107 cubic feet would enter at a velocity of ten feet in the four seconds, it follows that a cross-section of $3\times3\frac{1}{2}$ feet would give the required amount—that is to say, a room 80×30 feet would require an opening three-fifths of an inch wide all round. The 16 cubic feet of air admitted for each child each minute should be diffused through a sufficient volume of air to prevent draught and get warmed. Probably twenty times that quantity, or 320 cubic feet, would suffice for each child—altogether for 100 children 32,000 cubic feet, or equal to $80\times30\times14$ feet, which are about the dimensions already given above. A cross-section of $3\times3\frac{1}{2}$ feet is about the size of the upper sash of an ordinary window, and at first sight it might seem that this simple space, or any arrangement of spaces corresponding to it, would be insufficient to ventilate a large room for 100 children; but it must be remembered that the air is travelling at the rate of ten feet in four seconds—a velocity which is expected to be maintained by a furnace. By maintaining, at all seasons, a steady current of air, it would be found that the size of the aperture or apertures now recommeuded would be sufficient. The general result of these calculations may be thus compendiously stated in the form of a rule: that each person requires a continuous supply of about sixteen cubic feet of air per minute, moving at the rate of 150 feet in that time, and diffused through a space coutaining 320 cubic feet, the size of the opening for the admission of the air being about two square iuches. I have heard it gravely argued that, subject to the diffusion power of gases, the carbonic acid and sulphuretted hydrogen gases quickly disperse themselves through the air, and thus effect a sufficient ventilation. Commou experience convinces us that this notion is not correct. The weight of 100 cubic inches of air is 31 grains, and an equal measure of carbonic acid gas weighs 47·08 grains; air, therefore, is about one-third lighter than carbonic acid, yet if a jar of air be placed over one of carbonic acid, the latter will ascend, and after the lapse of a few minutes may be detected in the jar above. This is owing to the diffusion power of these gaseous bodies—that of air being 1, and that of carbonic acid in the ratio of 0·81. It is upon this property of gases, in fact, that the purity of our atmosphere depends. The diffusion power of carbonic acid is, however, much less than air, and so small that it cannot serve the purposes of ventilation. It cannot commonly be diffused as rapidly as it is generated, and its limited diffusion power therefore only increases the area of its poisouous activity. The same remark applies to sulphuretted hydrogen, which diffuses itself rapidly enough to be exceedingly disagreeable, but not to get rid of its noxiousness. It might appear reasonable to assume that by availing ourselves of this increased levity of heated air we should adopt the most natural and easy method of ventilating a room, but in practice it is found to fail. This failure is owing to several causes: first, because the watery vapour contained iu expired air condenses under the influence of cold draughts, and when condensed retaius its impurities; secondly, because the temperature of the air outside is frequently higher than that of the room, and the predicated action does not take place; thirdly, in a crowded room heat and impurity are so rapidly generated that they cannot be reduced without so copious a supply of cold air that an intolerable draught is created; fourthly, the foul air, which contains besides carbonic acid and water a quantity of putrescible animal matter, in rising is distributed through the apartment, and should there be persons sitting on a higher tier of benches—as in many public places, theatres, churches, courts

of law, etc.,—they are compelled to breathe the air vitiated by the persons beneath them; fifthly, as according to this method the fresh air comes either from near the floor, or from a door or window, great inequalities of temperature exist in the room, and various draughts are caused by the interchange of hot and cold air. It is necessary to utter a caution with reference to the phrase "the ascent of heated or foul air." Without pretending to question the repelling power of caloric, it is better for practical purposes to regard the phenomenon from another standpoint —that of the relative specific gravities of heated and cold air. By virtue of the attraction of gravitation, cold air must always descend, and in consequence of its descent the warmer air must either rise, being pushed up, as it were, to the higher place, or otherwise escape. Warm air cannot readily ascend against a superimposed mass of still warmer air, or air of less specific gravity; hence the assumption that heated air must always rise is incorrect, for it will ascend only when the air above it is of a lower temperature or greater density. The attempt, then, to ventilate a room by admitting cold air near the floor, as is often done, is unscientific. It is soon found that the heat and closeness are not abated until the warm air is let out, and the most ready escape for it is by the upper windows. After gasping caused by proximate suffocation, the upper sash is thrown open, and with the rush of warm air out, there is a rush of cold air in. This happens not only by the windows, but also by the ventilators near the floor, and numberless cross-draughts are the result. Even when the temperature outside is nearly the same as that within, which is probably the case on the majority of days in this country, the cold fresh air will not ascend from the ventilators near the floor, although of course there will be a gradual lowering of the temperature of the room. The only way to obtain fresh air will be by the windows. Should there be a fire in the room, it will draw air from every crevice above or below, and greatly exaggerate the evil. I need not suggest further reasons against this practice; the fact being that it is this method of which everybody complains, and which has necessitated the inquiry for a better system. Then it has been supposed that we might take advantage of the superior levity of heated air by providing a shaft up which it might ascend. This resource has been adopted upon the principle, no doubt, that the larger the quantity of heated air that can be collected in a mass, the more rapid its ascent—two cubic feet of heated air rising twice as fast as one cubic foot, and so for all proportions. The draught, moreover, is proportionate to the length of the shaft, and is measured by the difference between the weights of equal bulks of the ordinary air outside and the heated air in the shaft being multiplied by the height of the shaft. Thus, if the heated air were lighter than the external air by one ounce to the foot, and the shaft were fifty feet high, the heated air would ascend with a force of fifty ounces. These shafts have been provided in America, and in New York Dr. A. N. Bell(a) has conducted some investigations for the purpose of determining their efficiency. He found that the air in a close room provided with a ventilating shaft, when one of the windows was opened, yielded 17·2 parts of carbonic acid in 10,000. The window was then closed, and after the lapse of ten minutes, another examination gave 32·2 of carbonic acid, or an increase of 15·6 parts; thus showing the uselessness of a simple ventilating shaft. This failure is apparently owing to the temperature in a class-room rarely being sufficiently high to set up the necessary action in the shaft, and to the great specific gravity of carbonic acid which prevents its easy ascent. A ventilating shaft is, nevertheless, a *sine quâ non* for the perfect ventilation of a large room intended for occupation by numerous persons; but its action must be promoted by the use of a heating apparatus, for, under artificial conditions, natural laws must be subserved by artificial means. Now let us consider the best means for removing the foul air from a room and conducting it to the ventilating shaft. I maintain that in order to secure good ventilation the poisoned air should be carried out of the room as soon as it is breathed, so that the atmosphere of the room should be preserved in the utmost possible purity.(b) To do this the polluted air should be conducted away by means of apertures and tubes placed within a few feet of the flooring. For this purpose there should be a number of metal tubes (proportioned to the size of the room and the largest number of persons expected to occupy it) having hooded openings at about the level of the faces of the occupiers when seated—say three feet from the floor. These tubes might be ranged along the walls, or attached to any fixed furniture, as desks in a schoolroom, and should be carried under the flooring to a common duct or trunk. This common duct should be in connexion with a furnace in the ventilating-shaft, and the foul air conveyed by it might be either taken directly into the furnace and burnt, or it might be received into a chamber surrounding the furnace, and, becoming thus heated, carried away by a foul-air flue surrounding the smoke-shaft of the furnace. I prefer the first method, because it is simpler, and the foul air is effectually destroyed, and because I require the chamber for another purpose. In this way all the foul air would be drawn out of the room immediately it was expired, and would not contaminate the air introduced for respiration. The use of a stove would not entail much extra cost, as it would be required in winter to heat the room under any circumstances. In summer a ring of gas-jets in the shaft might answer the purpose of creating a draught. Suppose, then, that a single person, as already shown, deteriorates sixteen cubic feet per minute, one hundred persons would deteriorate 1600 cubic feet, which is equal to about twenty-six cubic feet per second; and as the velocity in the foul-air duct would be about six feet per second, it follows that a main duct with a cross-section of about four and a half square feet would suffice. The admission of pure air, for reasons already given, would be best done by the cornice or by the ceiling. Either part should be perforated with small apertures, whose aggregate cross-section should be rather in excess of that of the duct for carrying off the foul air. This method of ventilation is obviously opposed to those generally in use, inasmuch as it conducts away all the foul air by ducts near the floor, and admits fresh air by openings in or near the ceiling. Admitting the correctness of the principles upon which this system of ventilation is based, we feel bound to insist, in order that it should be practically successful, that it be not muddled and spoiled by introducing other oxygen-consuming and draught-causing agencies for which no provision is made in the calculations—to wit, there must be no free gas-lights nor blazing fires. By the proposed plan one stove in the basement would ventilate and warm every apartment in a house, and at a less cost than would be required to maintain a fire in several fireplaces. With an open fireplace there is an immense waste of caloric (consequently of fuel) and unavoidable draughts. If an open fireplace be considered indispensable, it, like the gas-lights, should have its separate supply of air from the outside. How important this is may be concluded from a consideration of the fact that one briskly burning fire will consume as much oxygen as forty or fifty persons, and would of course produce an equal demand upon the outer air for supplies to maintain its consumption.

(a) *Food, Water, and Air*, September, 1873.

(b) Mr. Martin, civil engineer of Boston, U.S., gave an excellent exposition of this method of carrying away the foul air, in a paper inserted about two years ago in a series of reports published by the Sanitary Board of New York. My argument follows his on this essential point.

OBITUARY.

JOHN GRANTHAM, F.R.C.S.

This esteemed member of the profession died on the 14th inst., at his residence, Crayford, Kent, in the seventy-third year of his age, after a long and painful illness, during which he received the unremitting attention of his old friends Professor Erasmus Williams and John Adams; latterly Mr. Henry Smith was associated with these gentlemen in consultation. Mr. Grantham, who received his professional education at the then united hospitals of Guy's and St. Thomas's, was admitted a Licentiate of the Society of Apothecaries and a Member of the Royal College of Surgeons on February 21, 1823, and an Honorary Fellow of the same institution on August 26, 1844. He was the author of a work entitled "Facts and Observations in Medicine and Surgery, with additional Memoirs." To the *Medical Times and Gazette* he contributed an interesting paper "On Ammonia as a Dermic Agent in Treatment of Disease." The deceased gentleman, who was a widower, leaves three daughters; his only son, a Member of the College of Surgeons, died a few years ago.

The deaths registered in the metropolis last week were 1636. During the last three weeks the mortality in London has exceeded by 30 per cent. the numbers returned in the three preceding weeks. This increase in the mortality was 28 per cent. in the West District, 24 in the North, 17 in the Central, 30 in the East, and 41 in the South groups of districts.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examination meetings, held on Tuesday, Wednesday, and Thursday, November 11, 12, and 13, the Licence to practise Medicine was granted to—

Clarke, Francis Edward. | Courtenay, John Hoysted.
Yeo, Gerald Francis.

The Diploma in Midwifery was granted to—

Clarke, Francis Edward. | Horne, Patrick.
Courtenay, John Hoysted. | Howard, William Wells.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma were admitted Members of the College at a meeting of the Court of Examiners on the 18th inst., viz. :—

Aspinall, Henry Moon, L.R.C.P. Edin., Fleetwood, Lancashire, student of the Edinburgh and Manchester Schools.
Benson, Percy Hugh, M.B. Aberd., Whitby, of St. Bartholomew's Hospital.
Brayn, Richard, Market Drayton, of King's College.
Chadwick, George James, L.R.C.P. Edin., Portland, Dorset, of Guy's Hospital.
Clunn, Thomas Robert Hood, L.S.A., Manor Bier, Pembrokeshire, of Guy's Hospital.
Conolly, Beaumont Rowley, Kilburn, of the Middlesex Hospital.
Dixon, Henry George, Dublin, of that school.
Elliott, Frederick Hawes, Andover, of University College Hospital.
Fenton, George Frederick, St. Remo, of King's College.
Firth, Charles, M.B. Lond., Norwich, of St. Bartholomew's Hospital.
Gould, Thomas, L.R.C.P. Edin., Halesowen, of the Birmingham School.
Hosking, William Henry, L.S.A., Ross, Westland, New Zealand, of the Charing-cross Hospital.
Hawton, James William Hambly, L.S.A., Devonport, of Guy's Hospital.
Houghton, Walter Benoni, Tottenham-court-road, of University College Hospital.
Hunt, Richard, Leeds, of that school.
Kesteven, Leighton, Holloway-road, of St. Bartholomew's Hospital.
Lechler, Henry Martin, M.B. Aberd., New Cross, of the Aberdeen School.
Lloyd, Morgan, Carmarthen, of Guy's Hospital.
Lowe, Charles Henry, Burton-on-Trent, of St. Bartholomew's Hospital.
O'Brien, James Octavius, L.S.A., Henfield, Sussex, of Guy's Hospital.
Parson, Henry, Clapham, of St. Thomas's Hospital.
Pilkington, William Binns, L.S.A., Crawshabooth, Lancashire, of University College Hospital.
Rigby, James Arthur, L.S.A., Preston, Lancashire, of Guy's Hospital.
Sheard, William, L.S.A., Croydon, of King's College.
Walmsley, Francis Henry, Manchester, of the Belfast School.
Watson, Percival Humble, Newcastle-on-Tyne, of that school.
Wilcox, Henry, M.B. Aberd., St. Neots, of St. Bartholomew's Hospital.

The following gentlemen were admitted Members on the 20th inst., viz. :—

Day, Edmund Overman, L.S.A., Hemel Hempstead, student of Guy's Hospital.
Douglas, Claude, Ilkley, Yorks, of St. George's Hospital.
Gibbings, Ashley, Chichester, of King's College.
Grant, John, M.D. Philad. and Toronto, of Newburgh, Ontario, Canada.
Greet, William Ambrose, L.S.A., Penton-place, W.C., of University College.
Keyworth, George Hawson, L.S.A., Wellingley, Yorks, of Guy's Hospital.
Lush, William Henry, West Lavington, of St. Thomas's Hospital.
Mason, Henry William, Cirencester, of St. Bartholomew's Hospital.
Philps, Vincent, Ongar, Essex, of King's College.
Pocock, Walter, Brixton-road, of St. Thomas's Hospital.
Pyburn, George Wilkinson, B.A. Cantab., Hull, of University College.
Vincent, Henry Bird, L.S.A., East Dereham, Norfolk, of St. Bartholomew's Hospital.
Whitington, Charles Edward, L.S.A., Tuxford, Notts, of Guy's Hospital.
Whittle, Edward George, Whitehaven, Cumberland, of University College.

Fourteen candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. The half-yearly examination for the Fellowship of the College commences this day, and we understand that there is an unusually large number offering themselves.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, November 13 :—

Baskerville, John Dunbar, Kingstown, Ireland.
Findlay, A. C. T., Brooksby-street, Islington.
Gard, William John, Stoke Devonport.
Taylor, John William, Lewes, Sussex.

The following gentleman also on the same day passed his primary professional examination :—

Jones, Wm. Makeig, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BEEVOR, JOHN, M.D., F.R.C.P., M.R.C.S. Eng., L.S.A.—Medical Officer of Health for the Mansfield, Southwell, and Worksop Districts.

JACOB, EDWARD LONG, M.R.C.S. Eng., L.S.A., B.A. Lond.—Medical Officer of Health for Chertsey.

LEONARD, JOHN, M.R.C.S. Eng.—House-Surgeon to the Charing-cross Hospital, Strand, W.C.

RUSSELL, HENRY, B.A. Quebec, M.B., C.M.—Resident Surgeon to the Clinical Wards of the Royal Infirmary, Edinburgh.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Astley Cooper, Staff Surgeon, second class, to the *Devastation*; Samuel Campbell, Staff Surgeon, second class, to the *Sylvia*: James Donovan, Surgeon to the *Newcastle*, additional for temporary service at Yarmouth Hospital; Charles J. Devonshire, Staff Surgeon, second class, to the *Eclipse*; William J. Volatti, Surgeon to the *Eclipse*; Frederick A. Nixon, Surgeon to the *Lord Warden*, additional.

WAR OFFICE.—MEDICAL DEPARTMENT.—Staff Surgeon Allen Bryson, M.D., from half-pay, to be Surgeon-Major, *vice* John Eldon Young, M.D., deceased.

BIRTHS.

BLACK.—On November 16, at 70, Marquess-road, Canonbury, the wife of Robert J. Black, M.D., of a daughter.

HARVEY.—On November 9, at 26, Rue Wissocq, Boulogne-sur-Mer, the wife of John S. S. Harvey, M.D., M.R.C.S., of a daughter.

PRESCOTT.—On November 14, at Woolwich, the wife of A. Knight Prescott, Staff Surgeon-Major, of a son.

WILL.—On October 17, at Trichinopoly, Madras Presidency, the wife of George Elmsly Will, Assistant-Surgeon Royal Artillery, of a son, still-born.

MARRIAGES.

EVES—COLLINS.—On November 12, at St. Philip's, Cheltenham, Charles T. Eves, Surgeon-Major H.M.'s Indian Army, son of the late Augustus Eves, M.D., of Cheltenham, to Caroline Agnes, youngest daughter of the late Henry Collins, Esq., of The Duffryn, Monmouthshire.

TOMES—COOK.—On November 12, at All Souls', Langham-place, W., Charles S. Tomes, B.A. Oxon., M.R.C.S. Eng., L.D.S., of 17, Albert-road, Regent's-park, to Lizzie Eno, daughter of Charles D. Cook, M.D., of Brooklyn, New York.

DEATHS.

BELL, Rev. WILLIAM, M.A., of Brasenose College, Oxford, eldest son of the late Thomas Bell, M.D., formerly of Cheltenham and Demerara, at St. Helier's, Jersey, on November 14, in his 47th year.

BURFORD, WILLIAM, M.R.C.S. Eng., L.M., late of Camden-road, at 1, Lancaster-terrace, Eastbourne, on November 17, aged 42.

COATES, MARGARET AMELIA, wife of Matthew Coates, F.R.C.S. Eng., Staff-Surgeon R.N., second-class, at 8, Stone-terrace, Devonport, on November 13.

CREAM, CHARLES A. H., eldest surviving son of R. Chevallier Cream, M.D., of Putney, Surrey, at Spring-gardens, Buff-bay, Jamaica, on October 10, in the 22nd year of his age.

DALTON, WILLIAM, M.R.C.P. Lond., F.R.C.S. Eng., L.S.A., late of Cheltenham, and formerly of Swansea, at Bournemouth, after a long and protracted illness, on November 12, in his 71st year.

GIBB, MARY CHARLOTTE, wife of Hugh Gibb, Surgeon-General Bombay Army, and only daughter of the late General Brackley Kennett, Bombay Army, at Glenyon, Central-hill, Upper Norwood, on November 10, in her 65th year.

GRANTHAM, JOHN, F.R.C.S., at Crayford, Kent, on November 14, aged 72.

PART, CAROLINE, wife of James Part, M.D., at 89, Camden-road, N.W., on November 8, in her 61st year.

TICEHURST, FRANCES ANN, beloved wife of W. D. T. Ticehurst, Surgeon 13th Regiment N.I., and eldest daughter of John Head, Esq., of Lewes, at Ahmednuggur, Bombay, on October 20, aged 32.

WATTS, ROBERT, M.R.C.S. Eng., L.S.A., late of Clifton, Bristol, at West Hackney, Middlesex, on November 14, aged 72.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BEDFORD GENERAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Committee, on or before December 10.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CONWAY UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Wm. Hughes, Clerk to the Guardians, on or before December 10.

DORSET COUNTY HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman, on or before November 26.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Candidates must possess at least one qualification. Applications, with testimonials, to the Chairman of the Medical Staff, on or before Nov. 25.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must possess a recognised medical or surgical qualification. Applications, with testimonials, to the Secretary, on or before November 29.

KENT COUNTY LUNATIC ASYLUM, BARMING HEATH, MAIDSTONE.—Two Assistant Medical Officers. Applications, with testimonials, to Messrs. Beale and Hoar, Maidstone, before December 10.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, CITY, E.C.—Assistant House-Surgeon. Applications, with testimonials, immediately to George Croxton, Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, LOWER SEYMOUR-STREET, PORTMAN-SQUARE.—Surgeon to the Out Department. Candidates must be Fellows or Masters in Surgery, and registered. Applications, with testimonials, to the Secretary, on or before December 2.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before November 24.

TEWKESBURY UNION, FORTHAMPTON DISTRICT.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to George Budham, Clerk to the Guardians, on or before December 16.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Droitwich Union.—Mr. John C. Gibson has resigned the Droitwich District; salary £100 per annum.

Wycombe Union.—Mr. J. J. Littlewood has resigned the Eighth District; area 3464; population 2409; salary £29 per annum.

APPOINTMENTS.

East Ashford Union.—Charles S. A. Atkinson, M.R.C.S. Eng., L.S.A., to the Workhouse; Joseph Manning, M.R.C.S. Eng., L.S.A., to the First District.

Epping Union.—Richard T. Grabb, L.R.C.P., M.R.C.S., to the Roydon and Great Parndon Districts.

Glendale Union.—George Smith, M.R.C.S. Eng., L.S.A., to the Ford District.

New Winchester Union.—Thomas Roberts, M.R.C.S. Eng., L.S.A., to the Twyford District.

Stockport Union.—Peter Downs, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Stockport District and the Workhouse.

Whitehaven Union.—Joseph Dixon, L.R.C.P. Edin., L.R.C.S. Edin., to the Harrington District; John Morrow, M.D., L.R.C.S. Edin., to the Lamplugh District.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND.—On Saturday last, November 15, the Board of Trinity College elected Thomas Evelyn Little, M.D., as University Anatomist, *vice* Dr. Edward H. Bennett, appointed Professor of Surgery. In his capacity of University Anatomist, Dr. Little becomes one of the Surgeons of Sir Patrick Dun's Hospital.

QUEEN'S UNIVERSITY IN IRELAND.—At a stated meeting of the Senate of the University, held at Dublin Castle on Friday week, the 14th inst., the following gentlemen were appointed examiners for the year 1874-75:—In *Medicine:* Henry Kennedy, M.B., Vice-President of the King and Queen's College of Physicians. In *Surgery:* James Valentine Browne, M.D., Professor of Surgery, Queen's College, Galway. In *Midwifery:* J. Rutherford Kirkpatrick, M.B. In *Materia Medica:* Walter George Smith, M.D., Censor of the King and Queen's College of Physicians. In *Medical Jurisprudence:* J. Emerson Reynolds, M.D., Professor of Chemistry in the School of Surgery, Royal College of Surgeons.

CITY OF DUBLIN HOSPITAL.—On Monday, the 10th inst., Mr. Arthur E. Barker, son of the late Professor of Chemistry in the School of the Royal College of Surgeons, Ireland, was elected Surgeon to the above institution in the room of Dr. William Thornley Stoker, recently appointed Surgeon to the Richmond Hospital.

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE, JOHN-STREET, ADELPHI, LONDON, W.C.—The following arrangements have been made for the present year:—November 19—Opening Address by Major-General F. Eardley-Wilmot, R.A., F.R.S., Chairman of the Council. November 26—"On the Manufacture of Iron and Steel," by Sir Francis C. Knowles, Bart. December 3—"On Australian Vines and Wines," by J. T. Fallon, Esq. December 10—"On Mechanical Processes for producing Decorative Designs on Wood Surfaces," by Thomas Whitburn, Esq. December 17—"Whitby Jet and its Manufacture," by John A. Bower, F.C.S., Science Master, Whitby School. The chair is taken at eight o'clock.

AT the Clerkenwell Police-court, the other day, a milkman was fined £3 for selling adulterated milk. He quoted in defence our favourable report made some time ago as to the quality of the milk he sold. In our case, however, the milk was taken directly from the cow, the animal being milked directly into the vessel carried off. Had the dealer done so in the present instance he doubtless would have escaped a fine.

A CASE of true Asiatic cholera has been imported from Rotterdam, and landed in London, the patient dying in the London Hospital. The man was apparently well when he reached this country, and remained so for some time thereafter. This would lead us to believe that there must have been some source of infection on shipboard.

PROFESSIONAL EXAMINATIONS.—The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates for the diploma of Membership of the Royal College of Surgeons on the 14th inst., viz.:—1. State the local and general symptoms of a strangulated hernia in the inguinal canal, and describe the operation for its relief. 2. Describe the operation for placing a ligature on the radial artery in the upper third of its course. 3. Give the pathological anatomy, symptoms, and treatment of strumous ophthalmia (keratitis). 4. State the symptoms, diagnosis, and treatment of the various fractures of the upper end of the humerus. 5. What is necrosis? Describe its causes, the pathological changes which ensue, the bones most likely to be affected, and the surgical treatment. 6. What is talipes valgus? With what condition of foot is it commonly associated? Describe the treatment. The following were the questions on the Principles and Practice of Medicine, viz.:—1. Describe a typical case of enteric fever (typhoid), and in the absence of a rash distinguish it from acute tuberculosis, pyæmia, and meningitis. 2. You are called to a patient suffering from an acute affection of the chest after exposure to cold. State your reasons, according to the symptoms and physical signs, for believing that the patient has bronchitis, pneumonia, or pleurisy; or that he has a combination of these conditions. How would you treat him after your diagnosis has been made? 3. What do you understand by a nervine tonic? Give some examples from the Pharmacopœia, with doses of the medicines. Write one or two prescriptions for epilepsy.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Patterson, Constantinople.—We shall be glad to receive them.

Mr. W. Kirk.—Leslie's Pliable Plasters are to be obtained from Messrs. Mackey and Co., 2, Bouverie-street, Fleet-street, London, E.C.

Mr. Cooper.—Dr. Letheby's paper on "Disinfectants" was published *verbatim* as written. Portions, including that on street-watering, were omitted, as time would not permit the reading of the entire paper.

First Year.—The new edition of Wilson, edited by Dr. G. Buchanan, is a capital book, and if studied in the evening will well complement your day's work in the dissecting-room.

A. B.—The anecdote is as follows:—Douglas Jerrold at a party noticed a doctor in sober black waltzing with a young lady who was dressed in a silk of brilliant blue. "As I live!" exclaimed the wit, "there is a blue pill dancing with a black draught." It may not be out of place to relate the following:—Douglas Jerrold accompanied the late Mr. Wakley to witness some operations at the Royal Free Hospital. The first operation was amputation of the leg; the second was a minor one, for the removal of piles. Mr. Wakley told the wit the nature of the operation, and thought it was not worth his time to stay to observe it. "Oh!" said Jerrold, "I have seen the 'play,' and I would rather wait to see the 'after-piece.'" We believe this little episode with respect to Jerrold is now made public for the first time.

THE ARMY MEDICAL WARRANT OF NOVEMBER, 1873.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—With regard to the Royal Warrant of November 1, 1873, I beg to point out that it perpetuates the injustice of depriving medical officers of the junior rank of the prospective claim to forage, stabling, etc., as a right, and as part of their emoluments on attaining the rank of field officer. I am one of those who have been serving for many years in the junior rank, and when nearly arrived at the top of the list of Surgeons I find that the most valuable privileges of the rank to which I aspire will, in virtue of the Royal Warrant of March, 1873, in all probability be taken from me. Having entered the service, and having served for many years under the conditions laid down in the Warrant of the year 1858, I feel that I am being treated with gross unfairness, and I hold that I am entitled to everything promised to me by the Royal Warrant under which I elected to serve. Perhaps those out of the service may not be aware of the value of the prospective claim which has been taken away from the junior medical officers of the army. To put it in a few words I estimate that the Surgeon-Major who is allowed forage will be able to keep his horse at the cost of about £6 a year, which is the sum given as wages to a soldier-groom. On the other hand, the Surgeon-Major deprived of the forage, stabling, and soldier-groom will keep his horse (often absolutely necessary on account of ill-health) at a cost of about £92 a year. In the cases given above, both officers may have entered the service under the same conditions,

and have served with the same expectations. The fortunate one being the senior by a month obtains his promotion before March 1, 1873, and gets all he bargained for; the other, by the unjust Warrant of March, 1873, is deprived of what he had every right to expect.

I am, &c., A. B.

COMMUNICATIONS have been received from—

Dr. Wood, Gloucester; Dr. Wilson, Cork; A. B.; Mr. Ingpen, London; Dr. Henry Russell, Edinburgh; Mr. G. Murray, Edinburgh; The Editor of "Nature"; Messrs. Dunn, Hewett, and Co., London; The Secretary of the Anthropological Society; Mr. J. Whall, Worksop; Dr. Reginald Southey; St. Bartholomew's; Dr. Sheen, Cardiff; Messrs. Ruggett and Sons, London; Mr. Le Neve Foster, London; Messrs. Harvey and Reynolds, Leeds; Mr. F. Gordon Brown, London; Dr. J. Rinder, Spilsby; Mr. Gaskoin, London; Mr. H. C. Shepard, Raglan; Mr. Hopgood, Sunderland; Mr. Sellars, Birkenhead; Dr. De Lisle, Guernsey; Dr. Paterson, Constantinople; Dr. Coward, Tiverton; Mr. Wills, Barbadoes; Mr. Stokes, Cahir; Dr. Hulke, Deal; Mr. Kirk, Hedon; Mr. T. Jones, Manchester; Mr. Beaumont, Reigate; Mr. Haines, Stourport; Dr. Lionel S. Beale, London; Mr. W. E. Poole, London; Mr. J. Chatto, London; Dr. Peyton Blakiston, London; Dr. R. H. Semple, London; Surgeon-Major Cosmo Gordon Logie, M.D., Royal Horseguards; Dr. Andrew Wynter, Chiswick; First Year; Mr. Benett Stanford, Tisbury.

BOOKS RECEIVED—

Transactions of the Pathological Society of London, vol. xxiv.—Traité Théorique et Pratique D'Hydrothérapie, par le Dr. Bein-Barde—Reynolds's Lectures on the Clinical Uses of Electricity, second edition—Dr. Lankester's Annual Report to the Vestry of St. James's, Westminster—Administrative Areas for Sanitary Purposes, the most Convenient and most Efficient, by Alfred Carpenter, M.D.—Cowell's Introductory Address delivered at Westminster Hospital.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Le Progrès Médical—La France Médicale—Gazette Médicale—Le Mouvement Médical—Bulletin Général de Thérapeutique - La Tribune Médicale—La Gazette Hebdomadaire—Journal de Médecine et de Chirurgie—Philadelphia Medical Times, October 18 and 25—Pharmaceutical Journal—Monthly Review of Dental Surgery—Medical Press and Circular—Islington Gazette—New York Medical Journal—London Medical Record.

APPOINTMENTS FOR THE WEEK.

November 22. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 2½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

24. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Sansom. "A Case of Mitral Stenosis with Presystolic Murmur (with specimen)"; and "Cases of Exudation treated by the Aspirator." Mr. Jabez Hogg, "Cases of (1) Arrested Development of Left Eye; (2) Obliterated Lachrymal Duct in a Child of three years; (3) Multilocular Cyst in Neck of a Child of fourteen months, cured by Seton."

25. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Gee, "Case of Renal Calculi." Dr. Snow Beck, "Case of Fatty Degeneration of the Contractile Tissue of the Uterus; and on Cauliflower Excrescence of the Os Uteri."

26. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

27. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. Dr. Phillips, "On Retro-uterine Hæmatocele." Mr. Rivington, "On Psoas Abscess."

28. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

Clinical Society, 8½ p.m. Dr. George Johnson, "On Cases of Temporary Albuminuria, the Result of Cold Bathing." Mr. Henry Arnott, "On a Case illustrating Professor Esmarch's Method of Preventing Loss of Blood during Surgical Operations by means of Elastic Bandaging." Dr. Cayley, "On a Case of Hæmoptysis."

Queekett Microscopical Club, 8 p.m. Dr. Braithwaite, "The Histology of Plants."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 15.

BIRTHS.

Births of Boys, 1196; Girls, 1181; Total, 2377.
Average of 10 corresponding years 1863-72, 2108·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	779	857	1636
Average of the ten years 1863-72	781·3	759·9	1541·2
Average corrected to increased population	...	...	1695
Deaths of people aged 80 and upwards	...	...	51

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	11	2	1	5	...	6	1	2
North	751729	...	26	4	...	12	3	5	1	5
Central ...	334363	...	5	1	1	5	...	2	...	...
East	639111	...	35	16	1	7	1	10	1	1
South	967692	...	28	9	1	6	7	6	4	5
Total	3254260	...	105	32	4	35	11	29	7	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·929 in.
Mean temperature	40·8°
Highest point of thermometer	48·3°
Lowest point of thermometer	25·8°
Mean dew-point temperature	37·4°
General direction of wind	E. & E.N.E.
Whole amount of rain in the week	0·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 15, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Nov. 15.	Deaths Registered during the week ending Nov. 15.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2377	1636	48·3	25·8	40·8	4·88	0·20	0·51
Portsmouth ...	118280	12·4	90	33	58·0	34·0	45·0	7·22	0·43	1·09
Norwich	81677	10·9	57	35	46·5	23·5	39·8	4·33	0·29	0·74
Bristol	189648	40·4	119	83	...	...	...	...	...	...
Wolverhampton ...	70084	20·7	44	33	48·0	31·4	39·8	4·33	0·22	0·56
Birmingham ...	355540	45·4	298	163	48·0	30·6	39·9	4·39	0·25	0·89
Leicester	102694	32·0	111	71	47·7	28·5	39·3	4·06	0·21	0·53
Nottingham ...	89557	44·9	66	28	48·2	30·2	41·0	5·00	0·25	0·63
Liverpool	505274	98·9	393	238	48·2	33·9	40·3	4·61	0·17	0·43
Manchester ...	354057	78·9	248	189	49·0	34·5	42·2	5·67	0·00	0·00
Salford	130468	25·2	98	75	48·8	33·0	41·5	5·28	0·01	0·03
Oldham	85141	20·4	80	42	46·0	...	...	...	0·02	0·05
Bradford	156609	23·8	111	75	47·2	38·0	41·5	5·28	0·02	0·05
Leeds	272619	12·6	236	146	48·0	37·0	42·6	5·89	0·04	0·10
Sheffield	254352	11·1	234	118	49·0	30·5	41·6	5·33	0·04	0·10
Hull	128125	35·9	103	49	49·0	28·9	42·3	5·73	0·00	0·00
Sunderland ...	102450	31·0	118	43	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	115	91	...	...	...	...	...	...
Edinburgh	208553	47·1	125	65	51·4	29·8	42·7	5·95	0·24	0·61
Glasgow	498462	98·5	352	261	46·7	29·1	39·5	4·17	0·04	0·10
Dublin	314066	31·3	134	210	51·6	31·0	43·8	6·55	0·51	1·30
Total of 21 Towns in United Kingd'm	7507575	34·5	5509	3684	58·0	25·8	41·4	5·22	0·17	0·43

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·93 in. The highest was 30·23 in. on Saturday, and the lowest 29·68 in. on Thursday afternoon.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON UMBILICAL HERNIA.

By JOHN WOOD, F.R.S.,
Surgeon to King's College Hospital; Professor of Surgery in King's College, London.(a)

Gentlemen,—During the last few months we have had a good many cases of umbilical rupture, both in the infant and adult. The frequency of this complaint, and the importance of dealing with it properly and at an early stage, will speedily be recognised by each of you when charged with the responsibilities of practice. And this consideration has led me to choose this for the subject of my remarks to-day. Now, there are two varieties of hernia which usually come under the denomination of umbilical. The most common, and the most curable fortunately, is seen in very young infants and children. The other occurs in adults, most of whom have been subjected to distension of the abdominal cavity from corpulency or pregnancy, or both combined.

The *infantile* form is invariably more or less *congenital* in its formation, although it may not show itself to a noticeable extent until after the lapse of some months or even years after birth. Even in these latter instances a careful examination of the cicatrix which is left by the drying up and dropping off of the navel-string would reveal an imperfect closure of the fœtal opening, and perhaps a small protrusion at times when the infant cries. In order to understand its formation it is necessary for you to review the developmental changes which result in the formation of the placenta and umbilical cord and their differentiation from the fœtal portion of the ovum. At the beginning of the second month after conception the structure which ultimately becomes the umbilical cord is formed by the approximation and final connexion of the two vesicular processes, originally quite distinct—viz., the *umbilical vesicle* and the *allantois sac*. The former contains the yolk or early nutriment of the fœtus, and is connected by a canal—the *omphalo-enteric duct*—with the intestinal tube at the place where afterwards the ileo-colic valvular apparatus is found. The straighter part of the intestine below the point of connexion becomes afterwards the colon, with its vermiform appendix. The part nearer to the stomach becomes developed into the coils of the small intestine. These latter during the second month protrude into the substance of the cord for a considerable distance beyond the point where its highly elastic and gelatinous-looking substance becomes continuous with the abdominal wall of the fœtus. On the stomach side, or above these coils, the omphalo-mesenteric vessels pass from the umbilical vesicle to join the proper mesenteric vessels of the fœtus. Below them are the placental arteries accompanying that part of the allantoic duct which forms the urachus; above these, and, passing at this early stage almost directly backwards, is the umbilical vein on its way to the liver.

As development progresses, the coil of small intestines which is found at first in the interior of the umbilical cord becomes gradually withdrawn into the enlarging abdominal cavity, and the supplemental pouch of quasi-peritoneum formed within the hyaline substance of the cord becomes aborted, and finally obliterated. From this time the umbilical opening is occupied by the enlarging umbilical arteries and vein with the gradually dwindling urachus.

Thus the navel must be considered as a sort of double cicatrix, the upper portion of which is formed by the vessels of the umbilical vesicle, and the lower division, which becomes later on the chief constituent of the navel, is occupied by the placental vessels and urachus. Between these lies the pouch formed in the substance of the cord for the primary development of the folds of the small intestine. This arrangement you will find well demonstrated in a specimen of an ovum in the collection of Dr. Sharpey (published in Miller's "Physiology," Baly's translation, 1843, second edition, vol. ii., pl. iii. and iv.). If, however, the complete development of the infant is from any cause retarded or rendered irregular, this pouch of the navel-string may be to some extent persistent at the time of birth, just as the canal of Nuck may be in the groin.

In examining the bodies of prematurely stillborn infants, I have found this pouch extending into the navel-string to the extent of half an inch. By the first struggles of the child, or by the pressure made upon its abdomen in parturition, the bowel may at once appear as a protrusion within the cord, constituting the so-called *hernia of the umbilical cord*. In such cases that portion of the cord which covers the hernial sac does not shrivel like the rest, but assumes, in discharge of its continued functions, more or less of the appearance of the surrounding skin. In cases where the pouch remains, but no actual rupture is present, the portion of navel-string which invests it becomes enfolded in the cicatrix, which is wrinkled and inverted by the contraction of the umbilical vein and arteries, so as to form a larger, more puckered, and deeper depression than normal. This may afterwards become protruded and distended under the pressure of the abdominal viscera, and form that kind of umbilical hernia which appears directly or soon after birth. In all these cases the membrane which is technically called the peritoneal sac at this point is exceedingly attenuated, and in some instances hardly demonstrable. It is an imperfect formation, and for practical purposes may be esteemed non-existent. It is so adherent at the edges of the opening to the aponeurotic structures that it allows of no dragging or displacement of the surrounding portion of serous membrane, and the tension to which it is speedily subjected spreads it out into a very open mesh of tissue, having but slight resisting power in itself. I have seen several cases in which the tube of the urachus also remained pervious after birth, and exuded urine (sometimes in considerable quantities) in the exertion of crying or micturition.

Practical accoucheurs usually warn the student against tying the navel-string too close to the body of the child, for fear of including in its grasp a loop of intestine which might be present in a hernia of the umbilical cord. But it seems to me that the opposite habit of extreme caution in this respect leads to the application of the string at such a distance from the body that a portion of the root of the cord containing a tubular pouch may still remain, and leave a weakness at the part predisposing to a future protrusion. Thus it is not closed, as it might easily be at this time, by placing the ligature closer up to the abdominal wall. Of course care should be taken in doing this that any intestinal contents should be pressed out of the cord; and this is best done by pressure with the fingers, and then giving the cord a gentle twist on its own axis before applying the string.

The formation of so-called umbilical hernia later in life in adults who have a tendency to corpulency usually differs considerably in its pathology from that of the infant. A close examination will usually show that the opening into the abdominal cavity is placed in the linea alba above, below or to one side of the real navel. As the tumour increases in size, and the skin is distended over it, the navel becomes drawn over it so as to appear to form its point of departure. In the larger cases the bulk of the tumour is found to be below this point, and the part where the edge of the hernial opening presses most acutely and forcibly upon the contents, and most commonly strangulates them, is at the lower border. The weight of the protrusion itself increases this effect, and tends to bring the tumour lower on the abdomen as it increases in size.

The linea alba is perforated more or less regularly by branches of deep and superior epigastric vessels and twigs of nerve forming the terminal distribution of the intercostals. As the individual grows fatter, the adipose tissue is apt to form in masses extending along these vessels from the subperitoneal fat. The tendinous apertures lodging them are also under these circumstances frayed out by over-distension, and gradually become enlarged. If at this time, by illness or sudden alteration of habits, as after parturition in females, the fat is absorbed or the tension relaxed, a protrusion of omentum behind the peritoneum pushes forwards that attenuated membrane, and forms the sac of an incipient rupture, which may speedily increase under the effects of a bronchitic cough or the straining of constipation or defæcation. As a rule, while the umbilical rupture of children hardly ever contains omentum (which is at this age very scanty and imperfectly formed), but usually includes small intestine only, the rupture of adults almost always contains omentum, sometimes much thickened and hypertrophied, and may contain a portion of colon instead of, or in addition to, small intestine. In very large cases even a portion of the pylorus and duodenum may

(a) Delivered at King's College Hospital on October 10, 1873.

be involved, giving rise to distressing irritation of the stomach. I have seen many hernial protrusions, both in the child and in the adult, in the linea alba above the umbilicus, somewhat about midway between it and the xiphoid cartilage. At first, these are always formed of lobules of subperitoneal fat, sometimes constituting quite a fatty tumour, which has a distinct impulse on coughing, and can be pressed inwards to a certain extent, but never completely reduced. In after years these may certainly become developed into real herniæ, with a peritoneal sac containing bowel. Usually, with a little care in treatment, this may be prevented, since the opening is placed above the reach, as it were, of the small intestine, and is protected by the apposition of the liver and its round ligament.

The *diagnosis* of the umbilical herniæ of children is seldom difficult. Carcinomatous or other growths from the site of the navel-string may occasionally appear in early infancy, and receive a doubtful impulse in coughing. Their consistency, unyielding bulk, unvarying nature, and steady growth, will usually suffice to distinguish them. Chronic peritoneal abscesses may cause more difficulty. These make their way to the umbilicus, guided by the superior ligament of the bladder or round ligament of the liver, and in their earlier stages closely resemble umbilical rupture. They yield to pressure, and may be entirely pressed back into the abdominal cavity, and give a distinct cough-impulse. The previous history of abdominal inflammation or enlarged glands, the constitutional hectic, and afterwards a fluctuation felt in the tumour, will sufficiently distinguish them even before their final discharge of pus. An imperfectly closed urachus may also simulate umbilical rupture. Cases have been known in which small urinary calculi have been thus voided.

The herniæ of adults are most likely to be mistaken for subcutaneous fatty tumours; and, indeed, many of these supposed ruptures consist really of a fatty growth from the subperitoneal tissues protruding through the apertures before described. Though sometimes yielding a sort of impulse, and so simulating a real omental hernia, they are usually found destitute of a true cough-impulse, by reason of adhesions at the tendinous opening and other consolidating changes. *Hydatid cysts* may also be found in this situation.

The *treatment* of umbilical rupture in the child is fortunately very powerfully aided by the persistent tendency to a more perfect development which prevails after as before birth. If observed early and treated skilfully, these protrusions may usually be cured by the second or third year, and frequently in much less time. The protrusions of fatty lobules from the subperitoneal fat, however, are much more slow to disappear both in the child and adult. In these the chief care should be directed to prevent a rupture from succeeding them if the fat becomes absorbed, which may result from the intervention of some acute disease or anything causing the general removal of adipose tissue. Continued pressure will also accomplish this result, if carefully applied and maintained. In some cases I have removed these growths with the knife with success, and without the occurrence of peritoneal mischief. It should be borne in mind, in dealing with any kind of tumour about the linea alba, that it may be deeply and closely connected with the peritoneum, and may arise from pathological changes occurring in these fatty peritoneal outgrowths.

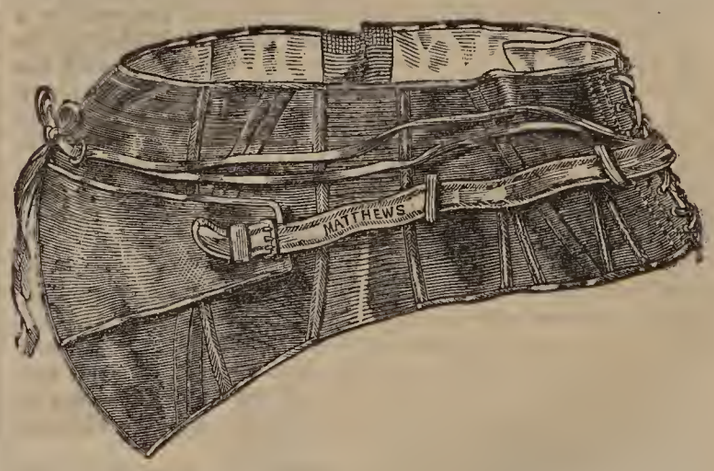
The readiest way of applying pressure to the umbilical ruptures of children is by means of common strapping placed over a flat piece of lead or pewter, or, what is usually more at hand, a penny-piece. This should be first enclosed in folds of strapping applied with the sticking side outermost, so as to adhere to the skin over the tumour. Over this broad straps of soap or adhesive plaster should be placed across the entire abdominal surface, and surmounted by a belt or bandage. This, though a valuable temporary expedient, can with difficulty be long maintained, on account of the constant trouble of changing, the liability to soreness and irritation of the skin, and a certain degree of skill which is demanded for its proper application. Very cheap and efficient appliances are now made by the surgical apparatus manufacturer, consisting of a broad belt of indiarubber, on the under surface of which is placed a pad for application to the protrusion. Some of these, however, I must warn you, are based on false principles, and, if they do anything at all, are apt to do injury instead of good. The difficulty experienced by the maker is to make the pad keep its place, and in order to effect this a convex or conical protuberance is placed within the hernial aperture like a cork in a bottle. Now, if this is effective in maintaining its position, its action necessarily is to accomplish a dilatation of the yielding borders of the ring, and thus to perpetuate and increase the rupture. If inefficient, it slips out of the aperture, and affords no resistance to the escape of the bowel; the only result being a dangerously false security.

Some years ago I devised a pad, consisting of an indiarubber ring adapted to the size and shape of the edges of the opening, which should press only on the edges, with the same tendency to close them as by pressure with the fingers in reducing the protrusion. The central aperture is covered over by a tense drum-like layer of indiarubber, which affords resistance to protrusion indeed, but produces no invaginating pressure. A figure of this umbilical pad is given in my work "On Rupture," and also in the last edition of "Druitt's Vade-Mecum." Latterly, Messrs. Matthews have modified this pad by an ingenious arrangement of air-pressure in the apparatus I show you. The ring pad itself is made into an indiarubber air-cushion, with a small aperture of communication into a globular air-chamber made of a thinner substance of the same material, and placed within the opening of the ring. Under ordinary pressure the projecting outline of the ring presses only upon the edges of the hernial opening, but under sudden succussion—as by a cough or laugh—some of the air is forced into the central globular cushion, and protrudes it, so as to meet the advancing rupture, and force

it back by an elastic rebound resulting from the same impulse which tends to force out the rupture. For certain cases this is decidedly an improvement. All this is aided by the elastic reaction, also, of the indiarubber belt which maintains the pad in its place. This should be broad enough to keep well in position, and may advantageously be fastened by loops to the dress of the child to prevent its shifting round, as it is apt to do in its fidgety movements. A free use of violet powder or starch will aid in preventing chafing.

In cases of fatty peritoneal growths a perfectly hard and flat pressure, as by a plate of metal or ivory, is the most likely to do good and cause the absorption of the tumour.

In umbilical rupture in the corpulent adult less hope can be entertained of a cure, but much comfort can be insured by a proper belt. This should be broad enough to cover the abdomen almost entirely, with elastic material at the sides, a lace up the



back, and kept from rucking up by whalebone ribs. Additional power may be obtained by a strap over the lower part of the protrusion, buckling at the side, and adapted to counteract the tendency to increase downwards and forwards in these cases. If the hernia be entirely reducible with comfort to the patient, an umbilical pad like those just described will be sufficient. But in many instances either a portion of the omentum or bowel remains permanently irreducible, or, if reduced, makes the patient feel so uneasy that it is impossible to maintain it in this situation. In such cases a concave or hollow pad is indispensable. It should have a raised, rounded rim or border of some soft and elastic material, as indiarubber, and should be

based on and supported by a shield of thin copper or other metal of the same shape to protect the protruding mass from accidental blows or injury from the clothing. In large cases, in corpulent people with pendulous bellies, the whole belt should be maintained in place by shoulder-straps, or even a perineal band or thigh-slop may be required.

The limits of this lecture, gentlemen, will not allow me to revert to operations which are sometimes required for the relief of umbilical ruptures, which I must accordingly reserve for some future opportunity.

ORIGINAL COMMUNICATIONS.

THE PHYSIOLOGY AND CLINICAL USE OF THE SPHYGMOGRAPH.

By F. A. MAHOMED,
Resident Medical Officer of the London Fever Hospital.

No. XII.

(*For Photo-lithographic Plate, vide Medical Times and Gazette, November* 1, 1873.)

The Pulse in Typhoid Fever: the Respiratory Undulation—Typhoid with Hæmorrhage—Typhoid with Pneumonia—Acute Rheumatism with Pericarditis—Value of the Sphygmograph in Acute Disease.

Some examples of the pulse in typhus were discussed in the preceding paper, though the tracings reproduced in the plate do not convey any idea of the extremely bad form generally assumed by the pulse in this disease; for if the wild delirium of a severe case can be sufficiently soothed or restrained for a tracing to be obtained, yet later on the running, scarcely perceptible quiver, which frequently is all that occurs in the arteries of such a patient—the indication of the exhausted, fluttering heart,—cannot be traced by the sphygmograph, on account of the constant subsultus and restless involuntary movements which accompany the exhaustion that follows. Those tracings, therefore, which have been described, bad as they are, only represent the pulse in cases which have either been mild throughout, or else where death has ensued early in the disease from a heart previously feeble that has utterly broken down under the strain. The same conditions do not occur in enteric fever: in these cases from the beginning to the end a tracing can generally be obtained; the patient is more manageable, the fever much less intense. Indeed, in a mild case the disease will run its course without the pulse ever becoming *fully dierotie;* and in severe cases only does it become *hyperdierotic.* Those pulses which to the finger feel most dicrotic are merely *fully dierotie* pulses, with a large dicrotic wave, such as in Fig. 7, Pl. x. This pulse felt very dicrotic to the finger, although the so-called aortic notch does not dip below the line. In the most extreme forms of hyperdicrotism, such as in Fig. 7, Pl. ix., the double-beat cannot be distinguished by the finger. This form of pulse was probably described as a soft collapsing pulse by the older writers, and its true physiological meaning never appreciated. The finger, however, educated by the assistance of the sphygmograph, readily learns to distinguish it.

The form of pulse in enteric fever varies with the complications that may exist; it may become full, hard, and non-dicrotic when albuminuria coexists. This character will be considered hereafter. It may be undulating and hyperdicrotic from lung complication, or it may become extremely rapid and flickering after severe hæmorrhage. Deaths do not usually occur in this class of cases from failure of the heart, except in some instances where pneumonia has supervened and impressed its own characters on the disease.

The first case illustrated in Pl. x. is that of a lad, aged 16, a baker, who, like all of his trade when suffering from enteric fever, had an extremely severe attack, narrowly escaping death. He was admitted into the London Fever Hospital on July 25, 1873, having already kept his bed ten days. As he admits feeling ill for four days previous to this, he was at least in the third week of his fever, probably near the end of it. He had been much neglected, and when admitted was in a very exhausted condition, presenting typically what is known as the "typhoid state"—lying low in the bed, with a dusky, heavy countenance; he had to be roused before an answer could be obtained; he spoke with difficulty; his mouth was constantly open; teeth, gums, and lips covered with sordes; tongue dry, brown, and hard; breathing rapid and rather laboured; no cough or expectoration; abdomen full, soft, and tender, with much gurgling in right iliac fossa, and one or two rose-coloured spots. There was impaired resonance over both apices, before and behind, with coarse breathing, and occasional rhonchus; the urine was albuminous; his temperature was 105° Fahr. on the evening of admission, pulse 120, and respirations 36 per minute. All night he was very restless, with wandering delirium; he passed characteristic typhoid stools, but had not severe diarrhœa. His morning temperature was 104·5°, pulse 112, and respirations 32; while on the evening of the same day his temperature was 105·3°, pulse 120, and respirations 32. On this day the tracing reproduced in Fig. 1, Pl. x., was obtained; it is one from which the worst prognosis would be given, and recovery deemed impossible. It indicates an overtaxed heart: percussion has disappeared; the upstroke is short and rather sloping; the apex is perfectly rounded and very broad; the heart is contracting laboriously, the commencement being gradual instead of sudden; the systole is prolonged; and the tidal wave is consequently unduly sustained. The heart is not, however, actually feeble, for the pulse requires a pressure of four ounces to develope it to the extent seen in the plate. It is evidently labouring to overcome obstruction in front; the pressure in the vessels is comparatively high for fever—a condition that is always coincident with albuminuria, and also, though to a less extent, with pneumonia, both of which conditions are here present. This is probably the reason of the pulse being comparatively slow—viz., 112 per minute. The heart's contraction being thus slow and laboured, and the tension high, the dicrotic wave is correspondingly ill-developed. The degree of dicrotism also varies from one pulsation to another, sometimes being only *fully*, at others *hyper-dicrotic.* This is accounted for by the blood pressure varying with the movements of respiration. The same cause explains the different degrees of suddenness of the heart's contraction, some of the upstrokes being more abrupt and vertical than others, and the apices of these are not quite so round. When the tension is lowest, then the contraction is most sudden, and the dicrotism most marked. Einbrodt has proved experimentally that variations in the arterial tension are produced by the respiratory movements. He found the lowest tension to be coincident with a period immediately succeeding the commencement of inspiration; after that the tension gradually increases till expiration commences, when it continues to increase for a short time, and then during the remainder of expiration begins to fall, which it continues to do till after the commencement of inspiration, when the minimum tension is again reached. The increase of dicrotism coincidently with decrease of tension is best seen in Fig. 15, Pl. x., in which the respiratory undulation is particularly well marked. It is but imperfectly developed in the present instance.

Under the influence of free stimulation, good nourishment, and jacket poultices, the lad very rapidly improved. Two days afterwards his pulse had greatly regained power; his temperature had fallen a degree or more, being 103·5° in the morning, and 103·8° in the evening; his pneumonia also was relieved, the dulness at the apices being diminished and his respiratory murmur almost normal all over the chest. That rare eruption, the "*taches bleuâtres*" of French authors, appeared on this day. There were several patches of these blue spots on the abdomen, looking like small ecchymoses, or still more like half-wiped-off smears of ink. These spots are stated by Murchison and Trousseau to occur in mild cases. This, however, does not appear to be the opinion of all authorities; it certainly was not true in the present instance. The pulse had now the form represented in Fig. 2, Pl. x.: the percussion is good, the upstroke vertical and high, while, though hyperdicrotic, the dicrotism is not excessive; the blood-pressure was rather high, as the tidal wave is too much sustained, giving a tendency to a square summit; and the pressure employed was considerable —*i.e.*, four ounces.

On the following day (July 29) the pulse showed a diminution of power (*vide* Fig. 3, Pl. x.): the upstroke is a little shorter, the apex less pointed, and the pressure employed rather lighter. The dicrotic wave appears more developed, probably because the tension is less. The temperature was higher on this day; on the next it had risen still further, being 104·4° in the morning and 105·2° in the evening. His breathing was again difficult; coarse breathing and rhonchus on deep inspiration were audible all over the chest. There

was a crackling sensation imparted to the hand on palpation. His pulse was much worse; the tracing is reproduced in Fig. 4, Pl. x.—a great undulation in the respiratory line is visible, while the dicrotism is much increased. Fig. 5, Pl. x., was obtained on August 1, when the temperature had fallen to 102·8° in the morning and 104·2° in the evening, and his breathing was very much improved. He was, however, still very ill, having constant delirium and great restlessness. The tracing shows an over-taxed heart, the tops often losing their sharpness. Fig. 6, Pl. x., obtained on August 3, shows a great improvement, though his temperature, which had previously fallen, again suffered an exacerbation, reaching 103·4° in the morning and 104° in the evening. Some undulation in the respiratory line is again visible. Figs. 7 and 8, Pl. x., obtained on August 4 and 11 respectively, show the gradual return to the convalescent state; the albumen had disappeared from the urine when the last of them was taken. He still remained, however, in a condition of partial dementia till August 22. During the whole of this time his temperature kept up to about 99°, varying a little above and below this point from day to day. The pulse during the same period felt strikingly dicrotic to the finger. It was attempted to alter this character by digitalis, but without success. This series of tracings is characterised throughout by the high pressure required to develope the pulse. This would be sufficiently accounted for by the presence of albuminuria and pneumonia, were it not that when convalescence had commenced, as in Fig. 8, Pl. x., the albuminuria and pneumonia both having gone, the same high pressure was required—*i.e.*, four ounces.

The next four tracings were obtained from a case in which severe hæmorrhage from the bowel occurred.

C. M., aged 22, was admitted into Guy's Hospital, December 15, 1871. On that day he appeared to be doing well, and his fever to be of a mild form; his temperature in the evening was only 102·8°, pulse 94, and respirations 28. Fig. 9, Pl. x., represents his pulse on that day: it is but slightly dicrotic; the only noteworthy feature about it is the considerable pressure required to develope it—viz., five ounces. It is possible this character may have had some connexion with the hæmorrhage which subsequently occurred. On the following morning his condition appeared unchanged, his temperature being 102·3°, pulse 94, and respirations 28. The pulse-tracing on this day, Fig. 10, Pl. x., showed no change from the preceding one, save that it was a trifle larger. Before night, however, very profuse hæmorrhage from the bowel occurred, which left him blanched, unconscious, and apparently moribund; his pulse being barely perceptible to the finger, as a slight running movement which could not be counted. The sphygmograph gave the tracing reproduced in Fig. 11, Pl. x.—a feeble, small upstroke, with a comparatively large dicrotic wave. With every movement of inspiration a great diminution of tension or blood-pressure occurred, such as is seen in the middle of the tracing. The pressure now employed was even greater than before—viz., six ounces,—but the artery appeared contracted, and a considerable pressure was required to invade the contracted, and therefore thickened, wall sufficiently to obtain a tracing. Under the influence of brandy and opium he recovered considerably from this condition of exhaustion, and on the following morning the tracing obtained (Fig. 12, Pl. x.) had very greatly improved: the arterial contraction had relaxed, and it was now somewhat similar to that obtained before the hæmorrhage; the dicrotism, however, had increased, and the tension varied with the respiratory movements; the pressure, also, was diminished to three ounces. Unfortunately, with the relaxation of the arteries the hæmorrhage returned, and death ensued the same evening.

The next case illustrated in the plate is one of enteric fever complicated by double pneumonia: a case in which the pulse assumed its worst form—one from which there is no hope of recovery. J. H., a woman aged 25, was admitted into the London Fever Hospital on May 5, 1873. She had been a hard drinker, and had lived a dissolute life. On admission she had nearly completed the third week of her fever. She to be appeared extremely ill; her lips and gums were covered with sordes, cheeks flushed (especially the right one), with hot and dry skin; slight jaundice and parched tongue, with thin yellow fur. Her abdomen was full, soft, and tender, covered with a profuse eruption of rose spots. There was slight dulness, with small crepitation at the base of the right lung, and impaired resonance, with somewhat tubular breathing and increased vocal resonance at the apex of the same side. The sputa were rusty and tenacious; the temperature being 104° both in the morning and evening. With this general condition her pulse was extremely hyperdicrotic (Fig. 13, Pl. x.) and rather soft, only requiring one ounce and a half of pressure; percussion, however, was good. There was no undulation in the respiratory line; the breathing was not at this time distressed. On the following day she was much worse; laid low in the bed, with a dusky countenance and thick speech. Sordes were more profuse, tongue chapped, lips tremulous, unable to expectorate the tenacious pneumonic sputa. In the morning her temperature was 104·4°, pulse 176, respirations 44. Her breathing had now become rapid and difficult; moist sounds were audible all over both lungs, there was dulness at both bases, and diminished resonance over the whole chest. In the evening her temperature had fallen to 102·8°; her pulse was intermediate between the forms reproduced in Figs. 13 and 14. The dicrotism had diminished, but was more than is visible in Fig. 14, while the pressure required was still only one ounce and a half. The undulation in the respiratory line was now well marked. On the day succeeding this her condition was even worse: her breathing was terribly distressed, and she was unable to protrude her tongue; her temperature was falling rapidly. The pulse-tracing (Fig. 14, Pl. x.) has altered materially; it indicates obstruction to the circulation. The dicrotism is much diminished, while the pressure required has greatly increased, four ounces being now employed.(a) The respiratory undulation is well marked. On the following day she was moribund, being unconscious, speechless, and sleepless, with paralysis of the bladder, the heart having completely failed to overcome the increased strain thrown upon it. Her temperature had fallen to 98·2°. The tracing obtained on this day was of a hopeless character; it is reproduced in Fig. 15, Pl. x. The blood-tension is constantly varying with the respiratory movements, as does also the dicrotism; the upstrokes are sloping, and the heart evidently failing. In this tracing, as mentioned above, the coincidence of the greatest dicrotism with the lowest tension is well marked. She died on the evening of this day. An autopsy revealed the usual intestinal lesions accompanying enteric fever and general pneumonia of both lungs, with hepatisation of both bases and right apex.

In acute rheumatism the pulse assumes a variety of forms, but in each case it takes its character from the complication which exists, or from the form assumed by the fever. In a simple case of acute rheumatism, the pulse is most frequently non-dicrotic, and of the sthenic variety; but in a large number of cases where the fever either occurs in a delicate subject, is much prolonged, very intense, or complicated by bronchitis or pneumonia, the pulse may assume any degree of dicrotism. Indeed, this disease well deserves a plate devoted solely to it, but as it is inconvenient to do this, one form of pulse which is peculiar to it must be illustrated here—it is the pulse produced by pericarditis, of which the last series in the plate affords well-marked examples.

W. H., a lad aged 18, was admitted into the Highgate Infirmary on August 28, 1872, suffering from a slight attack of acute rheumatism; from this he became convalescent, but on September 18 he had a sudden and severe relapse. The swelling and pain in the joints became more general. There was profuse sweating, with severe pain over the sternum, and inability to take a deep breath. There was a loud to-and-fro pericardial rub over the heart, the action of which was rapid. The breathing was shallow, and the respiratory murmur coarse. In the evening, when the tracing was obtained, his temperature was 103·8°, pulse 160, and respirations 50 per minute. His pulse is represented in Fig. 16, Pl. x. It is the pulse always produced by pericarditis; its characters are very peculiar, the most so being the absence of dicrotism. The heart is acting in an extremely excited manner; the impulse is forcible and very sudden, as indicated by the well-developed percussion-wave. The length of systole appears prolonged, the tidal wave being sustained. Both of these features are accounted for by the excited action of the heart when its envelope is inflamed, but why the dicrotic wave should be absent it is not so easy to say: a rapid and forcible action of the heart is generally found to increase dicrotism, except under certain conditions of high pressure and sthenic inflammation, but even in these cases the dicrotic wave is still present, though but slightly developed; it retains, moreover,

(a) In the plate the pressure is erroneously marked as one ounce and a half; it should have been four ounces.

its usual position in the downstroke of the tracing; but in the pulse of pericarditis it is altogether absent, and the arteries during diastole appear empty. The tracing resembles more than anything that of aortic regurgitation, but there is no reason to think that the aortic valves act imperfectly in these cases; possibly the greatly prolonged systole may account for it.

To return to the case, however. On the day following that on which this tracing was obtained (*i.e.*, on September 19), effusion into the pericardium appears to have taken place. His lips and extremities were dusky, finger-nails blue; he complained of numbness and loss of power in the right arm; the veins generally were distended; he suffered from vertigo; the area of cardiac dulness was increased, extending to top of sternum; he had some cough, with scanty rusty sputa. His morning temperature was 104·6°, pulse 142, and respirations 36. His pulse-tracing (Fig. 17, Pl. x.) had improved; the impulse was less excited and forcible, the percussion-wave being greatly diminished. The artery, moreover, does not become so completely empty during diastole, though there is not a vestige of the dicrotic wave. On the following day (September 20) his pericarditis was subsiding, and his breathing easier, though the least movement caused him to become extremely blue and almost asphyxiated. The pericardial rub was diminished, while the area of cardiac dulness was still much increased. There was loud rhonchus, coarse breathing, and impaired resonance all over the chest; his temperature in the morning being 101·2°, pulse 130, and respirations 40. The pulse-tracing (Fig. 18, Pl. x.) had much improved, being smaller and less excited, while the dicrotic wave had reappeared. Three days afterwards, having steadily and rapidly improved, his pulse became normal (Fig. 19, Pl. x.), though his temperature still remained up, being 100·4° in the morning, with pulse of 120, and respirations 56. He still had a good deal of lung-trouble, but his pulse was of a sthenic nature.

The following day he again relapsed, suffering this time from pleurisy and pneumonia. His pulse did not return to the non-dicrotic pericardial form, but became extremely hyper-dicrotic; and later on his condition was almost hopeless, his breathing becoming as rapid as 92 per minute, and the respiratory undulation was strikingly developed in the pulse. He, however, eventually recovered from his fever, though a mitral systolic bruit remained permanent.

The value of the sphygmograph in fevers and other acute diseases may be enunciated thus:—As a means of scientific clinical observation and research it affords great assistance, and is full of interest. It gauges more accurately than can be done by any other means the power of the heart and the mode of its contraction; it warns us of its failure. It is the chief, if not the only, indication of the vascular conditions of high or low tension in the arteries. It distinguishes between the sthenic and asthenic forms of fever. It often affords valuable indications for treatment, especially in the administration of stimulants. Lastly, it is of some value in prognosis.

(*To be continued.*)

ON DIPHTHERIA: WITH ESPECIAL REFERENCE TO A RECENT EPIDEMIC IN ITALY.

By ROBERT HUNTER SEMPLE, M.D., M.R.C.P.L.,
Physician to the Bloomsbury Dispensary.

(*Continued from page* 547.)

BEFORE continuing my remarks on the late epidemic of diphtheria in Italy, it is necessary again to allude, although briefly, to the essential characters of that disease, and to the views which I entertain as to its nature. Diphtheria is essentially characterised by the presence of a skin or pellicle (διφθερα), not necessarily occupying the fauces or the air-passages, but very often found in those parts—in fact, it may appear in the nose, in the pharynx, in the Eustachian tube, in the vulva of females, on the conjunctiva, and even on other parts of the mucous membrane, or on the skin. In order to constitute the disease diphtheria, the pellicle must be also of a peculiar character, such as has been frequently described, and is now, or ought to be, well known.

When I am asked, therefore, whether diphtheria is the same disease as croup, I answer—Decidedly not, because, however vaguely the latter name may have been used, nobody pretends that diphtheria affecting the nose or the pharynx or the cutaneous surface of the body, is croup. It should also be mentioned that the work "croup" (which etymologically has no signification at all) has been employed to designate sometimes an ordinary inflammation of the larynx and trachea, sometimes a specific affection characterised by the presence of a distinct false membrane, and sometimes a spasmodic affection due to excentric causes; and, it may be added, it has also been used to denote the stridulous breathing which may be due to tumours in the larynx or trachea. It would, therefore, be equally absurd to describe croup, in this wide sense, as synonymous with diphtheria, which, as I have just remarked, is characteristically distinguished by the presence of a false membrane. But I have no hesitation in repeating my conviction that croup (so-called) with pseudo-membranous exudation is the same disease as diphtheria attacking the air-passages. In this sense, and in this alone, croup and diphtheria are synonymous terms, but I think it would be far better if the former word were removed altogether from scientific nomenclature.

As an epidemic malady diphtheria has not very lately prevailed in our own country, although sporadically it is occasionally, and indeed frequently, observed. In Italy, however, it has very recently appeared as a most destructive scourge, especially in Florence and the country round that city, and it is very interesting to observe that its features have been precisely similar to those of previous epidemics, the dates and localities of some of which I have specified in a former communication.(a)

It appears that in the year 1863 diphtheria, together with scarlatina and measles, prevailed amongst rich and poor patients alike in Florence and its vicinity, and more in the suburbs and the surrounding country than in the city itself. After that year the character of the disease was more mild, and its attacks became more infrequent, and its epidemic nature was dissipated by its taking a centrifugal course into districts more and more remote from Florence. But although all traces of the disease as an epidemic were lost, there remained in wounds, especially on the surface of the body, a certain disposition to assume the diphtheritic form, which resisted all attempts at cicatrisation: and sometimes the sores spread so much, both in surface and in depth, as to carry off the patient by the injury done to the tissues.

Matters thus went on until 1867, when, together with measles, hooping-cough, and a few cases of scarlatina, a new attack of diphtheria broke out in the country district to the east of the city, Varlungo being especially afflicted by the scourge.

With regard to the exciting causes of the disease, and the telluric influences which preceded or favoured its outbreak, no positive information could be gathered. It attained its maximum in the months between July and the succeeding December and January, but at the approach of spring its intensity diminished, and it gradually disappeared. It showed, as usual, a predilection for infants, and in some respects for the male sex, sometimes attacking young men from eighteen to twenty years old. It entered the hut of the beggar as well as the house of the opulent farmer, whether living in a low and dull situation, or in a high, airy, and open one.

The adynamic and insidious onset of the disease, so distinctly noted by Bretonneau and by all other accurate observers, was equally remarkable in the Italian epidemic, for it generally began, without any previous illness, with a feeling of uneasiness about the fauces, the pain being sometimes slight, and sometimes becoming severe as the disease advanced. At first the fever was not intense except in the very severe cases, in which the heat of the skin was much raised; the pulse became rapidly frequent and weak, and the patient appeared feeble and depressed, as if he had been suffering for several days from fever of an adynamic tendency.

Here I would pause for a moment to point out how characteristically different is the onset of this disease from that of the malady usually called croup, but which is generally nothing more nor less than an acute or chronic inflammation of the larynx and trachea, is successfully treated by ordinary depressing remedies, and in which, I will add, there is no false membrane. In this malady (laryngo-tracheitis) the early symptoms are very severe, but the danger is by no means proportionate, and, in fact, it may almost be said that the symptoms and the danger are in the inverse proportion to one another.

In diphtheria, on the contrary, the early symptoms are very slight in most cases, and, indeed, are sometimes so indistinct

(a) *See Medical Times and Gazette*, November 15, p. 546.

as almost to escape notice altogether; but as the disease advances, the respiration becomes embarrassed, the voice assumes a naso-guttural tone, and the tongue becomes covered with a whitish-yellow fur. The cervical glands soon become swollen, but without any reddening of the superposed skin. As in former epidemics, so it was observed in the Italian one, that the patients often became rapidly worse—they were cold and pale, with fluttering pulse, the mind sometimes remaining calm, and they generally died from sudden collapse from the sixth to the ninth day. Occasionally the disease was observed to spread to the bronchial tubes, and sometimes, though not very often, it was seen to invade the nostrils, without leading, however, from this circumstance alone, to a fatal result. It should be mentioned, in explanation, that Bretonneau and some of his followers regarded the extension of diphtheria to the nostrils as one of the fatal indications of the disease.

Local paralysis of the velum palati was not infrequently observed in the Italian epidemic, but more commonly, although at a later period, the lower extremities were paralysed, presenting a condition similar to what is called locomotor ataxy. This paralysis was not severe in proportion to the gravity of the original disease, but it sometimes supervened upon apparently slight attacks. In accordance, too, with former experience, it was found that the paralysis was almost always partial and was not fatal—for the most part disappearing spontaneously, and not lasting more than three months.

This epidemic of 1867 gradually disappeared; but, as in the former one of 1863, there remained a disposition in wounded surfaces to become covered with diphtheritic exudations, as above mentioned.

In 1869 diphtheria committed great ravages in the province of Vicenza, and some cases were seen in Florence, chiefly among children at the breast. In the following year a few isolated cases occurred of a sporadic character, but in 1871 the disease again assumed an epidemic form.

Dr. Leopoldo Nesti,(b) from whom much of the above information is derived, was unable to trace exactly the primary development of this most recent outbreak, owing to the want of sufficient documentary evidence; but he has collected as many particulars as possible from the returns of mortality presented to the Civil Government. From these documents it appears that in the last two months of 1870 four deaths from diphtheria were reported, one of them being the case of a youth of good family. Five cases were reported in January, 1871, four in February, and ten in March, some of the latter being proved to have been cases of transmission of the disease. From this period the reports of deaths from diphtheria went on continually augmenting; fourteen deaths occurred in the month of April, twenty-two in May, and thirty-two in June. Dr. Nesti ceases here to report the exact numbers of the cases returned, but he states generally that diphtheria subsequently diffused itself irregularly throughout the various medical districts into which the city of Florence is divided, attacking that of Piazza dell' Independenza, to pass with greater severity to those of Pellegrino and St. Salvi, in which last he observed and collected the numerous cases on which his narrative is founded.

Dr. Nesti goes on to remark that all the districts of the city, with few exceptions, either at early or later periods, have given a large tribute of innocent victims to this indomitable and ferocious disease (*questo male indomito e feroce*), which, he says, "daily saddens our families, and which, unless removed by Heaven, threatens to last with a similar tendency for a long time."

Before proceeding to notice some other particulars relating to the progress of the epidemic and its peculiar features as lately observed in Italy, I may mention that I have just received a letter from Dr. Wilson, who is attached to the British Legation at Florence, and who seems to indicate that the malady (of which he has himself seen many cases) is now again on the decline.

(*To be continued.*)

Physic and Beer.—It transpired in the hearing of a case in the Court of Exchequer on Saturday last, that large quantities of liquorice were manufactured in this country under the Spanish brands, and that amongst the purposes to which it was applied were those of making black draughts and colouring beer.

(b) "Della Difterite nella Città e Contorno di Firenze dal 1863 al 1872," per L. Nesti. Firenze, 1873.

REPORTS OF HOSPITAL PRACTICE.

IN

MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

OPERATION FOR REMOVAL OF THE FEMALE BREAST BY MEANS OF INDIARUBBER LIGATURES.

(By Sir HENRY THOMPSON.)

On Friday, November 21, Sir Henry Thompson performed an operation upon the female breast, which, so far as we are aware, is perfectly new to surgical practice in England. Previous to the entrance of the patient to the theatre, Sir Henry stated that the plan he was about to adopt had been brought recently under his notice during a visit to Vienna by Professor Dittel. An accident, as it were, suggested the treatment to Dittel, who now for some time has employed it in over 200 cases, such as of tumours of the breast, in removing the testes and even limbs, and in the cure of fistula in ano. Having been called upon to see a young girl dying from meningitis, the following account of the case was given him:—The patient, who had been constantly reproved by her step-mother on account of the untidy state of her hair, was advised some weeks before her death to get a tightly-fitting net for her head, and to wear it night and day. This she did till the last, when it was found that the elastic band of the net had cut its way through the scalp and cranium, and was resting on the meninges of the brain, fatal inflammation of which it had set up.

The immense power for effecting the solution not only of the soft tissues of the body, but even of bone, having, by the constantly contracting pressure of an elastic band, been thus so remarkably proved, Professor Dittel resolved to attempt in certain cases to substitute this power for the knife in surgical operations.

The application of the treatment to the mammary gland by Sir Henry Thompson we will now describe:—The patient, a woman of about fifty-three years of age, had for ten years been conscious of a tumour in the right mamma. When first noticed it was seated near the nipple, below and to its outer side, and was of the size of a walnut. As it was discovered about the time of her confinement with her last child, which died soon after its birth, she was led to regard the tumour as a "distended milk-duct." It has gone on increasing, however, though very slowly, and about eight weeks ago the skin covering the tumour commenced to ulcerate. At the time of the operation the histological characters of the tumour were doubtful. It was of the size of a large orange, ulcerated on the surface, somewhat pendulous, and freely movable upon the subjacent tissue. The patient was a robust and healthy-looking woman. Chloroform having been administered, Sir Henry drew the mamma forward from off the pectoral muscle, and then, with a very long, strong, and slightly curved Liston's needle, transfixed the submammary tissues. Through the eye, near the point of the needle, a long piece of very elastic indiarubber tubing, about the thickness of stout whipcord, together with a long silk ligature, was passed. The elastic ligature was then divided, and the needle withdrawn. Each half of the elastic ligature was tied very tightly, so as to embrace one-half the mamma, inclusive of the skin. In fastening the elastic ligature a piece of silk ligature was placed at right angles to the elastic between the skin and the knot, and while the single knot was tightly drawn, the silk was tied around it by an assistant to prevent it slipping. A double knot was then made, and this was secured by again tying the silk around the elastic.

The long silk ligature which had been passed with the elastic tubing through the submammary tissue was then removed. The purpose of passing this was precautionary, in order that another piece of elastic might be drawn along the same track in the event of either half of that which was first passed breaking. Another precaution very necessary to take is to hold the elastic firmly at the time of dividing it and while withdrawing the needle, otherwise the contractility of the tubing will cause its disappearance through the track made by the needle.

The time likely to ensue before the entire separation of the breast is eight or nine days. The pain excited during any

portion of this time is remarkably slight. Sometimes a little pain is suffered for a day or two. In the case of the patient now referred to, there was no pain after the first twenty minutes from the time of recovery from the chloroform, and the suffering during this brief period was not at all severe.

MIDDLESEX HOSPITAL.

LIGATION OF COMMON CAROTID FOR HÆMORRHAGE AFTER THE REMOVAL OF A CERVICAL TUMOUR BY ELASTIC LIGATURE.

(Under the care of Mr. HULKE.)

MICHAEL H., a labourer, aged 31, was taken into the Middlesex Hospital at 9 a.m. on August 30, 1870, bleeding profusely from a sinus in the neck at the anterior border of the left sterno-cleido-mastoid muscle. The blood welled up copiously in a continuous stream. Its flow stayed immediately on the application of a graduated compress. He had lost enough to drench his clothes to his feet, and to thoroughly blanch him and induce great faintness.

He related that in St. George's Hospital, several months previously, he had undergone an operation for the removal of a tumour from his neck by a new method (understood to consist in the strangulation of the tumour with indiarubber bands,—the skin having been previously reflected, and long pins passed behind the base of the tumour to serve as guides for the elastic constrictors). The removal of the entire tumour was found impracticable in this way, and about one month later, before the wound had closed, very copious bleeding took place, necessitating an operation (afterwards learned to have been deligation of the carotis communis above the homo-hyoideus muscle). When the thread had come away from the vessel, and the wound was nearly closed, he was transferred to the Convalescent Branch, from whence some weeks later he returned to work. A small part of the wound which had never healed continued to discharge a little matter. A few minutes before he was brought to the Middlesex Hospital, while wheeling a heavy barrow in a neighbouring street, he felt a sensation in his neck as if something gave way, and quickly found himself covered with blood, and become faint; he soon afterwards vomited. At 9.30 a.m., half an hour after his admission, his pulse beat 150 per minute, and the thermometer in the axilla marked 104·3° Fahr. On being questioned, he said he had had a severe shivering fit in the night.

August 31.—2 a.m.: Blood welled up profusely from the sinus, "as from a fountain." The sister applied a fresh compress moistened with perchloride of iron, by which the bleeding was stanched before the House-Surgeon could reach the ward. 10 a.m.: Pulse 96; temperature 98·2° Fahr. 10 p.m.: Pulse 128; temperature 102·2° Fahr. At 11 p.m. he vomited, and the compress shifting, the wound again bled; but the bleeding, though very free for a moment, was immediately arrested by digital pressure, afterwards replaced by a fresh compress.

September 1.—Wound sloughy; washed out with a solution of carbolic acid, and dressed, as previously, antiseptically.

2nd.—9 a.m.: Pulse 120; temperature 102°; stitch in side; tongue dry and brown. 2.30 p.m.: Pulse 120; temperature 103·6°; strong arterial pulsation at root of neck. 9.30 p.m.: Pulse 104; temperature 101·8°.

3rd.—In the night several rigors followed by copious sweats. At 9 a.m., pulse 105, temperature 100·2°; at 9 p.m., pulse 112, temperature 101·8°; a severe rigor at midnight.

4th.—At 3 a.m. another rigor, and a third at 10 a.m., followed by a profuse sweat, in which his pulse was 120, and temperature 97·8°. At 11 a.m. a slight rigor whilst still sweating. At 12.15, pulse 120, temperature 108°. At 9 p.m., pulse 118, temperature 101·2°. Has vomited several times in the course of the day and in the previous night, and has passed several loose stools. Says on the whole he is more comfortable.

5th.—9 a.m.: Pulse 100, temperature 101·2°; was sick several times in the night. The wound is cleaner, and the discharge is not fetid. At 12.30 p.m., profuse arterial hæmorrhage—the blood spouted in a stream as thick as a cedar pencil—instantly arrested by pressure.

The pyæmic condition of the patient—manifested in the repeated rigors and sweats, the instability and extreme variations of temperature, and the looseness of the bowels—and the probability of cerebral mischief, inferred from the vomiting unprovoked by ingesta, but occurring at any time—had been judged a sufficient bar to any surgical measures so long as the hæmorrhage was easily controlled by pressure; but it being now evident that another bleeding would be fatal, Mr. Hulke decided to anticipate any more loss of blood by laying open the sinus, and securing, if possible, the bleeding vessel. Anæsthesia was induced with chloroform, and the sinus was laid open; it ran in the direction of the great vessels, but though the tissues were roughly handled and scraped, no bleeding could be now provoked. The border of the sterno-mastoideus having been drawn out, and the omo-hyoideus and sterno-thyroideus muscles having been divided, the sinus was tracked in the sheath of the vessels down to the level of the collar-bone, and the carotis communis was tied at the lowest accessible point. The adhesion of the artery to its sheath, and of this latter to the surrounding parts, with the alterations in all the tissues produced by the long-continued suppuration, and the great distension of the internal jugular vein during expiration and several times when there was slight struggling, made it rather difficult to pass the aneurism needle. The pulsation of the artery was so feeble that it was difficult to realise the presence under the finger of so large an artery so near the heart. An hour afterwards he had a very severe rigor; he was delirious through the night, and he died at half-past seven o'clock on the following morning. No further bleeding had happened.

At the examination of the body several scars were noticed on the front and side of the neck—marks of the skin-flaps reflected in the original operation. Above the omo-hyoid the continuity of the carotis communis was interrupted at the spot where it had been tied in St. George's Hospital. The upper end was obliterated and lost in a mass of adenoma; the lower end, to the collar-bone, was imperfectly blocked by a disintegrated clot. The ligature which had been applied the day before was found around the vessel just where the clot ended below. The left cerebral hemisphere contained two abscesses, and the liver several.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 29, 1873.

INDIARUBBER LIGATURES AND THEIR USE IN SURGERY.

WE publish to-day, under the "Reports of Hospital Practice," the details of an operation for the removal of the breast, which we think we may describe, without fear of contradiction, as being entirely unprecedented in British surgery.

The operation was performed on Friday, November 21, in University College Hospital by Sir Henry Thompson. The

patient, a woman about fifty-three years of age, had for ten years been conscious of a slowly growing tumour in the right mamma, which had latterly gone on growing more rapidly, and within a few weeks had commenced to ulcerate. The tumour was not thought to be malignant, and it and the gland in which it was growing were freely movable upon the pectoral muscle. It was on this latter account no doubt admirably adapted for the process to which it was submitted.

As will be seen by referring to the description of the case, this process consists in the strangulation of the mamma by means of an elastic ligature passed beneath the breast through the submammary tissue, and the subsequent separation of the mamma from these subjacent structures by the ulceration provoked by the contractile and continuously constricting nature of the ligature.

Although, as applied to the mammary gland, this mode of removing a portion from the rest of the body is, as we believe, new to the surgical practice in this country, it is not so in Vienna. Here the treatment has for some time been employed by Professor Dittel, who has, so we learn from Sir Henry Thompson, removed a large number of breasts in this manner. He has, too, amputated limbs by the same means; and for the removal of diseased testicles and the cure of fistula in ano the elastic ligature has by this surgeon been found to answer well.

The accident which we are informed led Professor Dittel to attempt the removal of such large masses and parts of the body as breasts and limbs by a tightly applied indiarubber ligature is described elsewhere in these columns, and is sufficiently remarkable to excite amazement and wonder; though in comparison with the folly of fasting girls and hair and pin devourers, and the sufferings to which they put themselves, there is nothing incredible in the fact that a young girl who has been perpetually scolded for having an untidy head should tenaciously wear a head-dress which would save her hair from falling loose and her ears from harsh reproofs. Granting, however, the originality of the idea in Professor Dittel's mind of indiarubber tubing as a ligature, and the novelty of the application of elastic ligatures to large and important parts, as in the case now under Sir Henry Thompson; and granting, further, the soundness of the treatment in the cases to which it has been applied, two questions nevertheless arise, viz.:—(1) How far is the employment of elastic ligatures new to surgery in this country? and (2) In what does the advantage, if any, reside of elastic ligatures over inelastic ones, or over the removal of diseased parts by the knife? That elasticity in a constricting agent has been thought desirable by some surgeons for several years past, is evident from the fact that Mr. Henry Lee and those who have followed his practice have employed twisted indiarubber sutures or a piece of indiarubber stretched upon a pin in the treatment of varicose veins. Mr. Bryant has at different times since 1863 removed small pedunculated tumours from the limbs by means of small indiarubber bands and threads of elastic from spring-sided boots. Mr. Lee has, too, for four or five years used a fine, very elastic indiarubber ligature for the removal of hæmorrhoids; and in St. George's Hospital (and we believe, too, occasionally in University College) the same material is frequently applied to nævi. We publish this week, moreover, a case which came under Mr. Hulke's care in the Middlesex Hospital in 1870, of a man who had a short time before, in St. George's Hospital, undergone an operation for the removal of an adenoid tumour from his neck "by a new method," consisting in the strangulation of the tumour with indiarubber bands—"the skin having been previously reflected, and long pins passed behind the base of the tumour to serve as guides for the elastic constrictors." Again, at page 114 in vol. iv. of the *Clinical Society's Transactions* there is a paper, read by Mr. Henry Lee on March 10, 1871, describing the removal of a tongue for cancer by an elastic ligature passed around the base of the organ.

It is, then, only in so far as concerns the part strangulated, and not the mode of strangulation, that the operation on the breast we have described is new amongst us.

The advantage which an elastic ligature possesses over a silk or any inelastic one is evident when any but the smallest amount of tissue has to be constricted. An ordinary ligature, no matter how tightly it may be tied, must become loosened after a certain amount of the constricted tissues has been removed by ulceration; but an elastic ligature, as fast as it has caused ulceration of some parts, goes on contracting upon the remainder, and thus not only is a continuous pressure kept up, but the pressure is sufficient to prevent any intercommunication between the fluids of the necrosed and the living tissues. This latter most desirable object is not obtained by any but an elastic constrictor; for if any of the strangulated tissues happen to be not quite dead at the time of the loosening of the ordinary ligature, some return of circulation is likely to occur in them. Owing to the continuous pressure and contraction of the elastic upon the strangulated parts, there is, too, less risk of the entrance of any septic material into the general circulation. There may be a doubt, however, when a very large quantity of tissues is included in the ligature, how far the indiarubber, being constantly bathed in putrid discharges, retains its elasticity, and thus whether the contraction and pressure are continued until the whole of the ligated parts are quite separated.

The advantages over the knife which Professor Dittel supposes the elastic ligature to possess are—(1) That it does away with the necessity of a cutting operation, and all the horror and distress which the idea of such excites in the minds of many patients; and (2) it is attended by less risk of pyæmia. Without experience on this point of course it is impossible to express an opinion, and we may be sure that Professor Dittel has good foundation for his conclusion. But certainly there is reason for thinking that pyæmia is as prone to supervene upon a large ulcerated surface, with sphacelated tissues in its immediate neighbourhood, as upon an incised wound—even if the vessels are in a state more favourable to the admission of matter from without. The patient reported under Mr. Hulke's care died from pyæmia, brought on, it is true, only indirectly by the operation.

As applied to the limbs the treatment cannot be commended: we fail to see what advantages such a means can possess over ordinary amputation to compensate for its offensiveness and greater tediousness. For tumours of the breast, when there is a strong repugnance on the part of the patient to the use of the knife, when the disease does not infiltrate the submammary tissues or the axillary glands, and when the tumour and the breast are freely movable upon and can be drawn away from the pectoral muscle, it is undoubtedly applicable, especially as it has been proved to be so slightly painful; and in cases of a cancerous nature where it can be employed all chance of inoculating the surrounding tissues with the cells or fluid of cancer is thus avoided.

We may refer our readers for an account by Professor Dittel himself of this treatment to the *Allgemeine Wiener Medizinische Zeitung*, an abstract of which we intend publishing in an early number.

THE EDUCATION OF MIDWIVES.

We do not think that the deputation from the Obstetrical Society which waited on Mr. Stansfeld in order to enlist his aid in their project of educating, examining, and licensing midwives, had much cause to congratulate themselves upon the Ministerial utterances they elicited. The published report of the interview, which appeared in the *Times* of Saturday

last, shows that it ended in Mr. Stansfeld telling the obstetricians that they ought not to stop at creating a set of midwifery nurses only, but that they should allow women who have the qualifications and means to take a higher rank without undergoing a full medical examination. By this we suppose Mr. Stansfeld to mean that there should be created a class of female obstetricians, who, being trained to practise midwifery and in the diseases of women and children, are yet not to be physicians or surgeons in a complete sense, and are not to have a full professional education. The plan of the Obstetrical Society, on the other hand, is merely to train and license a set of midwives, or midwifery nurses, to work amongst the lower orders, who are to have just practical knowledge enough to enable them to manage a natural labour, and to send for a medical practitioner if any manual or instrumental interference be necessary. Allowing that the project of the Obstetrical Society might possibly supply a want in certain pauperised districts, we think that Mr. Stansfeld's improvement on it would introduce a dangerous set of practitioners—pure *accoucheuses*, with sufficient knowledge of their art to make them conceited, and sufficient ignorance of the science of medicine in its totality to make them dangerous.

The question, however, arises—whether the creation of a class of female obstetric practitioners be really a desirable one in the present day? The fact, which has been frequently insisted on in these columns—that obstetric practice, which was formerly in the hands of females, has everywhere passed into those of male practitioners—furnishes, at least, an argument that men are better fitted by nature, in body or in mind, or in both, to perform the office than are females. No important improvement in practical midwifery has ever been made by a female. Had midwifery remained the speciality of the female sex, is it likely that version would ever have been attempted, or the forceps have been invented? We doubt it. But, apart from these considerations, we confess we do not see any reason for disturbing the existing arrangements. Medical male practitioners are quite numerous enough to discharge the duties of obstetricians in all prosperous districts, and the recent advance of wages should tend to increase their remuneration. The project of the Obstetrical Society might indeed supply a class of midwives who would be acquisitions in a few very poor neighbourhoods; but we certainly do not believe they are needed throughout the country. The speakers in the deputation to Mr. Stansfeld—Dr. Tilt and Dr. Aveling—insisted upon the large number of deaths in parturition which occurred in the practice of midwives, and upon the burden which children made orphans by the loss of their mother in childbed imposed upon the ratepayers. We should like to examine the statistics by which these assertions are proved. That women do die through the ignorance and incompetency of male and female unqualified practitioners, we have no doubt, but we do not believe that they die in such numbers as materially to affect the rates. Neither do we believe that the crime of child-murder would be oftener perpetrated by uncertificated midwives than by certificated ones. Still, as we have allowed, the project of the Obstetrical Society might supply a want felt in workhouses, barracks, and amongst very pauperised communities. But we regard with aversion any movement which would tend to take the midwifery practice of the country out of the hands of the male medical profession properly so called. We are convinced that such a change could not be effected without increasing the mortality in childbed, arresting the progress of the obstetrical science and art, and without inflicting an unnecessary loss on the large mass of the profession. Fortunately, that part of the female sex which has any chance of requiring the obstetrician's aid seems pretty generally to share our opinions.

THE PHYSIOLOGY OF VISION.

III.—The Cornea, and its Pathological Teaching.

The first portion of the optical apparatus of the eyeball on which the rays of light impinge is the cornea, the structure of which is not only exceedingly interesting in itself, but is rendered still more so by the fact that on it have been made some of the most interesting experiments as to the process of inflammation. It is bounded in front by a stratified epithelium of the squamous kind. Behind this comes the true horny or fibrous tissue of the cornea; next a thin highly elastic and nearly structureless lamina; and finally a single layer of flattened endothelial cells, which separates it from the aqueous humour. Of these various structures the first and second are of most interest. As regards the external corneal epithelium, it is continuous with that covering the conjunctiva; but, as in most forms of stratified epithelium, it is only squamous on its surface, where the cells are broad, flat, and dentated. Deep down the cells assume the columnar form, with their long axes at right angles to the corneal tissue beneath; whilst the middle cells frequently exhibit processes or prickles which seem to be of great importance in regenerating epithelium. One of the most interesting facts, however, relating to the structure of the corneal epithelium is that the nerve-fibres, found abundantly in the proper substance of the cornea, may be clearly traced into the epithelium, where they form a fine meshwork surrounding and enclosing the corneal cells. These fibres are non-medullated, for the medullated nerve-fibres which enter the cornea soon lose their medullary sheath and form various plexuses, one of the most marked of them being situated immediately below the epithelial layer, whence are sent off the fine twigs which terminate in the epithelium, sometimes in somewhat swollen extremities, just beneath the most superficial layers of the epithelium. No direct communication between these terminal nerve-fibres and the epithelial cells can, however, be discovered.

The true substance of the cornea may be reckoned as composed of three layers, although only one is spoken of above. We may, however, include in it the layer lying immediately below the internal endothelium, commonly called Descemet's layer or membrane, though that is structureless, and another in many respects similar, which lies immediately beneath the external epithelium. Both might be spoken of, as regards the cells lying on their surface, as basement membranes. But the cornea proper is composed of fine fibrils, so arranged as to leave freely communicating interspaces, in which are contained the so-called corneal corpuscles. The fibrils of the corneal tissue are in many respects similar to those of ordinary fibrillar connective tissue, and are arranged in fine bands, which, decussating with each other, run for the most part nearly parallel to the surface of the cornea. By boiling, the corneal tissue yields a substance like gelatine, but allied to chondrin in many particulars.

But by far the most interesting corneal structures are the corpuscles. These are or may be of two kinds. One kind exists as minute masses of protoplasm, with distinct nuclei sending out in every direction rays or processes which through the interstices of the corneal tissue directly communicate with corresponding processes sent out by neighbouring corpuscles. In this way there is a completely connected and directly communicating plexus of protoplasmic bodies throughout the cornea. Looked at from the anterior surface of the cornea, these corpuscles appear flattened; looked at in profile, they seem elongated from side to side. Now, these corpuscles can be made to change their shape; especially they can be made to retract their processes, when they appear as small clumps of protoplasm, more or less amœba-like. This is best done by means of a shock of induced electricity; and it is after such a shock, and the consequent retraction of the protoplasmic processes, that the existence of actual canals, commonly called

serous canals, for the reception of these processes of the corneal corpuscles can best be demonstrated.

Still another kind of corneal corpuscles can be made out, especially in the frog and other amphibia. These bodies are to all intents and purposes similar to the lymph or colourless blood corpuscles of the same animals, and in the cornea they may be seen to undergo changes in shape similar to those observed in the same corpuscles in other parts of the animal under different conditions. These are the so-called wandering or migrating corpuscles, and their origin under normal conditions can hardly be doubtful—they come directly or indirectly from the bloodvessels of the animal.

Now, if by any means the cornea be irritated—say by the application of a sharp-pointed stick of nitrate of silver to any given spot on its surface,—this irritation is shortly followed by what is called a purulent infiltration. By this is really meant a congregation of leucocytes at the irritated point to such an extent as to give the cornea a cloudy appearance. But for long a fierce battle was waged as to the exact interpretation of the phenomenon. On the one hand, it was contended that this cloudiness invariably appeared first of all near the margin of the cornea; on the other, that it appeared wherever the irritation was most intense. The upholders of the former doctrine maintained that this cloudiness was due to the presence of leucocytes which had wandered out of the various bloodvessels surrounding the cornea. Those who held to the latter view pointed out that this could not be so, inasmuch as there was no apparent change between the irritated spot and the margin of the cornea. The latter therefore maintained that the active moving corpuscles could only have originated in the fixed corneal corpuscles already described, and they pointed to the fact that these could be made to alter their shape by various excitants, so as to become indistinguishable from ordinary amœboid corpuscles. Subsequent experiments demonstrated the truth of both views, and thus was established the validity of that important doctrine which teaches that inflammation is not only a local change in the tissues of the part, but is also in part dependent on the direct passage of white blood-corpuscles out of the vessels to the parts beyond, where they cease to be called white blood corpuscles, taking now the name of pus corpuscles. Moreover, these experiments show that by an increase of the normal elements of the cornea it may become completely opaque, whether these elements take the corpuscular or fibrillar form.

THE WEEK.

TOPICS OF THE DAY.

We are glad to announce that the report which had reached us, that Mr. Quain contemplated retirement from the representation of the Royal College of Surgeons in the General Medical Council, is unfounded. Mr. Quain has retired from the Committee of Reference embodied for the formation of a Conjoint Examining Board for England; but we are happy to state that he still retains his post in the General Medical Council, which could ill afford to lose a surgeon of his long experience and mature judgment in all matters relating to medical education.

The Queen has been pleased to reappoint Dr. Parkes, Dr. Quain, and Dr. Stokes as representatives of the Crown in the General Medical Council; and Dr. James Warburton Begbie, of Edinburgh, as a Crown representative, in place of Sir Robert Christison, who, we believe, declined to be again nominated. The appointments reflect great credit upon those who advise her Majesty in this matter. We are sorry, however, that the Council will lose Sir Robert Christison's sound practical good sense.

The Royal College of Physicians of Edinburgh has appointed Dr. Haldane as its representative in the General Medical Council, in place of Dr. Alexander Wood; and the University of Edinburgh has nominated Professor Turner, of that University, to represent the Universities of Aberdeen and Edinburgh, in place of Dr. John Macrobin.

It is announced that there will be no opposition to the re-election of Dr. Lyon Playfair as representative in Parliament of the Universities of Edinburgh and St. Andrews.

The subject of the prevalence of ophthalmia in pauper schools has lately been discussed in the columns of the *Times*. Mr. Brudenell Carter has published an opinion that this prevalence is mainly owing to the fact that pauper schools are not systematically visited by medical inspectors, and that consequently the hygienic condition of these schools contrasts badly with that of county lunatic asylums. We have no desire to defend the policy of the Local Government Board, and of the Poor-law Board which it replaced, in appointing non-medical persons to perform duties which clearly belong to the province of the sanitary medical inspector. We believe that the appointments to poor-law inspectorships have been made matters of political and personal jobbery, to the great detriment of the public service. But, on the other hand, the answer of Dr. Markham, who was himself a poor-law inspector for some years, published in the *Times* of Thursday last, pretty clearly shows that something more is required to get rid of ophthalmia from pauper schools than medical inspection and the enforcement of hygienic measures. From his experience of the mode of spread of ophthalmia by contagion, and of the persistence with which it recurs in children who have once suffered from it, he has been lead to the conclusion that the only way to eradicate the contagious ophthalmia of pauper schools is to separate once and always the sick from the healthy—to have separate hospitals and school attached to them, in which convalescents should be educated, and never allowed to return to the general schools.

In a recent trial about "nourishing stout," Vice-Chancellor Malins asked who Dr. Hassall was, a testimonial from that analyst having been mentioned in evidence. We thought it impossible that any householder who could read would have had occasion to ask that question. We do not know whether we ought not to congratulate Dr. Hassall.

THE WAR ON THE GOLD COAST.

The hospital-ship *Victor Emmanuel*, it is now stated, will positively leave for Cape Coast Castle to-day (Saturday). All the medical and surgical stores which she is to carry, and which will make her a kind of floating depôt, have been received on board. The detachment of the Army Hospital Corps appointed to her have joined, and as she has been duly commissioned we may hope that nothing further will occur to delay her departure at the date fixed. Since our last, the 42nd Highlanders have been put under orders for the expedition, and are expected to sail from Portsmouth about the 1st proximo. Although a kilted regiment, the 42nd will not be sent out in such an inappropriate costume for bush-fighting, but uniforms will be issued to officers and men similar to those already supplied to the 23rd Foot and the 2nd Battalion of the Rifle Brigade.

The despatches recently received from Sir Garnet Wolseley contain nothing of importance that was not previously known. Although the results of the encounters which up to the present time have taken place with the enemy may not be considered important from a military point of view, there is no doubt that the operations so far have been of great utility in demonstrating what can be done by European troops in marching and fighting in the Bush. The correspondent of the *Standard* has called attention to the great necessity which exists for frequent rests on the march. He states that Sir Garnet Wolseley has himself laid down a rule that troops upon the march should

halt five minutes in every hour—the first halt to be exactly one hour after starting. Now, in this exceptional climate such a rule is essentially necessary. Owing to the intense heat, the lungs have to work much faster; consequently the great strain both on heart and lungs is evinced by palpitation and shortness of breathing. Now, ten minutes' rest at the end of every fifty minutes' work would relieve the men, prevent falling out on the road, and send them off again refreshed for renewed exertion. These remarks appear so reasonable that commanding officers in the field would do well to weigh them carefully, more especially as the custom appears to have been adopted in the long march to Magdala during the Abyssinian campaign with signal advantage.

The question has been mooted as to the supply of beer to our troops on the Coast, and whatever may be the decision as regards the men actually in the field, there is no doubt that an ample supply should be forwarded for the hospital-ship. A medical officer long resident on the Coast once informed us that bitter ale was almost the only stimulant he took during his tours of service, and the experience of other officers confirms the wisdom of this. We trust, therefore, that the *Victor Emmanuel* will be amply supplied in this respect for the comfort of the sick and wounded.

It is satisfactory to note that, if the operations which have taken place up to the present time are to be taken as a guide, the percentage of killed, as compared with wounded, will only be small; nor will the ratio of severely wounded be very high. The weapons of the Ashantees are of the commonest kind, and several instances have already been noted in which no penetration followed the blow received from slugs fired by the enemy.

LIBERTY AND TYRANNY.

We deny the truth of the allegation made by Mr. Downes during the following discussion which occurred at the last meeting of the St. James's (Westminster) Vestry. We allude especially to the remark that there is among medical men a rising feeling to restrain the liberty of the subject. We are sure our professional brethren will repudiate with us such a charge. It is untrue and unjust. Dr. Lankester, the Medical Officer of Health, in discharging the duties of his office to inspect public buildings, reported that he had visited the "Criterion," and found the whole building well ventilated; in fact, he had never seen a public building so thoroughly ventilated. Mr. Downes asked the medical officer if it came within his duty to visit such buildings as that lately erected by Messrs. Spiers and Pond. Dr. Lankester replied that there was an express passage in his appointment to that effect. Mr. Downes said in that case he might go into any house he liked; it seemed to him that the more liberal the age was called, the less liberty they got. He believed the clause mentioned by Dr. Lankester applied only to certain places, such as workshops. Dr. Lankester said the state of the law allowed him to go into any house. It was for the purpose of preventing nuisances. A man had no right to keep his house dirty; one foul place might poison a whole neighbourhood. Mr. Downes did not like the practice; if they could go into houses like the "Criterion," they might go into any others, and he was sorry to see among medical men a rising feeling to restrain the liberty of the subject. Dr. Lankester said the medical men did not wish to restrain any one's liberty: they only interfered for the general safety. He had gone over Burlington House, and was about to have an interview with Mr. Barry, the architect, in regard to the ventilation. Mr. Spryng asked if the Government were likely to adopt any suggestion of Dr. Lankester's in reference to the ventilation, and if he could take any action in the event of their refusing. Dr. Lankester replied that he had the magistrates to appeal to. It was in his power to indict any person in the parish in such a matter. We have had occasion to speak of the praiseworthy and satisfactory manner in which the medical officers of health generally are fulfilling the duties pertaining to their important office. Hitherto, so far as we know, their powers have been exercised with discretion, and even leniently. It is idle and untrue for vestrymen to charge these gentlemen with a desire to "restrain the liberty of the subject."

THE ABUSE OF MEDICAL CHARITY.

An influential and largely attended conference was recently held at Birmingham, to consider the subject of hospital reform. Representatives from the hospitals and charitable institutions of the district attended. The following resolutions were unanimously passed:—"That inasmuch as the gratuitous relief afforded by the medical charities of the town is abused, it is desirable that a combined effort should be made by the medical charities to prevent such abuse in future." "That a committee be appointed to prepare and submit to a future meeting of this conference a scheme for the establishment of a central organisation for a systematic inquiry into the circumstances of all applicants for relief (except cases of urgency and accident), and also to prepare an estimate of the probable annual cost of such an organisation." A committee and honorary secretary were appointed, and the proceedings closed. The abuse of medical charity is, we are glad to observe, engaging not only the investigation and consideration of the public in the metropolis, but is being taken up with much earnestness in our large manufacturing and other towns generally. Although the subject is a difficult one, we trust some practical plan will be elicited, and that the abuse of medical charity will ere long be a reproach of the past.

HEALTHY KENSINGTON.

Dr. Dudfield, the Medical Officer of Health, in his last report to the Kensington Vestry, states that during the past month the deaths were equal to 16 per 1000 per annum, against an average in three years of 20·12 per 1000. The deaths in the metropolis were 24 per 1000, and the average in three years 21·66. The deaths from zymotic diseases were only 13, against an average of 39 at a corresponding period of three years. Thus in every respect this return is a singularly favourable one as regards Kensington parish, in which the death-rate was less by 4 per 1000 per annum than the average, while in the metropolis generally the rate was more than 2 per 1000 above the average. The report of Dr. Dudfield is very satisfactory, but it must be remembered that Kensington is a rich and prosperous parish. It has comparatively few poor inhabitants; there is little overcrowding; a fine gravelly soil, and pure air to make it a healthy locality. Dr. Dudfield has proved himself an energetic and discreet medical officer, and we always read his reports with satisfaction.

CHOLERA IN NAPLES.

The epidemic of cholera (writes the *Times* correspondent from Naples on the 10th inst.) during the last four days has maintained its usual character—sometimes increasing and then decreasing. "The cases in this interval have been 28, 9, 18, 30, and the deaths 15, 5, 11, 20, yesterday's report being the most unfavourable we have yet had. At some places in the neighbourhood, too, the malady has been very severe, but no statistics are published, and no reliance is placed on those which are so. As to the causes, or some of the causes, of this diffusion of cholera, I can only repeat what I have already said over and over again—they are to be found in the filthy habits of the people, and it is well that a stern and unrelenting censor has come to tell them that their health and their lives lie in their own hands." He adds—"The latest report of the epidemic is again bad—cases 30, deaths 21. It has broken out in Rome."

A GOOD EXAMPLE.

PROMPTITUDE of action on the part of officials under the Sanitary Act is of the utmost importance to its being carried out efficiently. Hitherto justice has been sometimes delayed, if not protracted, by the imperfections of the Act. We are glad to perceive that the Vestry of St. George's, Hanover-square, at their last meeting, on the motion of Dr. Schulhof, unanimously passed the following resolution, which will greatly facilitate the proper working of the Act:—"That in cases of proceedings to be taken by the inspector of nuisances before a magistrate under the Acts for the Prevention of the Adulteration of Food and Drink, and of Drugs, the authority appointed by the Vestry to carry out the Nuisances Removal Acts be empowered to call in the assistance of the parish solicitors whenever they may consider such a course desirable."

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

THE opening meeting of the present session was held in the College Hall, Kildare-street, on the evening of Wednesday, November 19. A large number of members and visitors were present. Dr. James Foulis Duncan, President of the Society, occupied the chair, and delivered an inaugural address. In it he discussed the questions of "epidemic influence," and of "change of type in disease," illustrating the latter in a novel manner by a reference to the infrequency of late years of acute mania, with its terrible train of mental symptoms. At the close of his address he made a graceful and touching allusion to the loss of three distinguished fellow-workers—Professors William Barker, R. W. Smith, and Robert Law; the last of whom, and "third in this galaxy of eminence, still lives, but his work is done." Subsequently Dr. A. W. Foot brought forward the details of a very singular case of blue chromidrosis, illustrating his remarks by a water-colour drawing of the patient, a young lady aged 17. The exudation of the pigment occurred on the forehead and temples; also beneath the eyes, on the side of the nose, on the chin, and over the back of one hand. It was consequent on a series of intense headaches, and its amount was increased by hyperæmia of the face, from stooping and so on. In six months the affection passed away—the happy result being due apparently rather to mental rest than to any therapeutical measures. Drs. Stokes and Grimshaw detailed somewhat similar cases. Amongst the visitors were Surgeon-General MacIlree, who is now in charge of the Army Medical Department in Ireland, and several of the surgeons-major and surgeons at present attached to the Dublin garrison, the President and many of the Council of the Royal College of Surgeons, and the Governor of the Apothecaries' Hall.

ROYAL COLLEGE OF SURGEONS, IRELAND.

ON Monday last, the 24th instant, Mr. John Hamilton was elected a member of the Council of this body, in the room of Mr. Tufnell, the recently chosen Vice-President of the College.

DUBLIN OBSTETRICAL SOCIETY.

THE first meeting of the thirty-sixth session of this Society took place at the College of Physicians, Kildare-street, on the evening of Saturday last, the 22nd inst. The large hall of the College was quite filled, and the assemblage included the Presidents and Vice-Presidents of the Colleges of Physicians and of Surgeons, the Governor of the Apothecaries' Hall, the Surgeon-General of the Army Medical Department in Ireland, and many other distinguished visitors. The following office-bearers were elected for the year 1873-74.—*President:* Evory Kennedy, M.D. *Vice-Presidents:* Lombe Atthill, M.D.; and Thomas Darby, F.R.C.S.I. *Committee:* Fleetwood Churchill, M.D.; John Denham, M.D.; George H. Kidd, M.D.; George Johnston, M.D.; Alfred H. McClintock, M.D. *Treasurer:* H. S. Halahan, L.K.Q.C.P.I. *Honorary Secretary:* J. R. Kirkpatrick, M.D. The President (Dr. Evory Kennedy) read an address introductory to the session. The Obstetrical Society now numbers 142 ordinary members, twelve honorary members, and ten associates; and its proceedings for the past two sessions have been published in handsome volumes for distribution among the members.

THE POPLAR MEDICAL OFFICERS.

THE duties of the District Medical Officers of the parish of Poplar have just been the subject of consideration by a special committee of the Guardians. The result of their inquiry appears to be that, as district dispensaries and the Poplar and Stepney Sick Asylum have been established in the district, the duties of the medical officers have been largely reduced: that in consequence a reduction should be made, either in their salaries or in their number. As to the mode by which either of these proposals can be legally carried into effect, the committee express some doubt; but the Guardians have adopted their commendation to apply to the Local Government Board for advice on the matter.

HONOURS TO A MEDICAL MAYOR.

A LARGE and highly respectable meeting took place on Tuesday, at the Devonport Town Hall, to do honour to Dr. May on the completion of his third successive year of office as mayor of the borough. Nearly £500, the result of a subscription, had been expended by a committee in a life-portrait of the ex-mayor for presentation to the town, and a service of plate to himself. Sir John St. Aubyn, M.P., made the presentation. Dr. May had rendered important services in bringing a second line of railway to Devonport. The grateful recognition of these services was the immediate occasion of the presentation.

A QUESTION OF RIGHT.

THE Local Government Board has declined to sanction the appointment of Mr. G. C. Smith as Medical Officer of Health for Newtown, on account of Mr. Smith being an assistant to a medical practitioner. If fully qualified, we are at a loss to understand the grounds upon which his appointment has been ignored. Objections of this kind are, to say the least of them, unsatisfactory, inasmuch as they may deprive a good and efficient man of an appointment to which he may be justly entitled.

PROPOSED TESTIMONIAL TO DR. SAUNDERS.

A COMMITTEE has been formed by members of the City Corporation and others, having for its object the recognition of the public services rendered by Dr. Saunders as chairman of the Library and Museum Building Committee. The Lord Mayor will receive subscriptions. Dr. Saunders has rendered most important services to the citizens of London, and his labours, particularly with respect to the library at the Guildhall, justly entitle him to some substantial mark of the approbation of the community.

LUNACY IN IRELAND.

THE official report on Lunatic Asylums of Ireland shows that the returns for 1872 indicated a decided increase in the number of registered lunatics, the figures being 10,958, as against 10,767. This increase is partly accounted for by the greater longevity arising from the improved treatment of mental diseases.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE second meeting of the above Society was held at the Royal Kent Dispensary, Greenwich-road, on Friday, November 7; Prior Purvis, M.D., in the chair. William F. Teevan, B.A.,

F.R.C.S., read a paper "On the Causes and Treatment of Retention of Urine. The next meeting will be held on Friday, December 5, at 8 p.m. precisely. Dr. C. J. Thorowgood will read a paper "On the Nature and Treatment of Asthma."

FROM ABROAD.—PROFESSOR BOUCHUT ON DIPHTHERITIC BUBO.

UNDER the title of "The Treatment of Diphtheritic Bubo," Professor Bouchut communicates an interesting paper to the *Bulletin d'Thérapeutique* of October 15. Although one of the important complications in diphtheria, croup, and scarlatina, it is not, he observes, much known, and is not to be confounded with the simple glandular enlargement often met with in diphtheritic anginas, and which is frequently regarded as a sign of diphtheritic poisoning. This bubo is a suppurating adenitis, having nothing specific or toxical in its nature, and which appears to be the result of irritation existing in the vicinity. It is, in fact, only another example of that law of glandular pathology according to which, wherever local irritation is present, there may be set up irritation, inflammation, or suppuration of the corresponding lymphatic glands. Thus, any irritation or wound of the foot or genital organs may induce swelling of the groin; that of the fingers, adenitis of the elbow or armpit; that of the scalp, occipital adenitis; that of the lungs or bronchi, mediastinal adenitis; and that of the mouth or tonsils, ganglionary inflammation of the neck under the angle of the jaw, or in the parotid region. The progress of any of these inflammations may vary much in different individuals, suppuration occurring rapidly in some cases and more slowly in others.

In the diphtheritic and scarlatinal angina, the progress of the bubo is not very acute. At first we find one or more glands swollen but scarcely painful, they seeming lost in the doughiness of the cellular tissue, which constitutes a tumefaction in the submaxillary region extending to near the ear. There is a deep-seated, peri-glandular phlegmon which cannot be arrested, and will go on to suppuration. The tumour becomes hard and painful, without any change in the colour of the skin and without feeling very hot to the hand. The movements of the neck are difficult or impossible; and if the febrile condition of the angina had abated, it is rekindled, the temperature rising to 38° or 39° and some tenths. By degrees the tumour becomes softer, and is the seat of a deep-placed and uncertain fluctuation, which may continue so for several days, only becoming subcutaneous very slowly. If not opened, it eventually discharges itself, but then there is a considerable collection of matter, and there is a deep detachment of the muscles of the neck, the connective tissue of which has disappeared; symptoms of putridity set in, and the child sinks.

The pus in these cases, at first disseminated, is slow in forming itself into an abscess, and when this has taken place there is already considerable detachment of the deep-seated parts. Here lies the danger of these cases, for when one has the courage to seek for the pus in good time, as soon as its formation has taken place, and before any detachments occur, these buboes heal readily enough. Of twenty-two cases of these abscesses met with in Professor Bouchut's wards, six having been opened in good time were cured, but all the other children died. The sole means, in fact, of preventing the fatal accidents which result from abscess of the neck caused by tonsillar diphtheritis or scarlatinal angina is opening it promptly, and, if necessary, inserting a drainage-tube.

The case which was the immediate cause of these reflections occurred in a child seven years old, who had been cured of a diphtheritis by means of injections of saponised coal-tar. There was only some albuminuria remaining, when the left submaxillary region became inflamed, and the temperature mounted up from 37·2° to 39·3°. Collodion was applied during three days without any result; and a deep-seated fluctuation was believed to be felt. As this is often a deceptive sensation in this region, M. Bouchut postponed interfering for another twenty-four hours. His doubts then continued the same; but, fearing that detachment of the deep-seated parts might occur, he ventured to pierce the supposed fluctuating point. A few drops of pus were seen on the blade of the bistoury, which had penetrated to four centimetres, and the opening was enlarged on a conductor. Two days afterwards the aperture had in part closed, pus was only imperfectly discharged, and the tumour was as large as at first—deep-seated fluctuation being perceptible. Having ascertained the size of the abscess by means of a probe, a counter-opening was made, and a drainage-tube inserted. The child did very well.

NOTES ON FOREIGN HOSPITALS AND SCHOOLS OF MEDICINE.

I.—DENMARK.

(*Continued from page* 559.)

In a former communication (*Medical Times and Gazette*, p. 558) we gave a short description of the plan of medical education adopted in Copenhagen, and, at the same time, entered somewhat more into detail on the subject of systematic lectures and the practical teaching of the sciences allied to medicine. Following the programme which was then proposed, we now pass on to consider the provisions for clinical instruction in Denmark, and to describe the hospitals where they are carried out. Copenhagen possesses, besides the Clinical Hospital proper, a very much larger general or Commune-Hospital, and this we wish to notice at some length as one of the finest institutions of the kind in Europe.

It was stated in the previous part of this report that the Danish student of medicine attends hospital practice during the last three—or sometimes even four—of the six years of his professional education. In the same place we mentioned, among the buildings belonging to the medical school, but at some distance from the University proper, the Frederiks- or Clinical Hospital, and the Lying-in Institution. It is in these two hospitals that clinical work is especially pursued, and these will be first described. How far the Commune-Hospital is also made available for clinical teaching will be discovered when it comes to be noticed towards the end of this report.

The Frederiks-Hospital.

This hospital is an extensive one-storeyed building in the shape of a quadrangle, the middle of which is occupied by a large garden. On entering the principal gateway, in the end of the quadrangle facing the Amalie Gade (Street), the visitor finds the half of the hospital which lies on his left, or towards the east and south, devoted to surgery, and that on his right to medicine. The dispositiou of the wards of this hospital will be most easily comprehended if we describe one of the four sides of the quadrangle. Confining our attention to the east side, we first find several open passages from the inside to the outside, intersecting it at regular distances, and cutting it into as many divisions of a nearly square shape. Each of these divisions is in its turn intersected lengthwise by a partition subdividing it into two wards, the one facing the garden and the other the outer yard. This longitudinal partition serves an important purpose in the ventilation of the hospital, for into the double wall, of which it is built, there open the escape-holes of the ward on either side. This is not the only means of ventilation in the hospital: there are also openings in the roofs of the wards, and we are able to say that without more provision for purity of atmosphere than this natural ventilation, the surgical wards in the Frederiks Hospital smell perfectly fresh and pure.

These wards on the east side of the building are devoted, as has been said, to surgery. They are of various sizes, some large and handsome, others smaller and with a more confined look,—all plain and destitute of anything in the shape of novelty of arrangement or furnishing, but at the same time scrupulously clean, very comfortable and pleasant, and, as has just been said, filled with fresh and pure air. At our visit to the hospital we had the pleasure of accompanying Dr.

Saxtorph, the Professor of Clinical Surgery, in his morning round. Saxtorph's name is a familiar one in this country, especially to the Edinburgh surgeons, whose practice he holds in the highest estimation. We found that the hospital contains altogether about 400 beds, and of these about 150 are surgical, under Saxtorph's care, the rest medical, belonging to the services of Professor With and Dr. Tahlerup.

The walls of the hospital wards are oil-painted, and the floors waxed. Some of the bedsteads are wooden, others of iron. Each bed is furnished with a mattress in three pieces, all hair, resting on a lower mattress of straw. The bedclothes are blankets and a thick coverlet. The ward furniture is plain and good, and in nowise peculiar. The nursing in Copenhagen is done by females only, who seem to know and do their work fairly well. There are no sisters in attendance.

The Professor of Clinical Surgery visits his patients every morning during the session from half-past seven to nine o'clock, accompanied by the students, to whom he briefly describes the most interesting cases. The regular clinical lectures and demonstrations are delivered in the "clinic" (as the operating theatre is commonly called on the Continent) four times a week for an hour, immediately after the completion of the visit. The students take their places on the benches, and the professor, introducing both in- and out-patients, lectures on the cases, and operates where it is necessary to do so. This constitutes the clinical instruction received by the Danish student of surgery, and the clinical instruction in medicine closely corresponds, except that it is given six times a week instead of four. The opportunity of forming a practical acquaintance with surgery and medicine is therefore very abundant, as far as instruction is concerned. For the purpose of applying this knowledge and making it thoroughly personal, the zealous student has the further opportunity afforded him of working in the Frederiks- and Commune-Hospitals during his fifth and sixth years of study. Some three to six men may, if they please, go to one of the clinics in the evening, examine for themselves the patients admitted during the day, and write the cases. Next morning the professor reads and criticises the written cases. This arrangement may be pursued for two months in each session; and the student may take medical cases for one or two sessions, surgical cases one session, and syphilitic and skin cases for one session each. As we have indicated, this practical clinical exercise is entirely voluntary; but according to the present prospective arrangements it will become compulsory after 1875, and a fifth department—ophthalmology—be added to medicine, surgery, dermatology, and syphilis. Everything considered, it must be confessed that the Danish student of medicine possesses rare opportunities of acquiring a really practical knowledge of his profession.

We believe it will interest our readers to learn something of the practice of one of the leading Danish surgeons, and we will therefore briefly record the system of treatment which we saw followed in the wards of Professor Saxtorph.

The antiseptic system of dressing is adopted in its most minute details, and that with the best results, according to Saxtorph. We saw cases of amputation, excision, compound fracture, abscess, etc., all treated antiseptically, and all looking well. Saxtorph says he has used carbolic acid ever since it was introduced by Lister, and sees no reason for discontinuing it. In one case of gunshot wound of the leg, admitted in a very bad state, with secondary abscess and septicæmic diarrhœa, carbolic acid was applied locally, given by the mouth, and administered in enemata. The limb was subsequently amputated, and the patient is now doing well. Erysipelas very rarely breaks out in the hospital, although cases are not uncommonly admitted. Saxtorph treats burns by wrapping up the part closely in cotton-wool, and leaving it as long as it does not stink. Simple fractures are, as a rule, put up in starch-bandages after the swelling has subsided. Hip-joint disease is generally treated by pulley-extension. Several cases of chronic scrofulous disease of other joints were fixed in a starch-bandage, while cod-liver oil was being given internally. Excision had been performed a month before in a case of chronic hip disease with fistulæ, but, in spite of the antiseptic treatment, purulent discharge had returned in abundance. It is worthy of note that of some ten cases of excision of the hip in Copenhagen, of which a record is kept, not one is now alive,—why it is difficult to say. A case of chronic effusion into the knee had been punctured, and the joint immediately put in a starch-bandage: the result promised to be good. Amputations, as far as we saw, are very successful in the hands of Professor Saxtorph, the stumps healing well and without the conical look and exposed bone so often visible in German surgical practice. Stone in the bladder is common in Denmark, and Saxtorph prefers operating for it by lithotomy. He adopts the lateral incision, and uses the blunt gorget in entering the bladder. Skin-grafting is regularly employed, and with good results. Poultices, such as are seen in the London hospitals, are not to be found in Saxtorph's wards, where warm-water fomentations and arnica "flowers" alone are used.

The surgical out-patients at the Clinical Hospital are attended to in the "clinic" or operating theatre. The number is very small.

Next door to the Clinical Hospital stands the Lying-in Hospital, which contains fifty beds. It is under the superintendence of Dr. Stadfeldt, the Professor of Midwifery. We believe the annual number of labours is now considerably less than it once was; but neither of this nor of the internal arrangements are we in a position to speak with certainty. We will therefore leave the Lying-in Hospital, and pass on to the description of the other general hospital at Copenhagen.

The Commune-Hospital.

This magnificent hospital is situated in the north-western outskirts of Copenhagen, on a large piece of garden-ground which was formerly covered by part of the city ramparts. Its situation is at once open and airy, and readily accessible, and as the new botanical gardens are being laid out in front, and the rest of the immediate neighbourhood is occupied by a public promenade, there is little fear of the building being ever robbed of its pleasant prospect and pure air.

It is by no means easy to describe in an intelligible manner the appearance and arrangements of this huge building. We are under deep obligations to Professor Rasmussen—a visiting medical officer, and one of the most distinguished members of the profession in Denmark—for the extremely obliging manner in which he personally conducted us over the Hospital, pointing out the general plan, and showing every place and arrangement which might be supposed to interest us as foreign visitors. Let the reader imagine a building in the form of a quadrangle, enclosing a garden, and with one of its sides fronting the approach to the hospital—this is the plan of the administrative portion of the institution. From each of the four angles of this building there runs out a single narrow block, in such a direction that two of them are continuous with its front, forming therewith the front of the hospital; and the other two continuous with its back, and parallel with the front, forming the back of the hospital. This is, roughly speaking, the arrangement of the place, and the four blocks last mentioned are those in which the public wards are contained. The plan of the hospital might be otherwise described as shaped like the letter H turned on its side, and furnished with a double cross-line, thus— ⊟ Most of the building is of three floors, exclusive of cellars. In the rear are two bath-houses (male and female), a large washing- and laundry-house, and an engine-house—together. Still farther back are placed two buildings—one on the west side for mental diseases, and the other on the east for infectious diseases. Farthest north of all are the stables. At a short distance from the hospital in the south-west corner of the garden is the dead-house, with the post-mortem room; and flanking the front approach to the hospital on either side are the houses of the senior surgeon and the superintendent respectively. All the buildings are of brick, and the style is modern and plain. There is no attempt whatever at ornamental display, yet the general effect is pleasing as well as imposing. The hospital was built but a few years ago at a cost of 1,500,000 dalers Danish, or nearly £170,000 sterling.

The annual number of in-patients is said to be about 10,000 to 12,000, and the number of beds is 800. The number of out-patients—surgical only—is very small. Patients are admitted and kept in the hospital free of charge, except such as desire private rooms, and are called private patients: these pay not over 1 daler (2s. 3d. English) a day, and some of them less.

Large though the building be, the arrangement of the wards and their adjuncts is not difficult to comprehend. As has been said, there are four symmetrical wings in the building, each containing three floors, and a description of one of these is a description of all. Selecting one of the floors, we enter it from the staircase at the nearest end, and find ourselves in a corridor running to the other extremity, along the whole length of the back of the block. The corridor is large and bright, and may be warmed by steam in winter. The doors of the

wards and nurses' rooms open from the corridor towards the front; while opening from it towards the back at frequent intervals are bath-rooms, water-closets, and small ward-kitchens, which have thus been built in behind the corridor by short wings being thrown out at the back. The various apartments will now be examined in succession.

The wards, as we have just indicated, are placed side by side along the front of the block, are separated from each other by the nurses' rooms, and open into a common corridor behind them. All the wards, with a few exceptions, are of the same size—large square-shaped rooms, with windows towards the front only, and furnished with four beds on either side. The walls are whitewashed, their coat being renewed every year. The floors are waxed. In the middle of each ward stands a handsome iron stove, by which alone the atmosphere is warmed. The beds are iron, and the bedding the same as in the Frederiks-Hospital. A locker beside each bed and a few chairs complete the furniture of the ward. Fitted into one corner of the room is a small sink with a water-tap—an arrangement which is considered objectionable by the physicians, from the liability to the return of sewage-gas into the ward.

The ventilation of this hospital, which is almost altogether artificial, is very perfect, and deserves to be fully described. The system is one of constant abstraction of the impure air by means of a powerful fan driven by steam, while the pure air readily finds its way into the ward by special openings in the wall. Entering under the windows, the pure air is conducted in a pipe to the ward-stove, around which it circulates until it makes its escape at the top. The air, thus warmed, forms the upper stratum of the atmosphere of the room, but soon loses this position, and, becoming impure as it descends, reaches the floor. In the walls, close to the floor on either side of the ward, are several small holes in direct communication with the common exit or foul-air tube, which is pumped at the further end by the fan. There is therefore a current of some strength at the escape-holes in the ward, and through these the foul air is constantly passing. The huge fan in the engine-room at the back of the hospital is itself a sight worth seeing.

The nurses' rooms—one between each couple of wards—do not require description here; there is an outer room which serves as a kind of store, and an inner or private room. The means of direct communication between the wards and nurse's room is a small window only—not a door, as in some hospitals. The attendants, as far as we saw, are all females; they are neatly dressed, with no special uniform. There is no sisterhood.

Directly opposite the door of each nurse's room, on the opposite side of the corridor, are three doors leading respectively into the water-closet, bath-room, and kitchen, which have been already mentioned. The kitchen—a small ward-kitchen only—contains a stove heated by steam, with a large copper for poultices, a second for hot water, and a third for keeping food, etc., warm. There are also utensils for plain cooking. The bath-room contains two large baths with douche, and hot and cold-water taps. The baths are mounted on wheels, and can be taken into the wards when required. The water-closet includes an urinal and an ordinary seat with water. Professor Rasmussen does not approve of this arrangement; he would have the stools at once disinfected and removed.

We have already had occasion to remark that private patients are admitted into the hospital at so much a day. Each of these patients is provided with a private room, a lofty, well-furnished chamber, situated in the upper floor of the north and south blocks of the administrative portion of the hospital. These rooms open off a lateral corridor, like the public wards, and demand no special description.

The central part of the front of the hospital is occupied by a small and very pretty chapel on the second floor, and on the first floor, immediately under the chapel, by an operating-theatre. The theatre is very well lighted from a large front window, and by artificial light when this is necessary. On either side of it are small operation-wards for use immediately after operations, and specially fitted with steam-pipes for raising the atmosphere to a high temperature. At the time of our visit several tracheotomy cases were lying here.

The practice or service in the Commune-Hospital at Copenhagen is a mixed one—an arrangement which seems less strange when thus expressed than it looks to the eye of the visitor. It means that medical and surgical cases are found side by side in one ward, and visited by the same medical attendant, who treats in succession typhoid fever, fracture of the femur, cancer of the stomach, and the stump of an amputated forearm. We wish to record some of the cases seen under the care of Professor Rasmussen, and his method of treatment. Dilatation of the stomach—a disease so seldom observed (or recognised?) in this country—was being treated very successfully by washing out the viscus with a syphon stomach-pump. Phthisis is treated with warm infusions of malt; Rasmussen questions the value of cod-liver oil. Emphysema and asthma in Copenhagen seem to be relieved by iodide of potassium. Typhoid fever is being treated by Rasmussen with sulphocarbolate of soda, with quinine in small doses in some cases, and with cold baths (16° to 18°) whenever the temperature exceeds 41°. The results of these various means are uncertain, for, as Rasmussen wisely remarks, no two epidemics of typhoid fever are alike. In his surgical practice it was interesting to find Rasmussen of a different opinion from his colleague, Saxtorph, in the Clinical Hospital, as regards the value of carbolic acid. The former professor now constantly uses a watery solution of sulphurous acid, and prefers this to all other dressings, carbolic acid included.

The hospital for mental diseases and the epidemic-house are two nearly symmetrical buildings well behind the hospital proper. The former furnishes accommodation for eighteen delirious or maniacal cases, is arranged on the same corridor system as the hospital, and is of course specially furnished for the class of patients that are treated in it.

The bath-houses are two symmetrical buildings—male and female. The bath-rooms are very extensive, and of every kind—Russian, vapour, ordinary, and so on.

The kitchen, washing-houses, laundry, etc., are all supplied with steam, and it is by steam that all the cooking, washing, drying, and dressing are done. Every patient on admission is stripped and sent to the bath. He is then sent to his ward and furnished with an entire change of clothes, both under-clothing and upper-clothing. Nothing whatever in the way of food or drink is allowed to be brought in for the patients. There are three scales of diet, which closely resemble those of London hospitals, namely—No. 1 (diet for severe cases), liquids only; No. 2 (diet for convalescents), soup, fish, etc.; and No. 3 (or ordinary diet), meat, fish, soup, etc. Wine is not included in the ordinary diet, but is very much used, especially clarets.

The pathological building has been mentioned before. It is of no great size, is built in the chapel style,. and contains a necropsy-room, a small mounting-room, and a dead-room. Post-mortem examinations are not compulsory in Denmark, but nearly all are obtained.

There are altogether five services at the Commune-Hospital—namely, those of Drs. Holmer, Rasmussen, Brunnicke, Aarstrup, and Engelstet. The first gentleman's service is purely surgical, and the last has charge of syphilitic and cutaneous cases. The department of dermatology and syphilis is an university clinic, attended once a week during the sixth year of medical study. Each of the services has connected with it three or more resident assistants, the chief of whom probably divides the work of the daily visit with the professor. A journal is kept of every case admitted into the hospital.

We may add a few notes of the practice of Professor Holmer, the surgeon in the Commune-Hospital. Holmer agrees with Saxtorph, and disagrees with Rasmussen, on the value of carbolic acid in the treatment of wounds. This surgeon adopts Lister's antiseptic system completely, and believes in its efficacy. Two instructive cases of tracheotomy for croup were seen under Holmer's care in boys of three and six years respectively. A special ward is employed for these tracheotomy cases, filled with warm, moist air by means of pipes. Holmer has operated on no fewer than fifty-one cases of "diphtheritic laryngitis," and has been blest with 50 per cent. of recoveries!

It has been already sufficiently indicated how the practice of the Commune-Hospital is open to the medical students of the University, and how far they avail themselves of the privilege.

Copenhagen contains at least one more hospital, the Hospital for Children and for Diseases peculiar to Women. We are not in a position to speak of this place. Dr. Hirschprung attends to pædiatrics, and Professor Horitz operates on the gynæcological cases.

ENTERING the hospital surgery during the late war, Dr.—— met Paddy Doyle, the orderly, and asked him which he considered the most dangerous of the many cases then in hospital. "That, sir," said Paddy, as he pointed to where, on a table, lay a case of surgical instruments.

INDIVIDUALISM.

AN INTRODUCTORY ADDRESS DELIVERED BEFORE THE MEDICAL SOCIETY OF KING'S COLLEGE, LONDON, ON OCTOBER 16, 1873.

By JOHN CURNOW, M.D. Lond., M.R.C.P.,
Professor of Anatomy in, and Hon. Fellow of, King's College.

(*Continued from page* 590.)

Now we hear on all sides the announcement of, and mutual congratulations on, the near approach of a scientific pharmacology, deduced from experiments on the lower animals, as the true starting-point for the future treatment of disease; and Claude Bernard, by his researches on curare, is hailed as the pioneer of the new science. Whilst believing that as in the chemical school, so there is also in this a certain amount of truth, still I fear for both the same danger—that their very exactitude will prove the weak point in their application to therapeutics. Experiments on lower animals, such as frogs, lead to definite and calculable results; but we all know that with different human beings the same doses of iodide of potassium, mercury, morphia, and other drugs act very differently. We dismiss the fact summarily by calling it idiosyncrasy, but this is a mere confession of our ignorance. Human beings, moreover, are not singular in this idiosyncrasy, for on referring to the report of the well-known experiments on the influence of mercury on the biliary secretion, by the Edinburgh Committee of the British Association, which was read at the Norwich meeting in 1868, we find that a young retriever (D. Table 1), under similar external conditions gave very different results to the other dogs operated on; and the author of a prize essay read before the Medical Society of Lyons has recently stated that chloral differs in its action on dogs, according to size, stature, and race—"old dogs being more readily influenced than young ones, and hounds and spaniels than bulldogs or terriers."(a) These researches tend to show that the higher in the scale is the animal experimented on, and the more complex are its vital phenomena, the farther removed is the result from the certainty attainable when lower animals or inorganic substances are the objects of our investigation. Again, with many of our most useful drugs, well-defined and characteristic effects are not produced on the healthy organism, and it is the presence of the disease which elucidates the action of the remedy. Thus, no one from its effects in health could have inferred the beneficial action of iron in anæmia, of bromide of potassium in epilepsy, or of quinine in ague. Our ignorance of the tissue-changes which constitute the first stage of most diseases is another barrier to this method; we know not the primary departure from health in such an every-day affection as gout, for when uric acid is detectable in the blood, and we combat its presence, the disease is far advanced. Hence we are unable to make use of the substances employed in exact physiological experiments, although their action is so definitely localised that one is stated to influence "the cardiac inhibitory ganglia, another the nerve-fibres intermediate between these ganglia and the ends of the vagi nerves, and another these endings themselves."(b) The conditions on which health and disease depend are still too complex and ill understood, and the differences in the same disease in different individuals are so inexplicable, that as yet only the roughest generalisations can be made, and the more mathematical and precise a science becomes, the more difficult it is to subject such varying and ill-defined phenomena to its dominion. To sum it up, Truth is against Life: Life is combative; Science non-combative. We are still reluctantly obliged to admit "the miracle of life which will not be expounded, but will remain a miracle."(c)

Under the physiological method we must return to the symptomatic treatment of disease, and use cold to lower increased temperature, atropia to dilate contracted pupils, nitrite of amyl to relax abnormally contracted small arteries, etc., quite overlooking the varying conditions on which these symptoms may be dependent. The present school of physiologists is so rapidly becoming purely physico-chemical, ignoring the subtler problems of nutrition, growth, and development, that its predominance in practical medicine will not be an unmixed benefit. The tendency to appear exact by disregarding the complexity of the factors is an old failing in our medical history, and when we read of non-lethal and minimum-lethal doses of disease, and see the minutely accurate numerical and graphic representation of those phenomena which can be thus shown, without the slightest reference to or regard for any others, I fear lest we revert to adjusting the doses of our drugs mathematically, according to the plan of Alkahendi, in the ninth century, who regulated them by the rules of geometrical proportion and of musical harmony; and so shall in some new guise reinstate the old therapeutic formula—"The doses are as the squares of the constitution." That this is scarcely an exaggeration of the extremes to which some mathematical enthusiasts ride their hobby is shown by Volkmann's formula for the influence of stature on the pulse; the ratio he deduces being "that of the ninth root of the fifth power of the height."(d)

The slow growth of medicine has often been urged against it by its detractors, but the more complicated the data with which any science has to deal, the more removed it is from being an exact or pure science, the less capable are its elements of being reduced to calculation, and the slower must its progress necessarily be. At present the constituent factors of the human constitution are so varying, so intricate, and so imperfectly known, while our medicinal agents are so numerous, and their real value in many cases so doubtful, that it is at all events premature to displace the old art of therapeutics by the new science of pharmacology (whose true position thereto is merely suggestive), and to substitute for the ancient empirical methods the modern physico-chemical ones. To prevent this from taking place, we must exercise our individual judgments, even if we are forced to oppose prevailing ideas, and to decline following the advocates of plausible, popular doctrines.

"Give me truths;
For I am weary of the surfaces
And die of inanition. If I knew
Only the herbs and simples of the wood,
Rue, cinquefoil, gill, vervain, and agrimony,
Blue-veteh, and trillium, hawkweed, sassafras,
Milkweeds, and murky brakes, quaint pipes and sundew,
And rare and virtuous roots, which in these woods
Draw untold juices from the common earth,
Untold, unknown, and I could surely smell
Their fragrance, and their chemistry apply
By sweet affinities to human flesh,
Driving the foe and 'stablishing the friend,—
O! that were much, and I could be a part
Of the round day, related to the sun
And planted world, and full executor
Of their imperfect functions."

I hope that I may not be misunderstood here. I value as highly as anyone every advance in science, and particularly in those sciences which are related to medicines, but I cannot look upon them as worthy of being called "allied" sciences; I regard them as preliminary and ancillary thereto, and I hold that the great aim of all of us should be not to become physiologists, anatomists, or chemists, but physicians; and that to attain to this end, the only workshop is the bedside, and the best guides are observation and experience. The final purpose of our profession is "to cure disease, to prevent disease, to alleviate pain, and to prolong life;"(e) we have therefore to acquire a practical art, and the perfecting of ourselves in its technicalities is the first essential. The limits in chemical, physical, and mechanical remedies are quickly reached; while the unwieldy mass of therapeutic agents used by us is so heterogeneous and chaotic as to render any scientific classification thereof impossible. The absurd doctrines based on such attempts in the past history of physic should be enough to frighten us from further essays in this direction. Each system in turn started from some fragmentary truth, but being forced beyond its legitimate sphere, the very truth therein was endangered.

When fascinated by the brilliant seductiveness of some "easy method" or "royal road" out of our difficulties, we must not forget that the tritest things in our medical experience are among the most mysterious, and we may turn with advantage to the works and practice of the true clinical physician, such as Sydenham, Trousseau, Graves, or Stokes. We shall then appreciate that empirical method which they adopted, and which, though often scoffed at, placed them amongst the greatest benefactors to suffering humanity. "Prove all things; hold fast that which is good."

"*Ars longa, vita brevis*," said that very learned man, Dr. Butts, the Court physician (*vide* the narrative of "The Lady Rohesia," by Thomas Ingoldsby, Esq.); and, unfortunately for us, both parts of that old aphorism are still true. But a

(a) *Lyon Médical*, 1872, Tome ix., p. 300.
(b) Fraser's Lectures, p. 403.
(c) Emerson's "Essays": Experience," Bohn's edit., p. 184.
(d) Carpenter's "Human Physiology," 6th edit., p. 227, note.
(e) Sir William Jenner's "Practical Medicine of To-day," p. 26.

more hopeful prospect is held out to us in the "good time coming;" for then we shall no longer use such base material substances as iron, lead, arsenic, zinc, or even our old familiar friend, sulphate of magnesia, but bid them give way to fairer and more ethereal beings in the numerous progeny of that famous quartette: carbon, hydrogen, oxygen, and nitrogen. At least, that is what I gather from the following quotation:—

"The subject I have had to treat goes to the root of principle in the study of means for the cure—I am bold to say the cure, by true and certain scientific methods, of the diseases which most severely scourge the human family and many of the lower families in the scale of living organisation.

"Gradually—but surely as gradually—the curer of bodies will learn from the chemist and practical physiologist that his remedies, rapid in action, easy in administration, positive in result, must all come from the organic compounds, which are themselves a part of the organic nature.

"Thus learned, the physician will exchange dogmatism for wisdom, faith for knowledge, and doubt for certainty. He will compete with his fellows by the pure strength of intellect, he will be responsible for results without evasion, and his duties will be more solemnly his own; but he will stand where he never stood before, a conscious master in his art: he will know in what he doth believe, and the world, assured by his exactitude, will soon learn to know none but him in his vocation." (f)

This is not the dream of an ancient alchemist, intoxicated with the illusions conjured up by the idea of soon possessing the *elixir vitæ*, or the philosopher's stone; but it would really seem that, even in these prosaic days, the subtle influence derived from close communion with organic derivatives like "methyl and the allied compounds," will inspire with like visions the author of a paper read before the British Association of Science, and lead him thus sanguinely to prophesy the advent of the millennium of medicine.

I am well aware that Dr. Burdon-Sanderson, in his talented address on Physiology, at the past meeting of the British Medical Association, retorted on the physician that it was the latter "who attempted to apply the facts of recent experiment, without any sufficient knowledge of their bearing." (g) He instanced the present comparative disuse of mercury in certain well-known digestive derangements, as not being deducible from the investigations of the Edinburgh Committee. Against this ingenious shifting of the true position of the question—tried, I think, rather too soon—I must strongly protest. By referring to the discussion at Oxford in 1868, on the abbreviated report presented by Professor Hughes Bennett, one is struck with the unanimity with which every practical physician (including the president, Dr. Acland) spoke against the unwarrantable conclusions drawn by the originator and reporter of these researches. His inferences are even more absurd than those which Dr. Sanderson alleges throw undeserved discredit on his science, but I will only read one sentence—"Mercury was found in the Pharmacopœia, because it was copied from one to the other." (h)

Such rash statements as those which I have quoted seem very prevalent among the most eager prosecutors of the new science, and tend so much to lower unduly its position with cautious observers, that it will soon have to cry out in the words of the old maxim, "Save me from my friends."

The special object of my address has been to show the safeguards derived from a healthy individualism, both generally and technically; and to enforce the danger of allowing it to be swamped by mere popular opinion. For economy in teaching, the unit is lost sight of, and I consider it far from being the least advantage of this Society, that it is the only means in our educational system by which the expression of our individual ideas is fostered and encouraged, for elsewhere the student's judgment is overshadowed by that of his teachers or examiners, and he is only concerned in learning and reproducing their opinions. That a large element of the success of this College in the formation of judicious practitioners is due to this influence I am quite sure, and herein, as well as in promoting feelings of mutual attachment and forbearance, lie its chief claims to our support. A healthy individualism is also of great benefit to the Society, and in many of its best officers, under whose management its proceedings have been most flourishing and most useful, this characteristic has been very marked. Moreover, the Society appeals to the patriotism and affection of every King's man, for the name of nearly every one who has been taught here is inscribed on its records, and it is the most valuable legacy that has descended to us from our predecessors. Already it has become a sad memorial of such men as Todd, Salter, Brinton, Price, Tanner, Powles, Kempthorne, etc., who were in turn members of its executive, and who have passed from amongst us in the midst of their usefulness—their memories and their deeds now alone remaining.

Finally, gentlemen, the enunciation of such conservative opinions on education by one barely removed from the position of a student, may seem strange, and may have been little anticipated; but they are due to a strong impression, that we are increasingly affected by a tendency to form, and unhesitatingly act on, cursory judgments, based on superficial, and therefore unreliable results; and that it is too much the fashion to glorify our own period and our own work, forgetting that we are much too near and too interested to sum up impartially the effects of our own endeavours. I have therefore felt bound to reiterate the old but still necessary motto, "*Laus temporis acti;*" for as the fabled Antæus renewed his strength by contact with his mother earth, in like manner we, when baffled and almost crushed amid the clouds of speculative science, can always obtain fresh energy and vigour by returning to our *terra firma*—the examples and teachings of the fathers of "clinical" medicine.

(f) Dr. B. W. Richardson, "Report of British Association of Science, 1868."
(g) *British Medical Journal*, 1873, vol. ii., p. 153.
(h) *Ibid.*, p. 176.

REVIEWS.

Man and Apes: an Exposition of Structural Resemblances and Differences bearing upon Questions of Affinity and Origin. By St. George Mivart, F.R.S., V.P.Z.S., etc. London: Hardwicke. 1873. Pp. 200.

We welcome the appearance of this unpretending little work. It is a calm, dispassionate, and unprejudiced inquiry by a competent naturalist and anatomist into the value and truth of those doctrines as to man's relationship with the Simian families which, during the last ten years, have acquired such a rapid—but, as we believe, undue—development amongst large classes of society both in Germany and England.

Mr. Mivart does not place man, with Professor Owen, in a zoological sub-kingdom by himself, nor even, with Cuvier, in a separate natural order: he is content to put him where Linnæus and Professor Huxley would agree he should be zoologically placed—as a mere family (*Hominidæ*) of the sub-order *Anthropoidea*, of the order *Primates*.

We do not care to stop to inquire whether this classification, taking all the facts of the case into consideration, is the best or the truest. Its adoption at least proves that Mr. Mivart is ready to concede a large advantage to the supporters of a purely evolutionary hypothesis. But having made this concession, we think his book one of the most telling contributions to the anti-Darwinian side of the controversy which we have lately seen. In the first place he completely disposes of the claims of the gorilla to be the highest of apes and nearest to man, by showing that the huge brute is nothing of the kind. With regard to his brain characters, this indeed had been done long ago by Gratiolet; but the popular opinion of England has not been much influenced by the French estimate of the gorilla. Secondly, Mr. Mivart proves incontrovertibly that there is no one kind of ape which has any special or exclusive affinity to man, and that the resemblance between him and the lower forms is shared in not very different proportion by different species—some of them widely separated; that there is no regular ascensive approach to man in the Simian families, but, in the words of Schroeder van der Kolk and Vrolik, "the lines of affinity existing between the different Primates construct rather a network than a ladder."

With regard to the main question underlying the whole controversy, that of the descent of man from some ape form, we will allow Mr. Mivart to speak for himself in the following remarkable passage:—

"Let us suppose ourselves to be purely immaterial intelligences, acquainted only with a world peopled like our own, except that man had never lived on it, yet into which the dead body of a man had been somehow introduced.

"We should, I think, consider such a body to be that of some latisternal ape, but of one much more widely differing from all the others than such others differ one from another amongst themselves. We should be especially struck with its vast brain, and we should be the more impressed by it when

we noted how bulky was the body to which that brain belonged. We should be so impressed because we should have previously noted that, as a general rule, in back-boned animals, the larger the bulk of the body the less the relative size of the brain. From our knowledge of the habits and faculties of various animals in relation to their brain structure, we should be led to infer that the animal Man was one possessing great powers of co-ordinating movements, and that his emotional sensibility would have been considerable. But above all, his powers of imagination would have been deemed by us to have been prodigious, with a corresponding faculty of collecting, grouping, and preserving sensible images of objects in complex and coherent aggregations, to a degree much greater than in any other animal with which we were before acquainted. Did we know that all the various other kinds of existing animals had been developed one from another by evolution; did we know that the numerous species had been evolved from potential to actual existence by implanted powers in matter, aided by the influence of incident forces; then we might reasonably argue by analogy that a similar mode of origin had given rise to the exceptional being, the body of which we were examining.

"If, however, it were made clear to us—immaterial intelligences—that the dead body before us had been, in life, animated, not by a merely animal nature, but by an active intelligence like our own, so that the difference between him and all other animals was not a difference of degree, but of *kind*—if we could be made to understand that its vast power of collecting and grouping sensible images served but to supply it with the materials made use of by its intelligence to perceive, not merely sensible phenomena, but also abstract qualities of objects—if we become aware that the sounds uttered by it in life were not exclusively emotional expressions, but signs of general conceptions (such as predominate in the language of even the lowest savage), then the aspect of the question would be entirely altered for us.

"We should probably decide that if the body before us seemed to us to be so little related to the informing rational soul that its existence anterior to, and independent of, such rational soul was quite conceivable and possible, then its origin by process of natural evolution would, indeed, also be conceivable, and, indeed, *à priori* probable.

"But if, on the other hand, we were convinced, from whatever reason, that it was inconceivable and impossible for such a body to be developed or exist without such informing soul, then we should, with perfect reason and logic, affirm that, as no natural process would account for the entirely different kind of soul—one capable of articulately expressing general conceptions—so no merely natural process could account for the origin of the body informed by it—a body to which such an intellectual faculty was so essentially and intimately related."—Pp. 189 to 192.

For ourselves, we doubt not the philosophical truth of this conclusion, consonant as it is with the instincts of universal humanity. Mr. Mivart's little book, which is written in language "understanded of the people," will, we hope, supply an antidote to the unfounded assumptions and hasty generalisations of Mr. Darwin's "Descent of Man."

Fractures of the Elbow-Joint. An Essay to which was awarded the Second Prize of the Boylston Medical Society for 1873. By Walter Ela. Cambridge: Welsh, Bigelow, and Co., University Press. 1873. Pp. 57.

The author of this little monograph is a second year's student at Harvard Medical College. It is founded to a great extent upon information derived from the fracture-books of the out-patient department of the Massachusetts General Hospital. It is got up in the most highly finished style on glazed toned paper, with large clear type and wide margins. There are a few woodcuts, which and the Albertype were taken from drawings made by Dr. H. P. Quincy.

After two pages of general remarks upon fractures of the elbow-joint, a short account of the anatomy of the parts entering into the formation of the elbow is given—bones, ligaments, and muscles being briefly described; then a description of the mode of development of the humerus, radius, and ulna follows. In the greater part of the remaining pages the nature, frequency, causes, complications, diagnosis, mode of union, treatment, and prognosis of these fractures are considered.

The author deserves praise for the thorough manner in which he has consulted the works of authorities on fractures, the treatises on fractures about the elbow in works on general surgery, and the reports of hospitals upon the subject; but, in spite of his remarks in the first five lines of the introductory section, we cannot flatter Mr. Walter Ela by saying that we find anything in the pages of this little volume, under any of the headings we have mentioned, for which he is not indebted to well-known anatomical and surgical authorities.

We do not quite see how he can reconcile the two statements—(1) that one of the reasons for the obscurity which attends fractures in this region is "that the important structures are confined in so small a compass," and (2) that "the uncertainty in prognosis is, to a great extent, due to the extensive articular surfaces in this vicinity, which are often implicated in case of fracture of the joint"; and when he goes on to say "whereby inflammation is set up," we should like to know what the "whereby" means: has it reference to the *extensiveness* of the *articular* surfaces, or to the fact that extensive surfaces, or articular surfaces, or extensive articular surfaces, are *implicated?*

The anatomy of the bony structures of the joint is of the baldest character. No mention is made of one of the most important features of the trochlear portion of the humerus—viz., the obliquity of its margins, whereby this articular surface lies in the middle line of the bone posteriorly, and the prominence of the inner margin is greater anteriorly and that of the outer margin posteriorly. Yet this obliquity is of great importance. Then we must take exception to the statement that "the articular surface on which the head of the radius is received—the capitellum—is on the inferior extremity of the external condyle." A second-year student, even if he is not writing a treatise on the elbow-joint, ought to know that the articular surface for the radius is not simply and entirely on the inferior extremity of the external condyle; but consists of an eminence and a groove internal to it, upon the *antero*-inferior extremity, and that this articular surface does not extend to the posterior surface of the extremity at all. The articular ends of the ulna and radius are, too, very scantily outlined; yet if the anatomy of the part is introduced in a monograph of this sort, it ought to be minutely and completely described.

There is no necessity for us to dwell upon the accounts of the various kinds of fracture, but we feel bound to refer to a most carefully described case of fracture of the coronoid process, and impacted fracture of the neck of the radius, which Mr. Ela came across in the dissecting-room of the Harvard Medical School in November, 1872. It is described as a case of "fracture of the coronoid process, partial fracture of the olecranon, impacted fracture of the neck of the radius, and separation of the epiphysis of the internal condyle, followed by excellent motion"—as was ascertained upon inquiry of the woman's doctor, who says that motion was not impaired, nor was any deformity of the arm noticed after the injury. The parts of the joint after dissection are illustrated in four figures by Dr. Quincy.

This case is very interesting, and as rare as interesting. The author says he has not been able to find any mention of an impacted fracture in the upper extremity of the radius in any surgical writer, and thinks it has not been described. We cannot say that we are able to inform him of any report of such a case; but, whether or not, great credit is due for the acuteness shown in detecting the fracture in this instance, and for the care exercised in reporting upon it. The essay altogether deserves the prize which the Boylston Medical Society has awarded to it; though we do not advise all students who obtain prizes at medical societies to hasten to publish their successful papers. Let them wait awhile, and they will find that experience and matured judgment will enable them, later, to build upon the efforts of their earlier years a structure which will do them more honour than can fairly be expected from the earlier production.

Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1874. (Twenty-eighth year.) John Smith and Co., 52, Long Acre.

We have so frequently expressed our sense of the value of "Smith's Visiting List," that it is unnecessary for us to say more than that the edition for 1874 is in every way equal to its predecessors. It will be found a most useful companion, not only to the general practitioner, but to the consulting physician and surgeon.

Medical Visiting List. Introduced by Alfred Sheen, Surgeon to the Cardiff Infirmary.

This is simply a few pages of paper ruled for names of patients and days of visits, in a stiff cover.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, November 12.

The Introductories (*continued*). — Meath Hospital and County Dublin Infirmary—Richmond Surgical Hospital.

On November 3, Dr. Foot opened the winter session of the Meath Hospital and County Dublin Infirmary, with an address which was characterised by eloquence and earnestness, and, above all, pervaded by a vein of *sympathy* for the student, no matter what his standing. He commenced by stating that he found himself rather unexpectedly called upon to address them on this critical occasion. It had been arranged that his illustrious colleague, Dr. Stokes, should have spoken to them that day; but a sore accumulation of domestic trouble kept him temporarily absent. However, with the true interest Dr. Stokes ever felt for students, he had charged him to assure them of his deep sympathy with those about to commence their studies; to exhort to perseverance those with whose industry he was already well acquainted; while to those who had not yet exhibited any marked interest in their studies he sent a timely and affectionate warning to bestir themselves before their golden opportunities were lost for ever. As he (Dr. Foot) cast about in his thoughts how he could best carry out these instructions, and tried to think which of the many ideas fermenting in his mind under the influence of the occasion was the best suited to effect that object, he found perpetually turning up the principles dear to all true students —the principles of work and earnestness and persevering diligence—themes which could never be trite or threadbare as long as there were young students anxious to hear of the so-called secrets of success, and older ones willing to put these principles into practice.

After some prefatory observations on the difficulty of the task before him, Dr. Foot drew a vivid picture of the feelings of a beginner, who was in the uncomfortable position of a new boy in a school, and told them, from his own ease, how to get interested at once in hospital attendance, and so acquire the secret of punctual regularity. He advocated the mutual assistance of one another by students, and dwelt on the value to a beginner of the early cultivation of the senses, illustrating the wonderful differences in perfection between the taught and the untaught hand, eye, and ear. The best order of study, as founded on long hospital experience, was laid before the students. The picture of the different behaviour as to hospital attendance of the interested and the uninterested student was graphic and amusing, and seemed to have some very telling points for the audience. Tracing the chain of interest, enthusiasm, and work, with their interdependence on one another, he forcibly pointed out that it would not do to jog along with an easy indifference to exertion, content with avoiding gross violation of decorum. There were some by-roads they might thus travel—roads on which none they met would impede them as long as their appearance was genteel, and their dulness inoffensive; but, on the hard, rough, crowded highroad to success, thronged with onward-pressing enterprising, enthusiastic men, they would have no chance of even a footing in the Olympian competition unless they had early trained themselves to wrestle with intellectual athletes, acquired by their own exertions the steel mail of self reliance, and learned self-mastery, the parent of all other conquests. He was not so foolish or so mad as to suggest to them a contempt for the valuable assistance of those who had the power and might have the will to assist them, but he wanted to encourage any student present who had no friend or patron in the profession, and to tell such a one that he was not therefore exiled from even its highest honours. If the humblest man present would diligently incorporate into the essence of his daily life the principles he urged on them, the laurels of professional success would be within his reach, and a crown of their green leaves, slowly woven by his own unaided exertions, would grace his head in a far more noble and less envied manner than one manufactured by any other means, even though it were by a rapid patent process.

He turned then to the consideration of time, its value, how to make it, the inroads upon a student's time, by whom made, and how to avoid them. It did not occur to students at first to consider all the deep meaning that lay hidden in that one word "Past," but by-and-by as examinations became imminent, lightning-flashes of memory illuminated their frightened minds, giving them glimpses of the catalogue of unused yesterdays at the debtor side of their account with time. With great force and power he reviewed the reasons which made it so painful to see idlers refusing to accept their hospital privileges, the most painful thought of all being that of the hecatombs which thereby might fall at the shrine of their future experience. The senior pupils, who came under the lecturer's more immediate observation, were highly commended for their marked advance in clinical knowledge: the gentlemen who held the responsible positions of clinical assistants for the past twelve months came in for a well-deserved meed of praise. He went minutely into the different epochs of mental growth, observable by all clinical teachers in their students' progress, and, having quoted the celebrated passage from the writings of the Rev. Sydney Smith on the subject—"Great success, the fruit of great labour"—he wound up with some very touching remarks upon the disappointments likely to result from the neglect of early opportunities.

On Thursday, November 7, Mr. William Stokes, Professor of Surgery at the Royal College of Surgeons, Ireland, gave an introductory address at the Richmond Surgical Hospital. He said—"A twofold duty devolves on me on the present occasion: one is to bid you welcome to the Richmond Hospital—an institution hallowed by the memories of so many great men, who have so closely identified themselves with the progress of surgical science during the past half-century; and the other is to express how deeply I feel the honour and responsibility which my colleagues have conferred upon me by asking me to inaugurate this session, to mark, as it were, the commencement of our common, and, I trust, our happy toil." Mr. Stokes then proceeded briefly to review the work done in the Hospital by its past Surgeons. The treatment of aneurism by pressure was first conceived and put into practice in their wards. The introduction of this plan, known now all over the world as the "Dublin method," belonged to Charles H. Todd, the father of Robert B. Todd, the late eminent Physician of King's College Hospital. It is not long since the late Professor Smith mentioned to Mr. Stokes the particulars of the case in which this treatment was first applied. The case was one of popliteal aneurism, and pressure had been in the first instance applied in order to temporarily occlude the femoral until the calibre of the collateral vessels had increased, ligature of the main artery being at first contemplated. The pressure had been applied for upwards of three days, and Mr. Smith, then a junior student, with a few others, went with Mr. Todd into the ward where the patient was. Mr. Todd went up to the patient, put his hand on the tumour, and kept it there for some time. Then removing the pressure after a few moments, he looked up and said, to the astonishment of all present, "It is now still." The tumour eventually almost completely disappeared, for, the moment the pulsation ceased, that process began which was so characteristically described by the illustrious John Hunter when first he applied a ligature to the femoral artery for the cure of aneurism. "Now," said he to Mr. Peile, who was standing by, "the absorbents are at it, like mites at a cheese."

At a subsequent part of his address, Mr. Stokes called in question the doctrines of Sir James Simpson and Mr. Erichsen as to the excessive mortality in hospitals. In the Richmond Hospital during the past four years the lecturer had had thirty-eight amputations, with only two unfavourable results, and in the Meath Hospital the statistics were equally satisfactory; while Mr. Callender, Surgeon to St. Bartholomew's Hospital, one of the largest, if not the largest, in London, and situated in one of the most populous districts of the metropolis, thus writes: "For four and a half years there has not been one patient lost as a consequence of amputation, although during that time, under Sir James Paget or myself, thirty-five consecutive amputations have been treated in the same wards." Hospital reform should not consist in the substitution of a cluster of huts like a gipsy encampment for carefully constructed buildings, where arrangements can be made for having good ventilation, pure air, plenty of light, an even temperature

a perfect system of sewerage, carefully-cooked, simple, but nutritious food, and skilful nursing. As a proof of the vastly improved sanitary condition of the Richmond Hospital, Mr. Stokes mentioned that many of the so-called "hospital diseases," such as erysipelas, pyæmia, hospital gangrene, and cancrum oris, which were so frequently the subject of observation during the period of his pupilage, were now, it might be said, especially as regards the two latter diseases, almost entirely stamped out. During the time that he had been officially connected with the hospital he had not had an opportunity of seeing a single case of either of these two latter affections. This most gratifying and important circumstance could only be attributed to the vastly improved sanitary condition of the institution.

I cannot forbear to give the close of this discourse at length:—"And now, in conclusion," Mr. Stokes went on to say, "I wish to mention that quite recently, as you all know, two men who have done so much to make this hospital famous, have resigned their respective offices. These offices have been filled by the appointments of Dr. William Thomson and Dr. Thornley Stoker, both of whom, I need hardly say, have been cordially welcomed by their colleagues, and by all here who take an interest in the welfare of this institution, as they both have already, by their talents, attainments, earnestness, and social qualities, given proof that they are destined to merit very high distinction in our profession.

"Of one of those who have resigned (our late Senior Surgeon, and the honoured father of Irish surgeons, Robert Adams), I will only say that in retiring from the active duties of this institution he bears with him the sincere regard and esteem of his former colleagues and pupils, all of whom hope that he may often revisit the scene of his former labours, assist and guide by his sage advice, and encourage by his example; and that he may be long spared to look back with pride and satisfaction on his distinguished career—a career so beneficial to the public, so useful to the profession, so honourable to himself, and so creditable to the country of his birth.

"The voice of the other (of Robert William Smith) is now hushed in the stillness of death; the voice that for forty years has been heard so often within these walls, and who, until a fell disease prostrated and enfeebled him, worked with a vigour, a zeal, a fidelity, and an enthusiasm, combined with a pure love for truth, that has been in the annals of our profession, I may say, wholly without example, and who was rewarded by acquiring for himself an undying fame, and—what he prized far more—the deep respect of his professional brethren, the admiration of his countrymen, and the warm and lasting affection of his friends. Scientific workers may be divided into two great classes. There are those who advance it by patient investigation, by honest criticism, and by faithful endeavours to verify or disprove the opinions and theories of others. They are like the stars that shine by a reflected light; but worthy are they of praise and honour, for their work is useful and it is good. If they have not creative power, they have the power to adorn, to strengthen, and make permanent the work of others. But Robert Smith belonged to a nobler band of workers—those, namely, who illumine the rugged paths of science with lamps of their own—lamps which shed no borrowed light, and which they fashion by honest and bitter toil and light with their genius. No petty ambition for worldly honours, no sordid love of gain stimulated him to labour. His great aim, the goal he ever strove after, the one ambition of his pure, his blameless, his religious life, was, in the hitherto unexplored regions of the great art and science to which I may say from his early boyhood he devoted himself, to unfurl the glorious banner of truth: he felt and knew that by so doing he best advanced Christ's work here on earth."

GENERAL CORRESPONDENCE.

ADDRESSES ON PRESCRIPTIONS.

LETTER FROM MR. BALMANNO SQUIRE.

[To the Editor of the Medical Times and Gazette.]

SIR,—You have recently treated very fully on a subject of very general interest to the profession—viz., the guinea fee. May I bring under your notice another ethical question—viz., the stamping of the practitioner's address on the prescription.

Many practitioners bashfully avoid this, on principle, as a kind of undignified advertisement. I had recently occasion to consult at his house one of the most respected of the leaders of our profession on the case of a patient, and he politely invited me to write the prescription he had recommended myself. On my taking up a piece of his note-paper with his address stamped on it, he said "No! not the half with the address on; tear it in two, and take the other half to write on." Next day I was in the shop of a leading London chemist, and was referred to to diagnose the writing and initials of a physician who had written a prescription which the chemist was unable to make up, inasmuch as the total measure of the mixture as ordered fell far short of the sum of the measures of its ingredients. A reference to the "Medical Directory" failed to identify the writer, so that the chemist was left in a dilemma. He would have been in the same case if the accidental mistake had involved the prescribing of a fatally poisonous dose; but the address of the physician on the paper would have enabled the chemist to have sought a prompt rectification of the error. In the case of surgeons whose signatures happen to be fairly legible the address would not matter so much. I make the question one of a stamped (where possible) instead of a written address, because a stamped one would be sure to be always legible. Now, the stamped address on a private document—a letter addressed to the patient,—for so a prescription may be regarded,—is scarcely so glaring an advertisement as a bright brass-plate displayed on the house-door in the open street. The absence of it—if its presence serve, as it evidently must, the interests of the patient in case of error in the prescription by enabling the chemist to find the prescriber—is, I venture to say, a piece of conventional affectation; and I think it should be the custom—nay, that it should be the law—that every prescription should bear the address as well as the name of the writer.

I am, &c., BALMANNO SQUIRE.

9, Weymouth-street, Portland-place, W., November 25.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 11.

Dr. C. J. B. WILLIAMS, F.R.S., President, in the Chair.

A PAPER by Mr. JONATHAN HUTCHINSON was read, entitled "A Successful Case of Abdominal Section for Intussusception, with Remarks on this and other Methods of Treatment." The author first narrated the particulars of a successful case in which he had opened the abdomen for the relief of intussusception. The patient was a child aged two years. The intussusception had commenced at the cæcum, and was of such length that its extremity, presenting the inverted ileo-cæcal valve, was extruded several inches at the child's anus. The condition had been one month in course of development; latterly the case had been treated as one of prolapsus, and attempts had been made to keep the bowel in place by means of a cork pad. The child was very ill, and the author having failed in attempts to effect reduction by enemata, etc., and having had experience of several similar cases which had ended fatally, determined to operate. The child was put under chloroform, and the abdomen was opened in the middle line, below the umbilicus. The intussusception was then easily found, and as easily reduced. The after-treatment consisted only in the administration of a few mild opiates, and the child made a rapid recovery. The author next narrated briefly the particulars of three somewhat similar cases in which he had been consulted, and in which the intussuscepted bowel could be easily felt by the finger in the rectum. In all three, in spite of persevering treatment by injections, bougies, etc., the patients had died unrelieved. Without attempting anything like a statistical analysis of recorded cases, the author appended to his paper, in tabular form, the notes of a very considerable number of cases bearing upon the diagnosis and treatment of similar lesions. From the consideration of these the following conclusions were suggested:—1. That it is by no means very uncommon for intussusception to begin at the ileo-cæcal valve, and to progress to such a length that the invaginated part is within reach from the anal orifice, or even extruded. 2. That it is of great importance in all cases of suspected intussusception to examine carefully by the anus. 3. That in almost all cases of intussusception in children, and probably in most of those in adults, the diagnosis may be

made certain by handling the invaginated part through the abdominal wall. 4. That the prognosis of cases of intussusception varies much; first, in ratio with the age of the patient, and secondly, with the tightness of the constriction. 5. That in a large proportion of the cases in which children under one year are the patients, death must be expected within from one to four or six days from the commencement. 6. That in the fatal cases death is usually caused by shock, or by collapse from irritation, and not by peritonitis. 7. That in many cases it is easy, by estimating the severity of the symptoms (vomiting, constipation, etc.), to form an opinion as to whether the intestine is strangulated or simply irreducible. 8. That in cases of strangulated intussusception, whilst there is great risk of speedy death, there is also some hope that gangrene may be produced, and spontaneous cure result. 9. That in cases in which the intussuscepted part is incarcerated and not strangulated there is very little hope of the occurrence of gangrene, and it is probable that the patient will, after some weeks or months, die, worn out by irritation and pain. 10. That the chances of successful treatment, whether by the use of bougies or by the injection of air or water, are exceedingly small, excepting in quite recent cases, and that if the surgeon does not succeed by them promptly, it is not likely that he will succeed at all. 11. That the cases best suited for operation are those which have persisted for some considerable time, and in which the intestine is only incarcerated; and that these cases are also precisely those least likely to be relieved by any other method. 12. That in the cases just referred to, after failure by injections, bougies, etc., an operation is to be strongly recommended. 13. That the records of post-mortems justify the belief that, in a considerable number of the cases referred to, the surgeon will encounter no material difficulty after opening the abdomen. 14. That the circumstances which might cause difficulty are—(1) the tightness of the impaction of the parts; (2) the existence of adhesions; and (3) the presence of gangrene. 15. That, in selecting cases suitable for operation, the surgeon should be guided by the severity of the symptoms to an estimate of the tightness of the strangulation, and as to the probability of gangrene having already set in. 16. That in cases in which the patient's symptoms are very severe, or the stage greatly advanced, it may be wiser to decline the operation, and trust to the use of opiates. 17. That the operation is best performed by an incision in the median line below the umbilicus. 18. That in cases of intussusception in young infants (under one year of age) the prognosis is very desperate, scarcely any recovering excepting the few in whom injection treatment is immediately successful, whilst a large majority die very quickly. 19. That the fact just mentioned may be held to justify, in the case of young infants, very early resort to the operation. 20. That it is very desirable that all who, in the future, have the opportunity for post-mortem examination of intussusception cases should give special attention to the question as to whether an operation would have been practicable, and should record their results.

Mr. Spencer Wells said that in the case of his alluded to the child was moribund. Had the operation been performed sooner, no doubt it would have succeeded. He made only an incision large enough to admit two or three fingers. There was some difficulty in withdrawing the intussuscepted gut, which was a portion of the transverse colon, from the descending colon. In one case the cæcum had passed into the transverse colon. Nélaton had recommended opening the bowel in the right iliac region, and stitching it to the parietes. In this way the necessary relief could for a time be obtained.

Mr. Holmes referred to the case of an infant where he had no difficulty in withdrawing the gut. The case was acute, and the child died of inflammation. The absence of adhesions was interesting. He thought examination by the rectum might be useful. That could be done under anæsthesia.

Dr. Hilton Fagge did not think Mr. Hutchinson's views applicable to all cases. A distinction must be made between invagination and strangulation. Recently he had seen a child with a hard abdominal tumour, and recurrent pains once or twice a day. After two months no blood had passed. Two or three days after, blood appeared, and the child sank in two days, the cause being ileo-cæcal invagination. In another case the child began to have pain about 11.30 a.m. Its bowels were open about 1 p.m., and it was seen in the afternoon. A tumour was found in the abdomen, and inflation tried. The tumour disappeared, and the passage was restored. Some pain remained, and on the seventh day the tumour reappeared. Insufflation was again tried, but failed, yet on the eighteenth day both tumour and symptoms disappeared, and the child recovered. In such cases operation should not be too speedily attempted.

Dr. Thorowgood referred to a case where enemata were tried. After death there were no adhesions, and the parts readily separated.

Mr. Barwell mentioned a case where opium was freely administered after injections and inflation had been tried. After the opium was given the injections succeeded.

Mr. Eastes related the case of a child who had complained of pain, and had had an abdominal tumour for a week. Opium was given and insufflation tried, but failed; but the injection of a large quantity of water succeeded. He thought belladonna might do good, and that milk would suit better than water for injection.

Dr. Symes Thompson did not think belladonna so good as opium. In a case he had seen the paroxysmal pain was so great as to necessitate the use of chloroform.

Mr. Hutchinson said in reply that he was now able to add the fatal results of three operations on the Continent. He quite agreed in the practice of continuing insufflation as long as there was any hope of its success. In his case the bowel had been down a long time. We might diagnose the bowel being loose by its continually and gradually slipping downwards. In his case this had been going on for a month. If there was free bleeding the strangulation was probably very tight.

CLINICAL SOCIETY.

Friday, November 14.

Prescott Hewett, F.R.C.S., President, in the Chair.

Dr. George Johnson related the particulars of some cases of Poisoning by Homœopathic "Concentrated Solution of Camphor."—Case 1. Miss F., aged 20, having a cold and sore throat, took in water twenty-five drops of "Epps's Concentrated Solution of Camphor." She went to bed, and in a short time was found foaming at the mouth, black in the face, and violently convulsed. Mr. Drake, of Brixton, was sent for in great haste. For several hours she was unconscious. She vomited blood-tinged fluid smelling strongly of camphor, and had severe gastric pain. For several days she was partially paralysed, and six months afterwards she was still suffering from symptoms of nervous derangement. The preparation which caused these serious results is a saturated solution of camphor in alcohol, the proportion being an ounce of camphor to an ounce and a quarter of spirit. It is, therefore, stronger than the spirit of camphor of the British Pharmacopœia, in the proportion of 7·2 to 1.—Case 2. The Rev. W. R. was advised to take for a cold three drops of the same preparation every five minutes for an hour. After taking the eighth dose, he was seized with intense headache, which confined him to bed for forty-eight hours; and he was afterwards so weak and ill that he was unable to enter his pulpit for two months.—Case 3. Another case was communicated to Dr. Johnson by Mr. Delamerk Freeman. A young lady, aged 19, took for diarrhœa a teaspoonful of the same preparation, which rendered her comatose for several days, and caused a variety of nervous symptoms, which did not pass away for several days. Dr. Johnson remarked upon the notorious fact that many of the disciples of Hahnemann have passed from the irrational and ludicrous extreme of infinitesimal dilutions to the dangerous extreme of the greatest possible concentration of active and poisonous drugs. There is an obvious risk that this concentrated solution of camphor may be mistaken for the much weaker solution of the British Pharmacopœia—a mistake which, in spite of the printed directions on the bottle, was probably made by both the young ladies who suffered so seriously for their error.

Mr. Eastes thought that the concentrated solution of camphor was not the only homœopathic preparation in which uncertainty of the dose existed. He knew that Dr. A. S. Taylor had examined some powders of morphia prescribed by a homœopathic practitioner, and that he had found in each powder an almost poisonous dose of the drug—five-sixths of a grain—instead of an infinitesimal proportion.

Mr. Brudenell Carter remembered being, many years ago, told by a dispensing chemist in the West of England how shocked he (the chemist) had been by the statement of an assistant. The chemist had been in the habit of ordering from

London, of the makers, the different varieties of globules required by his customers. The assistant, who had lately come from the service of a homœopathic chemist, said that that was a needless piece of trouble, and that any other globules would do as well; that homœopathic chemists were in the habit of ordering their globules in a Winchester quart from a maker, and themselves sorted them out into differently labelled bottles; that the globules sold to the public were all alike; and that the chemists gave the same globules whatever their customers might order.

Dr. Hermann Weber had frequently seen patients who had been under homœopathic treatment. Their prescriptions showed that they had been taking large doses of mercury and other medicines, which other practitioners are in the habit of prescribing. Some of the leading homœopathic men in London declare that they do not give the minute doses recommended by Hahnemann. He knew of a leading practitioner who acknowledged to being a homœopath, and who, in a case of liver disease, had given, at different times on the same day, calomel, nitro-hydrochloric acid, and taraxacum. Another gave iron in large doses. Homœopathic physicians also prescribed mineral waters and full purgative doses of Carlsbad salts. He was very glad that Dr. Johnson had drawn attention to the subject, because this solution of camphor is now largely used as a remedy by the public—frequently, he thought, with harmful results. In one gentleman, who took, three or four times in twenty-four hours, five to eight drops of the solution, it caused, on three different occasions, great sickness and headache, followed by pain in the neck, shoulders, and arms, which lasted more than a week, all of which symptoms Dr. Weber considered due to the depression of the central nervous system caused by the drug.

Dr. Greenhow remarked that the concentrated solution of camphor is now largely employed as a popular remedy, even by people who are not homœopaths; these cases of Dr. Johnson's show that there is certainly danger in its being so taken. Concerning other homœopathic remedies, Dr. Greenhow went on to observe that he had lately seen a lady who had been under homœopathic treatment, and was taking "mercurius" in large doses, by which she had been mercurialised; the remedy was discontinued by Dr. Greenhow, and the patient recovered. We are wrong in the views we take of homœopathic practice. We think only of the infinitesimal doses, and consider *that* the central point of the system; whereas the absurdity of the thing lies in the theory "*similia similibus curantur*," which runs contrary to, and would upset, the collective medical experience of 2000 years.

Dr. A. P. Stewart thought it had been, as it should be, generally known that the homœopathic tinctures are very much stronger than those in ordinary use. He agreed with previous speakers as to the importance of this being known in regard to their tincture of camphor, which is now a very common domestic remedy. With other tinctures, the effects of ignorance of this point might be still more serious than in the case detailed by Dr. Johnson. One of Dr. Stewart's patients proposed to him, some years ago, that she should take some tincture of nux vomica, to which he assented, as he had often previously prescribed it for her with advantage; and, not knowing that it was the homœopathic tincture which she had in her medicine-chest, he ordered eight or ten minims for a dose. She stated that three minims had previously produced diarrhœa; consequently, two minims were ordered, and even this dose was followed by nausea and diarrhœa. He supposed that homœopathic practitioners, being identified in the mind of the public with their own absurdity of infinitesimal doses, and being unwilling publicly to renounce it, had recourse to these concentrated tinctures in order to produce an appreciable effect by very minute doses. That homœopathic globules are not always the inert things which Mr. Carter had described as made up wholesale, was proved by the case of a well-known Italian nobleman, who, some years ago, having forgotten to take one globule at the appointed hour, took two together, and died, with all the symptoms of poisoning by strychnia, the same night.

Dr. Anstie related the particulars of a Remarkable Case of Death from Meningeal Congestion without Inflammation. The patient was an active, intelligent lad of nearly thirteen years, previously quite well. At the end of his school vacation, he had a slight swelling of some cervical glands, and looked somewhat pale, but was quite cheerful and lively. He went back to school for a week, did his lessons with ease, played football, and sculled on the river; but during the whole time a sense of stiffness in the legs was gaining upon him. On October 5 the boy fell down on getting out of bed; and on Dr. Anstie visiting him, it was found that he had lost the power to stand, but could execute any movements of the legs when sitting or lying, though rather slowly. There were tingling sensations in the fingers and toes, but no other affection of sensation. There was a total absence of pyrexia; pulse 85, full but compressible. The upper limbs almost immediately became implicated in the loss of power; the right arm and (to a less extent) the right leg were more affected than the left limbs. Throughout the case, sensation of all kinds was only very slightly affected. There never was any fever, either subjective or as measured by the thermometer. The pulse continued to increase in frequency and to lose in power; it was 130 in the evening of the third day. On this day paralysis of the sterno-mastoids had been detected in the morning; and towards night paralysis of the respiratory muscles set in, and this last symptom steadily increased till it proved fatal at one o'clock the next day—viz., October 8, the fourth day (inclusive) since the commencement of actual paralysis. Neither speech nor swallowing were affected; and there never was the least interference with consciousness or intelligence till within five minutes of death. The affection was diagnosed on the third day by Dr. A. Clark, with the concurrence of Dr. Anstie, as congestion of the spinal cord and medulla oblongata. Post-mortem examination by Dr. Anstie and Mr. Warrington Haward entirely verified this diagnosis. The only pathological phenomenon was congestion, and that congestion was strictly and very remarkably limited to the vessels of the meninges of the cord and the medulla oblongata and the sinuses at the base of the skull. There was no trace of effusion either of serum, lymph, or blood. The absence of inflammatory products agreed with the symptoms during life, for there was no muscular rigidity or pain on movement, no pyrexia, and no paralysis of the sphincters of either rectum or bladder. Dr. Anstie remarked on the rarity of these cases of rapidly fatal congestion, and the little information that is to be found on the subject in the literature of nervous diseases. In Dr. Radcliffe's treatise, however (Reynolds's "System of Medicine," vol. ii.), the occurrence of rapidly fatal cases is alluded to; and Dr. Radcliffe had privately related several such instances to Dr. Anstie, in which death occurred on the fourth day from the first decided symptoms. Dr. Andrew Clark (whose absence was much regretted) had also, it appeared, seen some similar cases, and, what is more important, thinks he has seen one such recover. But there can be little doubt that the malady, coming on in the shape and with the rapidity shown in the case which formed the subject of the paper, presents very little ground for hope of success in treatment. "Derivation" of blood from the affected part would be the ideal treatment; and in the present instance it was attempted by means of diaphoretics, and would have been further attempted by means of purgation had not the case become too evidently hopeless. But Dr. Anstie thinks that it is more than doubtful whether effects of this sort can be really produced, either by these measures, or by leeching to the anus, etc. The etiology of Dr. Anstie's case was remarkably obscure. Of causes that have been assigned as capable of producing spinal congestion—viz., external cold, repressed hæmorrhoids, extreme over-exertion, etc.,—none were in operation; and it seemed impossible to give even a rational guess at the cause.

Mr. Barwell inquired as to the condition of the pupils and muscles.

Dr. Charles Carter related the following case, somewhat similar to Dr. Anstie's:—A young naval officer on the China station, a temperate man, and previously quite well, complained one day of pain and stiffness in the legs. He had taken a long walk—twenty to twenty-five miles—a few days before; and it was thought to be due to this. The pain and stiffness continued, and then were supposed to be rheumatic. He suddenly lost power in the legs, falling when walking, and was taken to hospital. There, in a few days, he died; the paralysis gradually creeping up the trunk, affecting the upper limbs and respiratory muscles till he died asphyxiated. There was no loss of sensation; the bladder and rectum were unaffected; the mind was clear to the last. At the necropsy, the spinal cord was examined, but nothing was found to explain the symptoms.

Dr. Southey mentioned the case of a gentleman whose legs, after a long ride, became stiff. Next day he lost power in both legs; and the paraplegia, at first partial, shortly became complete. He was ordered to give up all stimulants, to remain in a tepid bath one or two hours daily, to lie quietly in bed,

and take milk and lime-water. He had no medicine for three days; then he took twenty grains of bromide of potassium nightly for want of sleep. He recovered slowly, but completely.

Dr. Symes Thompson related particulars, sent to himself, of a case which occurred at Port Elizabeth. The illness began with pain and stiffness at the nape of the neck, to which succeeded paralysis of the legs, and then of the arms. There was an epidemic of the disease, involving thirty or forty individuals, sometimes ending fatally, and sometimes leaving nervous symptoms of a more or less chronic kind.

Dr. G. Harley described another case which in some respects resembled Dr. Anstie's. A young gentleman, aged 17, engaged in a City office, complained of having a cold for three weeks, and then had stiffness of the neck six days before his death. On the following day his limbs became stiff, but he went to his office. Next day he could not walk well, but went to the City. A third day also he went; but he then fell from his stool to the ground and staggered. Being sent home in a cab, he walked well from the cab through the hall, but could not mount the stairs. The paralysis increased. He could not void his fæces, but passed urine extra easily. On the day of his death he could walk across the floor, and was cheerful, saying he felt nothing at all wrong. The paralysis spread rapidly from the legs to the thighs, to the abdominal and to the thoracic walls—when his breathing became affected. Two days before death his pulse was 65; next day it was 84; and it rose to 120 just before death. He had also difficulty in pronouncing words and in swallowing water. Dr. Harley had often seen animals die in the same way. The symptoms were considered to be due to congestion of the spinal cord; so belladonna was injected, as it constricts the vessels of the cord; but the lad died asphyxiated. The necropsy was made by Dr. Lockhart Clarke. On removal of the brain, a large quantity of black blood welled up from the spinal canal. There was no morbid congestion of the front columns of the cord; in the posterior columns some of the axis-cylinders looked a little damaged. There were no naked-eye appearances of disease, except that the cord was raised in a few places by the congestion of its substance. No congestion of the meninges existed—only that of the cord itself.

Dr. G. Johnson suggested that perhaps some of the venous engorgement which had been found after death might have been due to the mode of death—viz., by asphyxiation.

Dr. Anstie, in reply, said that in the condition of the pupils there was nothing remarkable. The muscles were flaccid. Dr. Carter's case he considered to be of the same nature as his own. Dr. Southey's case was also one of spinal congestion; but was not the paralysis the result of alcoholismus? He was rather sceptical of the good to be obtained from bromide of potassium in these cases. He had, however, seen it benefit a man who had knocked himself up by excessive activity in conjugal duties, and in a few other instances. Dr. Hammond, of New York, gives ergot of rye for spinal congestion; but Dr. Anstie had had no experience with the drug. Dr. Thompson's case was one of cerebro-spinal meningitis, which involves rigidity of the muscles and pain on moving. Also the disease was epidemic. Dr. Harley's case was one of softening of the cord—"myelitis." Both that case and Dr. Thompson's case had affection of the bladder and rectum, which never occurs in simple spinal congestion. If any one had, four weeks before, told Dr. Anstie that congestion could produce such fatal symptoms, he would then have laughed him to scorn. He must now retract his former opinion. He was sure his case was not one of myelitis. In that disease, there is elevation of temperature; in his own case the temperature was not at all augmented. There must have been some sign of inflammation if it had existed; but there was nothing of the kind.

Decline of the Vienna Medical School.—The *Wiener Med. Zeitung* of October 21 states that the number of students continues to fast decline from year to year, and the lecture-rooms in which, when Oppolzer and Skoda taught, a place could only be obtained with difficulty, so crowded were they, are now nearly empty. Scarcely half the number of students of last year—which itself exhibited a deficiency of 300 compared with former years—have registered this year. At the same time the number of students at the Medical Faculties of Prague and Graz is said to be extraordinarily large. The same complaint, as we have already noticed, is heard at Berlin, while the medical schools at Leipzic and the smaller German Universities are very flourishing.

OBITUARY.

WILLIAM DALTON, M.R.C.P., F.R.C.S.,

Born at Swansea in 1802; entered the profession very young; served as pupil in his native town, afterwards in that capacity to Mr. Merryman, of Kensington; studied at Guy's and St. Thomas's, London; served as surgeon in a whaling vessel in the South Pacific for several years; settled down into steady practice at Winchcomb, in Gloucestershire; remained there seven years; then established himself in the neighbouring town of Cheltenham, in which place he had a leading practice for thirty years. He acquired a great reputation as an obstetric practitioner. He was subject to attacks of hæmatemesis, the first of which nearly proved fatal in 1856, and which finally laid him low on the 12th instant. He gave up practice in Cheltenham in 1869, and took up his residence at Bournemouth. He obtained the following appointments and honours: Vice-Pres. Roy. Med. Coll., Epsom; Fell. Med. Soc., London; Mem. Brit. Med. Assoc.; late Surg. Cheltenham Coll. and Ladies' Coll.; Cons.-Surg. Disp. for Diseases of Women and Children; Surg. Austral. packet, 1870. He was formerly Surgeon to 2nd Administrative Battalion of Gloucestershire Volunteer Rifles. He contributed to the *Lancet* "On the Anti-scorbutic Properties of the Raw Potato"; "On New Zealand Fern-root in Chronic Dysentery"; and papers on various subjects to medical journals.

EDWARD H. LINNECAR, M.R.C.S.,

One of the Medical Officers of the Barnet Union, died at his residence, at Henley, last week, at the age of 74. He studied anatomy under Joshua Brookes, and attended lectures on medicine at St. George's and St. Bartholomew's Hospitals. He became a Licentiate of the Apothecaries' Company in 1824, and shortly afterwards commenced general practice in New Basinghall-street, next door to the able and eccentric George Langstaff, whose museum at that time and for many years afterwards was one of the best in London. About thirty years ago Mr. Linnecar's health required residence in the country. He accordingly removed to Henley, and continued in tolerable health to the time of his decease. Mr. Linnecar was a thorough practical man, and brought good common sense in aid of moderate abilities and acquirements. For many years he was a constant visitor at the Medical Society of London, which then held its meetings in Bolt-court. He was a frequent speaker in that assembly, and was always listened to with attention and interest. He was a kind-hearted, genial man, and it may be justly said "beloved by all who knew him."

PHILIP HENRY DICKER, L.S.A.,

Died at 7, Priory-road, Everton, Liverpool, on the 11th inst., aged 63 years. The deceased was for many years well known in Oswestry and its neighbourhood. He had long practised in that town, and was the medical officer of several friendly societies of the district. His health broke down a few months ago, and he removed to Liverpool, where he apparently for a time rallied; but a change took place a short time ago, which ended fatally.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 20th inst., viz.:—

Aitkens, Louis Edwardes, Knaresborough, student of St. George's Hospital.
Donaldson, Henry, L.S.A., Hoxton, of Charing-cross Hospital.
Evans, Henry, L.S.A., Croydon, of Guy's Hospital.
Farr, Frederick Arthur, Dunstable, Bedfordshire, of Charing-cross Hospital.
Goicoechea, Francisco, M.D., Venezuela, Trinidad, of St. Mary's Hospital.
Hindhaugh, William, North Shields, of University College.
Hughes, Thomas Jones, Dublin, of the Dublin School.
Hyatt, James Taylor, Shepton Mallet, of Westminster Hospital.
Klien, Edward Hughes, M.B. Edin., Demerara, of St. Bartholomew's Hospital.
Knowles, Edmund, L.S.A., Cambridge, of St. Mary's Hospital.
Lambert, John, Farsley, Yorkshire, of the Leeds School.
Lang, Henry Charles, Berners-street, of University College.
Lewis, Henry Harman Dendy, L.S.A., Drummond-street, of Westminster Hospital.
Lovell, Walter Frederick, St. John's Wood, of St. George's Hospital.
Maclean, Norman Collier, Blockley, Worcestershire, of St. Mary's Hospital.

Parker, William Kitchen, F.R.S., L.S.A., Claverton-street, Pimlico, of Charing-cross Hospital.
Place, Modesto, M.D., Venezuela, Trinidad, of St. Mary's Hospital.
Smith, Roland Dunn, Chatteris, Cambs, of the London Hospital.
St. John, Leonard, M.D. McGill, St. Catherine's, Ontario, Canada, of St. Thomas's Hospital.
Strang, William Douglas, Penge, of University College.
Tootell, Edward, Maidstone, of St. Bartholomew's Hospital.
Tyrrell, Frederick, Haslington, Middlesex, of St. Mary's Hospital.
Watson, John Wilcocks, L.S.A., Heigham Hall, Norfolk, of University College.
Webb, Edward Robert, St. George's-road, S.W., of St. George's Hospital.

The following gentlemen passed the Primary or Anatomical and Physiological examination for the Fellowship on the 25th inst.:—

Black, James, student of St. Thomas's Hospital.
Carline, William Arthur, of King's College.
Clark, Henry Edward, L.R.C.P. Edin. and M.R.C.S. Eng., of the Glasgow School.
Clarke, Arthur, of University College.
Collins, John Wilkins, of St. Thomas's Hospital.
Duncan, Andrew, M.R.C.S. and L.S.A., of King's College.
Green, Frederick King, of St. Bartholomew's Hospital.
Jackson, Ernest Carr, of St. Thomas's Hospital.
Rendall, John, of Guy's Hospital.
Savage, James, M.R.C.S. and L.S.A., of the Hull School.
Stone, John Neesom, L.K.&Q.C.P. Ire. and M.R.C.S. Eng., of the Dublin School.

Seventeen candidates out of the twenty-eight examined, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for six months.

The following is a copy of the questions submitted to the candidates for the Fellowship on this occasion, all of which were required to be answered, viz.:—Give the dissection required to expose the trunk of the sympathetic nerve in the neck, and describe the relations of the nerve. Trace the cardiac branches from their origin to the cardiac plexuses. Describe the serratus magnus, the dissection by which you would display it, the various parts with which it is in relation, and the vessels and nerves by which it is supplied, and enumerate the muscles which are its antagonists. Describe the modes of origin, the structure, and the general management of the lymphatic and lacteal vessels, and the nature, sources, and destination of the lymph. Describe the structure of the human ovum, and give an account of the earlier stages of development up to the period at which the chorda dorsalis is formed.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a Certificate to practise, on Thursday, November 20:—

Verdon, Henry Walter, Manchester.

The following gentlemen also on the same day passed their primary professional examination:—

Hay, William Alfred Edward, Guy's Hospital.
Richardson, Joseph Berridge, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BRAINE, WOODHOUSE, F.R.C.S.—Chloroformist to the Charing-cross Hospital.

HAMILTON, CHARLES W., L.R.C.S.I., L.R.C.P.E.—Medical Officer of Louisburg Dispensary, Dispensary District in Westport Union, County Mayo.

O'KELLY, RICHARD AMBROSE, L.R.C.P. Edin., L.A.H. Ire., C.M.—Medical Officer to the Workhouse, Cork Union.

SMITH, R. SHINGLETON, M.D. Lond., B.Sc.—Physician to the Bristol Royal Infirmary, *vice* Dr. Beddoe, F.R.S., F.R.C.P., resigned.

WALDO, HENRY, M.D.—Assistant-Physician to the Bristol Royal Infirmary, *vice* Dr. Spencer, promoted.

NAVAL APPOINTMENTS.

ADMIRALTY.—Dr. John M. Hunter, Staff Surgeon, second class, to the *Active;* Richard C. P. Lawrenson, Staff Surgeon, second class, to the *Victor Emmanuel;* John O'Neill and Dr. John R. Leech, Surgeons to the *Active;* James M'Carthy, Surgeon to the *Victor Emmanuel.*

BIRTHS.

ADAMS.—On November 23, at North Lodge, St. Matthew's Infirmary, Victoria-park, the wife of E. J. Adams, L.R.C.P., M.R.C.S., L.S.A., of a son.

BOLEY.—On November 23, at 1, Mortimer-road, Kilburn, the wife of John B. Boley, M.D., M.R.C.S. Eng., L.S.A., of a son.

EARLE.—On November 23, at Brentford, the wife of E. S. Earle, F.R.C.S., of a son.

GODWIN.—On October 28, at Agra, the wife of Surgeon C. H. Y. Godwin, Royal Artillery, of a son.

HOLMAN.—On November 18, at East Houthly, Sussex, the wife of T. Holman, M.R.C.S. Eng., L.S.A., of a son.

MYERS.—At Chefoo, North China, on October 2, the wife of W. Wykeham Myers, M.B., C.M., of a daughter.

RICE.—On November 20, at 8, Sloane-terrace, S.W., the wife of M. W. Rice, M.D., of a son.

MARRIAGES.

BROCK—CHEYNE.—On November 20, at Ivybridge, Devon, M. W. Brock, Esq., 17th Regiment, eldest son of Wm. Brock, Esq., of Belmont, Guernsey, to Aby Mackenzie, elder daughter of Alexander Mackenzie Cheyne, M.D., late of White Hall, Aberdeen.

BRUCE—BENTLEY.—On November 20, at St. Luke's, New Kentish Town, the Rev. W. H. Bruce, to Kate, eldest daughter of the late George Bentley, M.R.C.S., of Halstead, Essex.

GAFFNEY—ST. CLAIR.—On November 19, at the Church of St. Thomas, Fulham, John Burke Gaffney, L.R.C.S., L.A.H., Surgeon Indian Army, to Jessie Alice St. Clair, of Park Lodge, Fulham.

GARDNER—PEARLESS.—On November 18, at Kingston Church, Portsmouth, Surgeon-Major Thomas Turville Gardner, Army Medical Department, to Rose, second daughter of the late Edward Pearless, Esq., of Peterborough.

HARDINGE—HIGGINS.—On November 20, at the Abbey Church, Great Malvern, Thomas Samuel Hardinge, Esq., of St. Leonard's-on-Sea, to Caroline Josepha, widow of the late John Higgins, Esq., of Stratford-on-Avon, and youngest and only surviving child of Andrew Henderson, M.R.C.S. Eng., of Great Malvern.

KERANS—PALMER.—On November 18, at St. Anne's Church, Dublin, William Robert Kerans, L.R.C.S.I., Surgeon Army Medical Staff, eldest son of Lawrence C. Kerans, Esq., of South Park, co. Galway, to Annie, second daughter of Thomas Palmer, Esq., of Forster Park, in the same co.

MCFARLAND—ELLIOTT.—On November 24, at 7, Gardiner's-row, Dublin, Francis Edward McFarland, Surgeon-Major Army Medical Department, to Mary Georgina, elder daughter of John Hugh Elliott, Esq., of Gardiner's-row, Dublin.

PATERSON—CONRAN.—On November 19, at St. Thomas's Church, Upper Clapton, Walter Hugh Paterson, M.D., of Brigg, Lincolnshire, to Mary Agnes, second daughter of Edward J. Conran, Esq., of Templeogue, Dublin.

DEATHS.

BRUSHFIELD, PERCY R., second son of T. N. Brushfield, M.D., M.R.C.S. Eng., of Brookwood Mount, Woking, at Guildford, on November 19, aged 12.

COATES, GEORGES, L.S.A., for many years resident in Bloomsbury, at Bournemouth, on November 18, in the 72nd year of his age.

COWARD, WILLIAM, M.D., at 6, Dean-street, South Shields, on November 22, aged 66.

DICKER, PHILIP HENRY, L.S.A., late of Oswestry, Salop, at Liverpool, on November 11, aged 63.

MANSON, SUSANNA JONES, widow of the late Frederick Manson, M.D., of Park-street, Grosvenor-square.

PEARSE, EDMUND, M.R.C.S. Eng., L.S.A., at 17, Tavistock-square, after a week's illness, on November 18, aged 57.

PROBART, THOMAS BRERETON, L.S.A., late Lieutenant in the Royal Lincoln Regiment of Militia, at Tetford, near Horncastle, on November 19.

SEALE, ELIZABETH, wife of I. Lockyer Scale, L.R.C.P., at Ashton House, Steeple Ashton, Wiltshire, on November 19, aged 64.

TAYLOR, ALEXANDER DOUGLAS, M.D., L.R.C.S.I., Deputy Inspector-General of Hospitals, at Bootle, near Liverpool, on November 19, aged 62.

WALLACE, CATHARINE, widow of Richard Wallace, F.R.C.S. Eng., of Hackney-road, at 206, Richmond-road, Hackney, on November 21, aged 67.

WHITAKER, THOMAS HARPER, M.R.C.S. Eng., L.S.A., at his residence, Kirkby Lonsdale, Westmoreland, on November 14, aged 61.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

AMPTHILL UNION.—Medical Officer of Health. Candidates must be legally qualified and registered. Applications, with testimonials, to John Wright, Clerk to the Sanitary Authority, on or before December 3.

BEDFORD GENERAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Committee, on or before December 10.

BRISTOL ROYAL INFIRMARY.—Assistant House-Surgeon. Candidates must be F. or M.R.C.S., or M.S., and also possess medical qualifications.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Two Assistant-Surgeons. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary, on or before December 9.

CONWAY UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Wm. Hughes, Clerk to the Guardians, on or before December 10.

GAINSBOROUGH.—Medical Officer of Health. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to the Clerk of the Union, on or before December 8.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must possess a recognised medical or surgical qualification. Applications, with testimonials, to the Secretary, on or before November 29.

KENT COUNTY LUNATIC ASYLUM, BARMING HEATH, MAIDSTONE.—Two Assistant Medical Officers. Applications, with testimonials, to Messrs. Beale and Loar, Maidstone, before December 10.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

RIPON DISPENSARY AND HOUSE OF RECOVERY.—Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Honorary Secretaries, on or before December 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, LOWER SEYMOUR-STREET, PORTMAN-SQUARE.—Surgeon to the Out Department. Candidates must be Fellows or Masters in Surgery, and registered. Applications, with testimonials, to the Secretary, on or before December 2.

ST. GEORGE'S (HANOVER-SQARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before December 29.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

TEWKESBURY UNION, FORTHAMPTON DISTRICT.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to George Budham, Clerk to the Guardians, on or before December 16.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Applications, with testimonials, to the Honorary Secretary, Exe Villa, Tiverton, Devon.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

APPOINTMENTS.

Barnstaple Union.—Joseph Harper, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Second District.

Clifton Union.—Wm. Hodges, M.R.C.S. Eng., L.R.C.P. Lond., to the Workhouse.

Dolgelley Union.—John T. Jones, M.R.C.S. Eng., L.S.A., to the Talyllyn District.

Droitwich Union.—John H. Hughes, L.R.C.P., M.R.C.S., to the Ombersley District.

Kendal Union.—Wm. Wyllie, M.D., M.B., and C.M. Glasg., to the Kirkby Lonsdale District.

Middlesex.—Dr. T. Redwood as Analyst for that part of the County not included in the Metropolis.

Ulverstone Union.—Wm. H. Woodburn, L.R.C.P. Edin., L.F.P. and S. Glasg., to the Broughton West District.

THE M.B. DEGREE AT OXFORD.—The final examination for the degree of Bachelor of Medicine will commence in the museum on Tuesday, December 9, at 9.30 a.m. The first examination for the same degree will commence at the same place on Wednesday, December 10, at 9.30.

LORD HOUGHTON presided, and delivered an address, at an important meeting of medical practitioners at the West Riding Asylum, Wakefield, on Tuesday. Dr. Carpenter afterwards gave a lecture on the recent experiments by Professor Ferrier on the localisation of the functions of the brain.

CHOLERA is again on the increase in Munich.

THE United States census returns show that there are 525 women physicians and surgeons.

TESTIMONIAL TO A SURGEON.—On the 17th inst. a ceremony of an interesting description took place at the Grove Hall Asylum, Bow, by the presentation of a silver salver to Mr. J. A. Brown, late one of the medical officers, who, after a residence of twelve years, has resigned his post at that establishment.

MORTALITY OF LONDON.—There were 1674 deaths in London last week. The fatal cases of measles, diphtheria, and hooping-cough were excessive. The epidemic of measles shows an increasing fatality, the deaths from this disease having risen last week to 130. It has not been so fatally prevalent, says the Registrar-General, since the beginning of 1840.

THE CHOLERA IN PARIS.—The epidemic has now passed away, and from the subjoined figures it will be seen that it has not assumed any great extent, although the proportionate mortality has been large:—Between September 4 and November 13 there were treated in the various civil hospitals 432 cases; of these 160 were discharged, 254 died, and 18 remained under treatment.

A JOKE.—On imposing a fine of £15 on a milkman at Dublin, for selling as milk a mixture of 90 per cent. of water and 10 per cent. of milk, the magistrate stated that he had not inflicted the full penalty of £20, because he wished to leave himself a margin of £5 to meet the case of any enterprising trader who might carry adulteration to a yet further pitch.

ON July 14 last, Assistant-Surgeon T. Harvey Hill, 36th Middlesex Rifle Volunteers, passed the requisite examination prescribed by the Army Regulations for the Reserve Forces, and received a certificate of proficiency.

THE subject for the annual prize to be competed for by apprentices of apothecaries at the Apothecaries' Hall of Ireland in May next is "The Metallic Preparations of the British Pharmacopœia."

ABUSE OF CHARITY.—A man died of starvation in the Edinburgh Infirmary, a few days since, about whom nearly £50 was found concealed.

THE Holborn District Board has addressed a letter to the City Commissioners of Sewers, complaining that rabbits unfit for human food were sold in large quantities at wharves in the City, and brought to their district for sale to the poor. They therefore applied to that Court for their interference in the matter. It turned out on inquiry that the wharves referred to were out of the City, and the City inspectors had no power to seize the rabbits. We trust the guardians will pursue their efforts to check the sale of this unwholesome food till they ascertain the proper authorities who are responsible for its stoppage. This case shows the importance of giving adequate powers to a central authority. "Loopholes of retreat" to offenders against the public welfare under the present Act are simply disgraceful.

AT the last meeting of the Halifax Board of Guardians the following letter from Mr. T. M. Dolan, the Medical Officer of the Halifax Union, was submitted to the meeting. The letter was transmitted from the Local Government Board, asking for information on the subject. It was dated the 20th ult., and was as follows:—"I beg to inform you that, very much to my surprise, no inquest was held on the body of the man Anderson, of whose death I informed you. I do not know what cause of death was given, but have heard that the surgeon who advised the removal of the patient gave a certificate of death." No answer was agreed upon by the Board.

THE ROSS MEMORIAL HOSPITAL AT DINGWALL.—A cottage hospital of eight beds has just been opened at Dingwall, Ross-shire. It was erected as a suitable memorial to the late Dr. Ross, of that town, who was so widely known and esteemed, both professionally and publicly, throughout the northern counties of Scotland. The building stands on the shore of the Cromarty Frith, and is constructed according to the most modern designs, with complete sanitary arrangements, ventilation, and baths. The whole cost is over £1200, exclusive of the site and the price of furnishing. Dr. Bruce is the honorary medical officer of the hospital.

THE MEDICAL EDUCATION OF WOMEN.—On November 21, a deputation, consisting of the President, Honorary Secretaries, and members of the Council of the Obstetrical Society, had an interview with Mr. Stansfield, at Gwydyr House, on the subject of the present position of this country with regard to the education, training, examination, licensing, registration, and supervision of midwives. With Mr. Stansfeld were Mr. Hibbert, M.P., and Mr. John Lambert, and with the deputation were Dr. Tilt (President of the Society), Drs. Phillips and Aveling (Hon. Secretaries), Dr. Hall Davis, Dr. Madge, Dr. T. Chambers, Dr. Brunton, etc. Dr. Tilt reminded Mr. Stansfeld that on a previous occasion he had received a deputation of the British Medical Association, under Mr. Ernest Hart, on the subject of the registration of stillborn children, when the subject of midwives and their position came before him. The subject was one of wide importance, and the speaker said it was not necessary for him to enter before the President of the Local Government Board on the general results of the extraordinary neglect in this country of care in the parturition of the lower classes, for a state of things existed here in this respect which was not to be found in any other civilised country. In addition to the evils which had been brought before the President on the previous occasion by the present condition of things, the facility in child-murder and kindred crimes, the speaker said he would draw attention to the great excess of mortality among women and children, as well as a great deal of preventable disease arising from unqualified women who were thoroughly incompetent practising as midwives. This had to do with the Government and the State, as by the mortality of mothers young families were thrown upon the parishes for support; and by the mother being rendered incapable of work, as often happened, mother and family were together thrown upon the rates. Thus a vast expense, far

above anything like an expense which would be entailed by the education, examination, and licensing of these women, even if the whole expense should be borne by the public, fell upon the public purse. He stated that the Royal College of Surgeons would not interfere in this matter, and that the society represented there desired only to see something done in this important matter; and though they had no desire to have the matter in their hands, would give every assistance, either in providing examination boards or otherwise, to see carried out what their experience had abundantly proved to them was necessary for the public good. At present, women, he said, were practising upon diplomas granted by individuals, and the people were thus misled into trusting women who had no qualifications for the office of midwives. In answer to Mr. Stansfeld, the deputation said the giving of these individual diplomas was strictly unprofessional, and that they led to the most harrowing results of blundering ignorance. Mr. Stansfeld entered into a long conversation with Dr. Tilt, and said that though he was not departmentally responsible in this matter, it coming within the province of the Privy Council Office, yet he took an interest in the matter. Dr. Aveling then spoke, and said the main objects the deputation had were the public safety, the public economy, and the public happiness, for all these were involved in this matter. The parturient women were not safe in the hands of unskilled women, public economy was affected because the children of families whose mothers died or were diseased in consequence of maltreatment came upon the public purse for support, and their homes were frequently broken up from the same causes. With regard to the definition of these women, they should rather be regarded as midwifery nurses than as medical women, and he then dwelt upon the modes which could be adopted for their education, and laid down in a minute already sent to Mr. Stansfeld. The examination and licensing he regarded as most essential and necessary, and he drew attention to the systems in vogue in Prussia and France. In the first-named country itinerant inspectors visited the midwifery women and examined their diaries, and in France they had to hold diplomas proving their capability, while in all cases of difficulty they had to call in medical assistance of the highest class. Other points were pressed upon the President of the Local Government Board, and he, in reply, said he was favourable to the training, education, examination, and licensing of women in this important sphere, but he was not favourable to the class being kept at one standpoint—namely, that they should be midwifery nurses only. He thought women who had the qualification and means should be allowed to go a rank higher without undergoing a full medical examination. He said he would place the matter before Lord Aberdare, and he advised that the deputation should also consult that department. The deputation then thanked Mr. Stansfeld and retired.

The Royal Academy.—Mr. John Marshall, F.R.S., the recently elected Professor of Anatomy in the Royal Academy, in the vacancy occasioned by the decease of Mr. Richard Partridge, will commence the delivery of his first course of lectures to the students and Royal Academicians on Monday next, December 1, and continue them every Monday and Thursday up to the 18th proximo inclusive. Professor Marshall is the sixth gentleman who has filled the chair, in succession to the following distinguished members of our profession:—The first was Dr. William Hunter, the elder brother of the celebrated John Hunter, who held the office from the foundation of the institution in 1768 until his death in 1783, when he was succeeded by John Sheldon, who also occupied it until his death in 1808. He gratuitously dissected a horse and had casts made from it for the sole use of the students. It is stated that he was the first Englishman who made an experimental ascent in a balloon. Sheldon, who was much respected, was succeeded by Sir Anthony Carlisle, twice President of the Royal College of Surgeons, whose lectures were highly attractive; he resigned the chair in 1824, and was succeeded by Joseph Henry Green, whose lectures, more philosophical, were hardly less popular than those of Carlisle. He resigned the chair in 1851, when he was succeeded by Richard Partridge, who, without aiming at the eloquence of his predecessor, delivered most valuable discourses. He also wore the gown until his death a few months since. It is believed that Professor Marshall will reflect the greatest credit on the choice of the Royal Academicians.

New Central Hospital for Prisoners in Paris.—The Conseil-Général de la Seine has just voted 73,000 fr. for the erection at the prison of La Santé of a central infirmary for the treatment of prisoners suffering from serious diseases. Such an infirmary, indeed, already exists, having been formed at St. Pélagie during the siege, when an epidemic of scorbutus broke out in the prisons. The object of the vote is to transfer this provisional into a permanent establishment, which is to be organised like the hospitals. For the sake of hygienic considerations and the welfare of the patients, it would have been preferable to have improved the condition of the infirmaries attached to the prisons, so as to have enabled grave affections to have been treated therein. Why accumulate these patients in a single establishment, where they may become a centre of infection, while it would have been so easy to have disseminated them among several small infirmaries? What an infatuated liking we have for centralisation! and in matters of hospital hygiene it can always be said of us, "Hygiene proposes, the Administration disposes."—*Gaz. Heb.*, November 22. [Certainly some change is imperative, for at present all prisoners the subjects of serious disease are treated in the midst of the other patients of the ordinary hospitals!]

Prompt Operating in Strangulated Hernia.—In illustration of an opinion strongly held by M. Desprès, that the sooner the operation is performed the more likely is recovery to take place, he publishes the results of the thirteen cases of strangulated hernia that have occurred in his practice at the Cochin during eighteen months of 1872-73. In seven of these, in which no attempt at reduction was made prior to the operation, three recoveries were obtained; while of six upon which no operation was performed, only one recovered. He strongly protests against the use of the taxis and other modes of treatment now in vogue for the cases ordinarily brought to hospitals. The mortality from strangulated hernia, taken generally, in the French hospitals amounts to 70 per cent., while in those cases that are operated upon in good time it is only 58 per cent.—*Gaz. des Hôp.*, November 18.

Operation for Hernia in a Young Infant.—M. Guéniot related at the Société de Chirurgie the case of an infant, three months old, upon whom he had performed the operation for strangulated hernia. The child died the same evening, and at the autopsy the small intestine was found much distended, and having its convolutions agglutinated by false membranes from peritonitis. The large intestine was collapsed, and a noose of this had penetrated into the inguinal canal, and had become strangulated at both the external and internal orifices. M. Marjolin observed upon the excessive rarity of strangulated hernia prior to the age of thirteen months. He had never met with it in so young an infant as this. M. Panas stated that he had operated for inguinal hernia in a girl six months old, the sac containing, besides the intestine, the right ovary and tube.—*Union Méd.*, Nov. 22.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Sapo Mollis.—"Chemical Technology," by Rudolph Wagner, eight vols., 25s. J. and A. Churchill.

Inquirer.—The Director of the New York Meteorological Observatory has recently issued his report for 1872. The report is of a most interesting and instructive character, and it should be consulted by all who are interested in studying the meteorological phenomena which bear on health and disease.

Very Foggy.—You are not the only puzzled one; we are quite unable to give the information. All we have to report is that there was another meeting on the "Conjoint Scheme at the College of Physicians on Monday last, and that the Council of the College of Surgeons are not quite so unanimous as is stated on the subject."

A Metropolitan Teacher, and *J. W.*, who have addressed us on the subject, will be able to judge for themselves whether the standard for the fellowship of the College of Surgeons has been lowered, by perusing the questions published in another page of the *Medical Times and Gazette*, and also by the fact that seventeen out of twenty-eight were rejected. The pass examination for the Fellowship takes place this day, and will be continued next week.

R.A., Pimlico.—There is a painting of Dr. William Hunter, the first Professor of Anatomy at the Royal Academy, in the possession of the College of Physicians, from which there is an engraving in Pettigrew's "Medical Portrait Gallery." The large mezzotint representing him lecturing before the "big-wigs" of the Academy is well known. A painting of Sheldon is in the Council-room of the College of Surgeons. A very good likeness of Carlisle will also be found in Pettigrew's work. Messrs. Barraud and Jerrard have published a capital photograph of Partridge.

COMMUNICATIONS have been received from—

Professor Halford, Melbourne; H. K.; Mr. Hitchcock, Greenwich; Dr. Fairbank, Lynton; Mr. Poole, London; Mr. J. Chatto, London; Dr. Bruce, London; Dr. Russell, Birmingham; Mr. F. A. Mahomed, London; Sir Henry Thompson, London; Dr. Aveling, London; Mr. Head, East Grinstead; Sapo Mollis; Mr. B. Vincent; B. M. B.; Dr. Galabin; Mr. W. W. Reeves, London; Mr. W. R. Dalton, Dovercourt; Mr. Balmanno Squire, London; Dr. Wynter, Chiswick; Mr. Eastes, London; Dr. Shingleton Smith, Bristol; Mr. Braine, London; Mr. H. Wilbraham, Westport; Miss Dalton, Bournemouth; Typhus Mitior; Dr. Waldo, Clifton.

BOOKS RECEIVED—

Bradley's Manual of Comparative Anatomy and Physiology—Klein's Anatomy of the Lymphatic System, part 1—La Crémation des Morts en Italie, par le Dr. Prosper de Pietra Santa—Drysdale on the Granular Cell found in Ovarian Fluid—Macleod's Address delivered in the University of Glasgow—De la Médecine Capillaire, par le Dr. B. Riofrey—Budd on Typhoid Fever—Richardson on the Simplicity of Life—The Progress of Medicine and Surgery—St. Bartholomew's Hospital Reports, vol. ix.—Tyson's Introduction to Practical Histology—Agnew on Lacerations of the Female Perineum.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Gazette des Hôpitaux—La France Médicale—La Tribune Médicale—Le Mouvement Médical—Le Progrès Médical—Gazette Médicale—Philadelphia Medical Times—The Registrar-General's Quarterly Return of Births, Deaths, and Marriages in Scotland—The Students' Journal and Hospital Gazette—Gazette Hebdomadaire—Allgemeine Wiener Medizinische Zeitung—Pharmaceutical Journal—London Medical Record—Medical Press and Circular.

APPOINTMENTS FOR THE WEEK.

November 29. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

December 1. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Mr. Malcolm McHardy, "Preparation of Double Intussusception." Mr. W. D. Napier, "Instruments for the Detection and Removal of Calculus." Mr. Cripps Lawrence, "Case of Intestinal Obstruction from Fæcal Accumulation." Dr. S. O. Habershon (President), "Remarks on some Complications met with during the Recent Prevalence of Rheumatism." Dr. Wiltshire, "Particulars of a Case of Inflammation of the Sciatic and Brachial Plexuses associated with Articular Rheumatism." And other Communications.

Royal Institution, 2 p.m. General Monthly Meeting. Election of a President.

2. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

London Anthropological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. Report on Dr. Dowse's Specimen of Foreign Body in the Crico-Thyroid Pouch. Dr. Moxon—Two Cases of Osteoid Cancer of Lung. Mr. Andrew Clark—Lymphoma infiltrating Trachea: Tracheotomy performed twice. Dr. Payne—Pouches in Peritoneum giving occasion to Hernia; Thickening of Pulmonary Artery. Dr. Lockhart Clarke—Sclerosis of the Spinal Cord. Dr. Robt. King—Large Abscess of Liver without Ulceration of Intestine. Mr. Arnott—Sarcoma of Omentum in a Child. Mr. Morrant Baker—Rare Form of Oxalate of Lime Calculus. Mr. Tay—Necrosis of Lower Jaw. Mr. Coupland—Disseminated Nodular Growths in Liver, with Tuberculosis of Lungs. Dr. Fred. Taylor—Leucocythæmia with Lymphadenoma. Dr. Crisp—Imperforate Anus. Mr. Godlee—Ossifying Enchondroma. Dr. Dowse—Renal Calculi.

3. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society (Meeting of Council, 7 p.m.), 8 p.m. Mr. Tapson, "Note on the Removal of Intra-uterine Tumours." Dr. McCallum, "On a Case of Extra-uterine Fœtation." Dr. Routh, "On the Use of Intra-uterine Pessaries in Uterine Disease." And other Papers.

Royal Microscopical Society, 8 p.m. Meeting.

4. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Harveian Society (Special Meeting of Council, 7¼ p.m.), 8 p.m. Mr. Balmanno Squire, "On Lupus and its Treatment."

5. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

Medical Society of London, 8 p.m. Meeting of Council.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 22.

BIRTHS.

Births of Boys, 1217; Girls, 1136; Total, 2353.
Average of 10 corresponding years 1863-72, 2100·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	892	782	1674
Average of the ten years 1863-72	775·8	770·1	1545·9
Average corrected to increased population	...	...	1700
Deaths of people aged 80 and upwards	...	...	69

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	8	3	...	5	1	5	2	1
North... ...	751729	...	40	2	8	13	1	7	1	...
Central ...	334369	...	8	1	2	4	...	3	...	...
East	639111	...	34	16	1	6	1	4	3	3
South... ...	967692	...	40	5	2	18	3	3	6	8
Total	3254260	...	130	27	13	46	6	22	12	12

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·961 in.
Mean temperature	43·3°
Highest point of thermometer	53·4°
Lowest point of thermometer	35·7°
Mean dew-point temperature	38·6°
General direction of wind	E.N.E. & W.S.W.
Whole amount of rain in the week	0·18 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 22, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Nov. 22.	Deaths Registered during the week ending Nov. 22.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2353	1674	53·4	35·7	43·3	6·28	0·18	0·46
Portsmouth ...	118280	12·4	70	53	61·2	32·2	44·6	7·00	0·13	0·33
Norwich	81677	10·9	42	23	52·5	35·0	42·3	5·73	0·23	0·58
Bristol	189648	40·4	137	73	53·2	31·9	42·0	5·56	0·01	0·03
Wolverhampton ...	70084	20·7	53	27	56·8	30·0	41·0	5·00	0·09	0·23
Birmingham ...	355540	45·4	276	175	58·0	34·3	42·5	5·84	0·06	0·15
Leicester	102694	32·0	91	36	53·7	32·2	41·5	5·28	0·07	0·18
Nottingham ...	89557	44·9	54	36	54·6	33·6	40·3	4·61	0·06	0·15
Liverpool	505274	98·9	330	262	55·0	34·6	42·3	5·73	0·11	0·28
Manchester ...	354057	78·9	233	211	...	...	...	...	...	...
Salford	130468	25·2	117	64	55·0	28·2	41·3	5·17	0·38	0·97
Oldham	85141	20·4	74	51	52·0	...	...	...	0·40	1·02
Bradford	156609	23·8	111	73	46·0	33·4	39·7	4·28	0·00	0·00
Leeds	272619	12·6	159	158	54·0	33·0	42·3	5·73	0·05	0·13
Sheffield	254352	11·1	212	125	54·0	30·0	41·7	5·39	0·04	0·10
Hull	128125	35·9	89	58	52·0	32·9	41·6	5·33	0·18	0·46
Sunderland ...	102450	31·0	96	36	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	81	90	...	...	...	...	...	...
Edinburgh	208553	47·1	107	89	43·9	35·3	38·8	3·77	0·03	0·08
Glasgow	498462	98·5	315	289	50·8	24·8	37·2	2·89	0·35	0·89
Dublin	314666	31·3	181	166	54·5	28·5	43·6	6·44	0·16	0·41
Total of 21 Towns in United Kingd'm	7507575	34·5	5181	3769	61·2	24·8	41·5	5·28	0·14	0·36

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·96 in. The highest was 30·30 in. on Monday morning, and the lowest 29·21 in. on Saturday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURE ON

INFANTILE PURULENT OPHTHALMIA.

DELIVERED AT THE MIDDLESEX HOSPITAL, MARCH 4, 1872.

By J. W. HULKE, F.R.S.

Gentlemen,—The purulent ophthalmia of newly-born infants is a complaint so destructive when allowed to run its course uncontrolled, and still more so when injudiciously treated, yet so amenable to proper measures, that no apology is necessary for again bringing the subject under your notice. In the lower classes of London population it is the most common cause of blindness in childhood. The mothers of infants attacked by it have so commonly at the time of their confinement a puriform vaginal discharge that it seems more than probable that the ophthalmia is often due to the direct inoculation of the child's eye with the maternal discharges. For the production of the ophthalmia there need not be gonorrhœa,—indeed, very often we feel confident that the vaginal discharge was not the result of impure sexual congress: the products of a simple leucorrhœa transferred to the ocular conjunctiva will provoke an acute suppurative ophthalmia. Analogy makes it probable (and observation, I think, confirms it) that infantile ophthalmia consequent on gonorrhœa is more severe than that induced by leucorrhœa. The condition of the infant also is not without its influence on the affection; for in puny, weakly infants the cornea offers less resistance, and more readily sloughs than it does in strong, healthy children.

Usually on the next or the second day after its birth the infant's eyelids are noticed to be a little swollen, the ocular conjunctiva is slightly reddened, and if the lower eyelid is drawn down so as to expose its inner surface, this also is found unduly red, and perhaps a flake or two of mucus is noticed on the loose folds of the membrane where it joins the eyelid and the eyeball. By the following morning the conjunctiva is much redder, it has also become slightly œdematous, and it exudes an abundant mucus; the swelling and redness of the eyelids are also greater. By the end of the day the dropsy of the conjunctiva (*chemosis*) is often so great that the distended membrane overlaps the border of the cornea and bulges between the distended eyelids. The discharge is now purulent. The child evidently suffers much; it is fretful and restless, and cannot sleep. If the intensity of the ophthalmia does not soon abate, the surface of the cornea loses its polish, it sheds its epithelium, the lamellar tissue becomes whitish-grey, sodden-looking, and opaque, it then sloughs and opens the anterior chamber, on which the aqueous humour, followed by the iris, gushes out. Upon this the lens, unsupported in front and pressed upon behind, is pushed forwards against the back of the cornea. When the corneal breach is small and the protruded piece of iris is not large, the eye is not necessarily lost. Often the exposed iris inflames, it becomes thickened and coated with exudation, granulations spring up in this and also from the edges of the corneal opening, the hernia shrinks, and there results a scar, technically called a leucoma, in which the iris is permanently entangled. Although very disfiguring, such a scar—when its edge is definite, and when it does not overhang the whole area of the pupil, but leaves part of this unobstructed—is not incompatible with useful sight. In course of time small scars often become inconspicuous, partly by a slow assimilation of the cicatricial tissue to the structure of the normal corneal tissue, and partly by the disappearance of the exudation and young cell-broods—inflammatory products evolved during the early stages of the process which ended in the gangrene of the cornea. In eyes bearing marks of a limited perforation of the cornea in early infantile life, and less frequently also where a faint corneal opacity without any corresponding adhesion of the iris (*anterior synechia*) points to a corneal lesion short of actual perforation, a minute white dot may sometimes be seen in the front of the lens. This is, I believe, the mark of a former contact of the lens and the back of the cornea. Where the cornea was actually perforated during the ophthalmia, the mechanism of this contact is perfectly plain; but even where the integrity of the anterior chamber was not broken, a little reflection renders it intelligible. The much greater convexity of its lens makes the distance between the anterior pole of this and the cornea much less in the infant's eye than in the adult's; hence, in ophthalmia, pressure exerted on the cornea by the œdematous conjunctiva and the distended eyelids, helped by the greater resistance to the recession of the eyeball into the orbit offered by the over-fulness of the orbital vascular system, and assisted possibly by a repletion of that of the choroid heightening the intra-ocular tension, may so lessen the small space between them as to bring the cornea and lens together. Where they touch, a minute bead of exudation shed from the cornea or iris on the lens (which latter becoms a little web of fibro-nucleated connective tissue), lessening the permeability of the capsule, checks the evolution of the developing lens-tissue, and causes a minute necrosis (an effect which simple pressure may also occasion), the residuum of which is an atheromatous speck. Where great part of the cornea sloughs away, the lens, together with some of the vitreous humour, is not infrequently instantly extruded, followed by collapse of the eyeball. Where this has happened the scar replacing the cornea is apt to bulge, although its thickness may after some time much exceed that of the normal cornea, and it may become so prominent that the eyelid can be closed with difficulty over it, or not at all. In some such cases a weak spot in the scar may burst from time to time, some of the fluid contents escape, and the projection temporarily lessen.

Treatment.—It would seem almost superfluous to tell you that you will not wisely employ alike in every case one inflexible mode of treatment. Ever keeping before you a guiding principle, you must always adapt your measures, whatever these may be, to your patient's circumstances. Thus, topical applications, which can only be safely applied by the skilled hand of a competent medical attendant, are out of place where, as in many country districts and in large poor-law and club practices, great distances and large demands on the practitioner's time make it impossible for him to see the patient daily. For this reason we seldom use the pure or diluted solid stick of nitrate of silver—a remedy recommended by foreign surgeons. This, again, is the reason why ice, an auxiliary much in favour with our foreign *confrères*, is so little used by us in these cases, because, unless the ice or ice-water is constantly applied, it promotes a greater reaction—its proper use demands such incessant attention as few patients in the working and in the lower middle classes can bestow or command; besides which, ice is mostly beyond the reach of the poor in towns, and not generally procurable in the country. The treatment which has been followed for more than a quarter of a century with much success at the Royal London Ophthalmic Hospital, the oldest and largest institution in this country specially devoted to eye diseases, consists in the frequent use of alum-water (generally gr. vj. ad ℥j. aq. dist.). First, the eye must be thoroughly cleansed from the discharge; and, as this cannot be done without some pain and struggling, it is well for the safety of the child's eyes, and in order to lessen the chance of the accidental inoculation of the nurse's eyes, to have the child completely under control. For this it is neither necessary nor proper to give chloroform. A simple and efficient way is to place the child with its arms straight by its sides upon a shawl or on a long towel, and then swathe it round a few times in this, leaving only its head out. So swathed it cannot move, and one person, unassisted, can do all that is required to the eyes. The eyelids being now gently separated without pressing on the eyeball, the discharge should be wiped away, and the eyelashes cleansed with tepid water and small pieces of rag, which should be immediately burned. Next, if the nurse is intelligent and has not clumsy hands, the conjunctival pouch under the upper and lower eyelid should be carefully syringed out with tepid water; for this a common pewter squirt will do. When the pus is thoroughly removed, some of the alum-water should be dropped into the eye, and diffused beneath the eyelids by moving these lightly over the cornea, or it may be injected under them with the squirt. After this the eyelids are dried, and a little simple ointment is smeared along their edges in order to prevent the eyelashes becoming glued together. If the ointment is softened to the consistence of cream by warming it, it may be very neatly applied with a brush. In an acute case the use of alum-water should be repeated frequently. At first every second hour will not be too often, and then as the ophthalmia yields the intervals may be increased, until, in a couple of days or so, six or four applications in the twenty-four hours will suffice. If

the surgeon can see the child daily, and he prefers to use nitrate of silver, the eyelid should be everted and cleansed in the same way, and the exposed conjunctival surfaces should be lightly wiped with the caustic-stick, or (which I think preferable) brushed with a solution of the salt—gr. x. ad ℥j. One such thorough application a day is enough, and in the intervals a little alum-water, pure or mixed with ext. belladonnæ (in the proportion of ℥viij. ad ʒj.), may be dropped three or four times into the eyes. The more powerful astringents or stimulants are to be used at longer, the milder at shorter, intervals. If you employ alum-water in the way I have described, you will rarely have to regret the loss of an eye. Such an occurrence is quite exceptional, and it seldom happens unless the cornea is already sloughing when the child is first brought to you. Implication of the cornea does not necessitate the discontinuance of the astringent remedy; its use should be persevered in, because in the speedy arrest of the ophthalmia lies the best hope of averting or limiting the destruction. A small hernia of the iris through a limited breach in the cornea may generally be left to itself; it will nearly always shrink as cicatrisation proceeds. Surgical assistance is seldom required except a considerable part of the cornea has perished, and a large piece of the iris, perhaps distended by the lens, protrudes. Under these circumstances the removal of the lens will hasten cicatrisation, and give a better scar; the eye is greatly damaged or wholly lost as regards sight. For this no special operative skill is required. Chloroform may be given; the iris should be cut with a thin, sharp knife, on which the lens will escape—if not, it may be removed with any small convenient scoop. After this the eyelids should be closed, and a small pad of cotton-wool secured on them with a roller. This is only exceptionally required. Not unfrequently, however, young children from two to four years old will be brought to you who have suffered from infantile purulent ophthalmia, and have the cornea replaced by a bulging opaque white scar, termed an anterior staphyloma. Such a prominent scar may prevent the eyelids closing, it is very liable to become inflamed, and it is very disfiguring. On these grounds the abscission of the front of the eyeball may be required. For this anæsthesia is almost necessary. The eyelids are held apart with a speculum, and the eyeball being fixed with a hooked forceps, a small puncture is made into it with a pointed knife behind the line of the ciliary processes, large enough to admit one blade of a scissors, with which the bulging part is cut off, care being taken that the line of the incision lies just behind the ciliary region. The lens is generally included in the piece cut off, but if not it must next be removed. If towards the horizontal equator of the eyeball the line of the incision is taken a little further backwards in the sclerotic, the lower and upper half-circles will fall together more neatly, and will not form the troublesome angle resulting from a truly circular abscission, which sometimes makes the fitting of an artificial eye difficult, and its use painful. In little children I never sew up the wound, and seldom apply anything but water-dressing.

An occasional and very troublesome sequel of infantile purulent ophthalmia is inflammation of the lachrymal sac. I think it is more frequent where an acute ophthalmia instead of thoroughly ceasing has lapsed into a subacute chronic form. If the sac suppurates the abscess cannot be opened too early, and if after the subsidence of the inflammatory swelling epiphora and a chronic mucous discharge continue, the lower lachrymal punctum and canaliculus should be slit up into the sac. Through this the contents may be gently pressed out several times daily; and once a day after emptying the sac in this manner a few drops of a solution of sulphate of zinc (gr. ij. ad ʒj.) may be dropped into the corner of the eye. If the nasal duct is strictured you will best adopt an expectant treatment until the child is older.

Algiers as a Health-Resort.—The writer of an article in the *Journal des Connaissances Médicales* on the climate of Algiers and its effects on patients, chiefly those affected with pulmonary diseases, concludes with the following remarks:—"The climate of Algiers calms the cough, and diminishes expectoration; it is favourable in the first stage of tuberculosis, and in the second, provided proper precautions be taken; it is injurious in the third stage, and in the case of patients afflicted with blood-spitting. In general, patients should go to Algiers in November and leave in April."

LECTURE ON
HOSPITAL PATIENTS, DOCTORS, AND NURSES.

By Dr. LIONEL BEALE, F.R.S.

(INTRODUCTORY TO HIS CLINICAL LECTURES AT KING'S COLLEGE HOSPITAL.)

(*Concluded from page* 573.)

And now, gentlemen, I have to speak upon a subject of the greatest importance to every member of the profession and to the public, rich as well as poor, and one concerning which much misconception prevails in many quarters.

No calling has undergone more wonderful changes—and for the better—in these last days than that of nurse, nursing sister, and superintendent of nurses. Nursing has become a profession, and in some hospitals—I wish I could say in all—a special department. The old "matrum" and her poor, overworked, ignorant, scrubbing attendants have either disappeared or have much changed in character. The poor, tired old charwoman no longer recoups her exhausted powers, after her hard day's toil, basking in the warmth of the ward fire, and supplied with her supper and a shilling in exchange for her modest services as "night nurse." The system did seem bad, and according to my experience it certainly was desperately bad, but no doubt it had its good points; for, as you know, there is good to be discovered in everything, if only you are far-seeing, and look far enough, and long enough, and deep enough. Every old nurse was eminently deferential, and in a way thoroughly under the control of the constituted authorities. Though the discipline seemed lax in some particulars, and the work was often most carelessly performed, there was never any doubt as to who was master and who served. In former days dismissal was summary, and on some occasions it was found necessary to interfere in advance instead of waiting until the offence had been actually committed in a legal sense. Thus, a nurse who might have been regarded as potentially tipsy, though actually sober, might have been transferred from the ward to the environment of the institution to develope the several phases of the alcoholic malady. Happily, all this is of the past. Nurses are now of an altogether different order. They are taken from a different class. They are, I may say, well educated. They are trained, and know their work. Many are proud of nursing the sick, but few will scrub the floor. Nurses are paid higher wages. They are devoted and trustworthy, but are of course more independent. Hospital nursing nowadays may be thoroughly well done, but of course it is more costly than the apology wrongly called nursing in former days. Still, at this time there exist two very different ideas of what a nurse ought to be. According to one, she is a sort of medical maid-of-all-work, to be generally useful; according to the other, she is a member of a profession, and has rights as well as duties. For the last twenty years many medical practitioners have been doing their utmost to raise the character of the nurse and increase her efficiency. Considerable success has attended these efforts, not only in large hospitals and in populous cities, but in villages; and the poorest cottagers in the country, as well as the sick inmates of our poor houses, have been gainers thereby.

I am glad to be able to say that we were among the very first to abandon altogether the old system of hospital nursing, and to take a new step in advance as regards hospital management. A system of nursing based upon (at that time) altogether new principles was introduced. The new nurses were members of a staff owing allegiance to a lady who undertook without remuneration the general superintendence of the nursing department of the hospital. She was assisted by other ladies, who, like her, gave their services to the good cause. The nurses under the sisters were not only well paid, but every care was taken for their well-being and comfort. About seventeen years ago, then, the responsibility of nursing our hospital was transferred from hospital servants to the sisters and nurses of St. John's House. No hospital could be better nursed than ours has been during these seventeen years. Year by year the excellence and thoroughness of the work have been acknowledged, and everyone who knows anything about nursing will confess that more thoroughly good work cannot be. The testimony of the staff has been all but unanimous.

It is well that you should learn how good nursing should be conducted, and you cannot be much in our wards without

gaiuing the informatiou. Hospital nursing demands iucessant care and attentiou, and no inconsiderable labour on the part of the nurse, who is almost incessantly moving about, and sometimes has many journeys up and down stairs to perform in the day. As an illustration of hospital nursing, I will refer to one or two of our wards. Take for example the Sambrooke ward, through which we have just passed. Consider what the sisters and nurses have to do there at this time—day by day, and night by night. At the eud of the ward is a patient just admitted in a highly feverish state, requiring constant watching. Opposite to him is a delirious youth, suffering from typhus, whose life is in jeopardy. Two nurses are required to manage him. Beef-tea or brandy is given every two hours, and for the next few days probably it will not be safe for a uurse to be absent from his bedside for many minutes at a time. He is in a very troublesome condition, for he is sometimes violent, and tries to fight his way out of bed; still, with the thorough care and attention he gets, he will probably recover. A few beds off is a case of cerebral disease. This patieut is sometimes unconscious for several hours together, and requires a good deal of looking after. Lower down we have a man suffering from rheumatic fever, who is perfectly unable to use either of his hands. He suffers much pain, and, though doing perfectly well, requires the constant assistance of the nurse. Opposite to him, as you know, is a very bad case of acute rheumatism, with pericarditis and pneumonia. This poor fellow will also recover, but will give much work for our sisters and nurses for some time to come. All these cases require most patient and constant watchiug. Without first-rate uursing there would be little chance of saving two out of these five cases. If thoroughly well nursed, a large percentage eveu of the very worst cases of rheumatic fever complicated with heart disease and lung mischief, as we know by experience, will recover. But in addition to the work just referred to, you must remember there are ten more cases in this ward, several of which are serious, and requiring a good deal of attention. Then there is the ordinary daily routine work of the ward to be done, such as giving the patients their meals and medicines, making their beds, and seeing to the numberless duties which afford almost constant occupatiou in the case of the nurse who has but a single patient to look after in a single sick-room.

And if you wanted to see in an individual case of sickness the result of thorough nursing aud constant patient care and attention, extendiug over a long period of time, I should recommend to your notice a little girl iu the Twining ward, whose case is also most interesting medically. She was admitted about five mouths ago, in a condition which seemed almost hopeless. There was well-marked pyæmia, and abscess after abscess formed in different parts of the body. There was extensive lung mischief and purulent expectoration. The emaciation was extreme, and for weeks the temperature ranged from 101° to 104°. The last abscess that formed was a large oue, occupying the calf of the right leg, and this, after being opened in two places, was followed by necrosis of the greater part of the shaft of the tibia. The dead bone has not yet thoroughly separated; but the child is gaining flesh, and thanks to good nursing will recover. Now, I doubt if during the five months she has been in the Hospital, more than an hour has passed without the nurse being required at the bedside of this child. Although she weighed only two stone and half a pound, she has had during the whole period of time six ounces of braudy per diem, besides beef-tea, milk, and a small quantity of good ale. She has also taken pepsiue and tincture of perchloride of iron during the whole period. Now, here was a case in which we should not have had the smallest chance of being useful unless we could depend upon thoroughly honest, tender, and intelligent nursiug care. A child suffering in this way is ofteu very irritable and excessively exacting. If the nurse is to be of the greatest use possible, she must be patient and in good temper during the progress of a tedious case like this, and if she can be in good spirits and always cheerful, so much the better for the little sufferer. Now, it is only by a thoroughly good system of training and a thoroughly good system of mauagement that we can hope to obtain—or retain, if we possess it—such service.

St. John's House is a comfortable *home* as well as a nursing institution, and when our nurses become old and can no longer work they receive a pension, which, though uot so large as we desire it should be, nevertheless represents an amount of capital which very few people in the enjoyment of an income far higher than that of a nurse can manage to save. Our nurses belong to a sisterhood—a religious sisterhood—the bishop of the diocese being our president.(a) You must not, however, allow yourselves to be misled by the word "sisterhood," which is applied to communities differing from one another in most important particulars, and which are conducted on very differeut principles. Our workers take no vows—they can come and go as they think right. They freely give their services, working in a way that must excite the illogical gratitude eveu of a thinking-machine. Such an institution and such a work is sure to be misunderstood and its motive misinterpreted iu these days. In King's College, however, we ought to fully understand it and sympathise with its aim, for the basis of the two institutions is the same. Now, I must beg you to bear in mind that in our sisterhood everything is *voluntary*. As Bishop Blomfield said when St. John's House was founded in 1848, "There would be no vows of poverty, mouastic obedience, or celibacy, no cloistered seclusion, no tyranny exercised over the will or the conscience, but a full, free, and willing devotion to the great cause of Christian charity.(b)

Some persons object to our system; some disapprove sisterhoods and religious communities of every kind; some disbelieve in work undertaken upon religious grounds; some disapprove religion of every kind whatever. *Quot homines, tot sententiæ.* Our country is, however, large enough to contain us all, and we may differ mightily from one another. Nor does it appear probable that as time goes on the differences will be less; but nevertheless the work of England will be so done that we shall not feel ashamed of our country. It would, however, be un-English on the part of one person or of many belonging to an institution or a community which rests upon certain defined prineiples, to attempt to undermine those principles in order to destroy that society—just as it would be un-English and wrong on the part of any of us, who differed from a co-worker, to co-operate in his work, to make him believe we were his friends, and then when we knew him, and were acquainted with his weaknesses as well as his strength, to use the knowledge we had thus gained for his overthrow should an opportunity occur. Such conduct in the abstract would be called base; in the concrete, a milder term is usually applied to it, and some think perhaps that it is only the legitimate advantage which a strong person must, according to the inexorable laws of natural selection, take over a weak one clearly unfitted to survive in the struggle for existence.

Theu there are people who take what they tell you is a thoroughly *practical* view of the matter. They eare not what those who are engaged in any work may think, or what they believe. The questiou for such practieal persons is simply this—Is the work done properly; are the people at their posts; do they do that which they engage to perform? If these questions can be answered affirmatively, not only will superstition be tolerated by the practical person, but he will be ready to bear honest testimony to the honest workers, and praise their work, though he may not agree with the principles upon which they work. But never mind! judge, if you choose, like our supposed praetieal business man, by the results,—and what will be your conclusion? Look at the state of our wards, and cousider what we gain by this thorough cleanliness. Do we not happily enjoy almost immunity from hospital maladies, such as pyæmia, spreading erysipelas, etc.? The contagious fevers we take in hardly ever afford evidence of their contagiousness by spreading in our wards; and on the rare occasions upon which fever is communicated, it is the poor nurse, uot oue of the patients, who is almost invariably the sufferer. We prove the excellenee of our system by appealing to the facts.

As I have had to touch upon the religious question, I shall take this opportunity of adding a few words upon that head; for at this time it is well that you should know what your teachers feel in connexion with a matter of such real import-

(a) "As a religious institution, its internal harmony and its steadiness and moderation as regards Church principles could only be secured by placing it always under the authority of the bishop of the diocese for the time being, as president and visitor."—"A Short Account of St. John's House and Sisterhood," p. 2.

(b) *Op. cit.*, p. 3. The present Council of St. John's House consists of the following members:—The Lord Bishop of London, Sir Rutherford Alcock, K.C.B., the Rev. Canon Barry, D.D., Professor Beale, F.R.S., W. Bowman, Esq., F.R.S., Robert Cheere, Esq., the Rev. Edward Coleridge, Robert Few, Esq., Bartle J. L. Frere, Esq., G. Frere, Esq., the Earl of Harrowby, the Right Hon. Lord Hatherley, the Rev. J. E. Kempe, B. Lancaster, Esq., the Lord Bishop of Lichfield, the Lord Bishop of Lincoln, the Right Hon. J. R. Mowbray, M.P., Dr. W. S. Playfair, Randolph Robinson, Esq., the Very Rev. the Dean of St. Paul's, W. H. Smith, Esq., M.P., G. A. Spottiswoode, Esq., John G. Talbot, Esq., M.P., the Rev. the Master of the Temple, the Rev. W. Tennant.

ance to us all; and although I daresay Mr. John Morley and others will tell you that my business is with teaching purely secular, while many of my scientific friends will not hesitate to affirm that I am a prejudiced supporter of the anti-scientific view of things, and others will try to set me down without giving any reasons at all, it is nevertheless right that I should speak. In these days it would indeed be foolish, on the part of conscientious advocates of the principles upon which our College has been founded, to flatter themselves that they were regarded with much respect by those who assume the title of philosophers, and seek to impose upon mankind their peculiar views, as if they were infallible, and on the ground that they belonged to the "advanced" school. "Advanced" their school certainly is as regards its professed knowledge of facts about to be, and its interpretation of what is now known. For the *advanced* is also the *prophetic* school of science, and it possesses other qualities which even unscientific people are beginning to discover and to appreciate. Some of us connected with this place may constitute the very last of those who desire to act up to the antiquated doctrine,—"That every system of general education for the youth of a Christian community ought to comprise instruction in the Christian religion as an indispensable part"; but were the number reduced to ever so contemptible a minority, I should certainly form one of that minority; and if I cannot give adequate reasons for the views I take, I shall at least be able to give full and sufficient reasons why I utterly reject the evidence upon which many of the new so called "laws of nature" are said to be founded.(c) There never was a time when a greater number of utterly untenable dogmas were palmed off as "fact and law," than have been palmed off during the past few years. What a few philosophers *desire* that the majority should believe to be truth, is represented by them in the most positive language possible to be actual scientific truth. But very many of these dogmas have been proved to be neither scientific nor true. Then it is said—"Ah, but even these certainly will be proved to be true at some future time!" Our views, and opinions, and beliefs, by which only we can be guided here, are to rest upon the facts, and laws, and discoveries of the science about to be! But already people are beginning to perceive that, while it is quite right to study with the greatest care, and minuteness, and skill, and patience all that relates to the subject of fog, it is also right to bear in mind during the whole course of the inquiry that there is blue sky beyond, which cannot be successfully investigated by aid of the same instruments and method of research as have been shown by experience to be admirably adapted for elucidating all the facts of importance connected with fog.

But it is to be observed that many—and of these not the least wise among the leaders of thought—have decided to change front a bit, and some are actually returning to the old views concerning the importance of religious teaching. If I might venture to prophesy, I should say that before long the opinion that the acquisition of branches of knowledge without instruction in Christianity "will be conducive neither to the happiness of the individual nor to the welfare of the State" will be more generally entertained (at least in England) than has been the case for many a long year. Views have changed wonderfully within the last year or two. People are beginning to find out that they are not mere machines, and that the positive assertions concerning the groundlessness of the religious idea are mere dogmas that cannot be justified. It is already admitted that little boys and girls may be taught that there is a God without any very dangerous consequences to the developing liberty of the growing subject. In my opinion, the fundamental principle of our College has not been really shaken, nor do I think it likely that it will be.(d) I therefore conscientiously give all the support it is in the power of a doctor to give to those who devote themselves to the good work of nursing our sick, although they are members of a religious body. I have long been a member of the Council of St. John's House, and I cannot conceive a connexion more natural or more likely to work well and be advantageous to both institutions than that which has so long subsisted between St. John's House and King's College Hospital. For the sisters and nurses I unhesitatingly claim—and in doing this I am sure I shall have with me my colleagues and many friends—the respect and support of medical practitioners and the public, on the ground that by thorough self-sacrifice and devotion, and the earnest discharge of their self-denying duties, it has been thoroughly earned. Nor can I conceive that Englishmen generally will allow themselves to be prejudiced against bodies of thoroughly useful, earnest workers, or refuse to accept the benefit of their labours, simply because they are influenced by religious views, which those who disbelieve that miracles have ever been performed and have implicit faith in physical causation, characterise as foolish, bigoted, or narrow. Gentlemen, in this sense I must plead guilty to failings such as many possess who have been already condemned as weak, and unscientific, and foolish,—for I am not afraid to confess my utter disbelief in the arguments of those who assert that the facts of science have shown miracles to be and to have been impossible, who assert that the facts of science have destroyed our belief in God, and proved Christianity to be only a kindly superstition.

(c) See "Protoplasm, or Matter and Life"; "Life Theories and Religious Thought"; "The Mystery of Life"; and "Bioplasm, an introduction," etc.

(d) I will, however, make this reservation – In case the prophecies relating to the formation of laboratory-bred organisms out of lifeless matter, and the discovery of the mechanical equivalent of consciousness (Huxley), should be actually fulfilled while I am a member of the staff, I will instantly resign. At this time, however, I regard these not only as very false, but as very foolish prophetic utterances.

ORIGINAL COMMUNICATIONS.

ON TREATMENT OF VESICAL CALCULI.(a)

By WILLIAM DONALD NAPIER, M.R.C.S.

During my attendance at the meetings of this Society it has always afforded me the utmost satisfaction to observe not only the generous forbearance of its members towards those who seek to bring forward any new idea, but the equally ready sympathy and kindly assistance which they as invariably extend to the most inexperienced.

Thus encouraged, I do not hesitate to present myself before you this evening, feeling sure that you make full allowance for the peculiar position in which I stand. In no society does the humblest effort towards the extension of science or increase of light stand less in need of an apology than in one composed of men whose best faculties are devoted to their pursuit, and whose very vocation tends to enlarge their sympathies and give breadth and completeness to their opinions. To be counted with them, if only in the desire to mitigate human suffering, is not unworthy the ambition of any man, and to be able to contribute in ever so small a degree towards the object that actuates them, would be to me a sufficient reward for the time, and thought, and labour that I have spent, and spent willingly, on the study of a special branch of the surgeon's art that has appeared to me to demand even more strenuous efforts than have yet been made to obtain for it the high place that can only be secured by the nearest approach to perfection that we are capable of raising it to.

Unable to devote any but my contracted leisure moments to the study of the subject in which I have taken such vivid interest, I have found eight years not more than sufficient to work out to my satisfaction the various schemes that have at different times suggested themselves to me, and that have resulted in the instruments that I am about to lay before you, hoping, as I do, that they possess at least the merits of simplicity and originality.

One of them I have been already permitted to bring before the notice of this Society; but as I did so hurriedly and without previous notice, and as it has since been greatly improved in manufacture, and is besides intimately connected with the others that I am anxious to call your attention to, I must hope for your pardon for including it in the series, which would be incomplete without it.

Rather than occupy your time with a dissertation on vesical calculi, which could be done much more advantageously to you by any of the eminent surgeons present, I shall confine myself to only such an exposition of my own views as is absolutely necessary for the explanation of the motives that guided my various experiments, and in illustration of the principles which are embodied in the mechanical appliances I have alluded to.

There has at no time been any hesitation in the mind of the profession as to the rank amongst operations of importance that should be assigned to the one commonly practised for the relief of persons suffering from stone in the bladder. But

(a) Paper read before the Medical Society of London, December 1, 1873.

perhaps its pains, its perils, and its jeopardies were never fully appreciated by the general public until an illustrious life lay in the balance a year ago, and the newspapers were teeming with surgical details, variation of symptoms, and auguries as to the chances for and against the termination of the struggle that was known to be going on between science and disease in that quiet room at Chislehurst.

How gradually but persistently the gravity of the malady forced itself on men's minds! How the desire for intelligence grew in intensity; and how deep and universal was the regret when it became known that the life that had weathered more storms, endured more of "the changes and chances of this mortal life" than is common to men, with all its varied experiences of struggle, of exile, of a throne, of triumphant success and humiliating defeat, of fierce physical suffering and immeasurable mental distress, had succumbed under the very treatment intended for its prolongation!

There was throughout England, in the days that succeeded that last bulletin, but one feeling of compassion for the man whose profound distress at the humbling issue of a disastrous campaign, with all its miserable concomitants, had been aggravated beyond description by intense anguish of body, so unfitting him for personal exertion that it must have been by an almost unparalleled act of fortitude that he in the first instance assumed the command of the army that, but for his grievous disability, might never have been led to shame. Is it too much to say that, but for the length of time that was permitted to elapse—let the reason for the delay have been what it may—but for the length of time, I say, that was permitted to elapse between the first suspicion of the existence of the disease and its establishment as a fact, a very different result might have been hoped for, not only to the man but to the nation?

I have alluded to the place held in professional estimation by the operation for the removal of stone, but were any testimony required in proof of it, none more convincing could be found than in the enormous number and almost incredible variety of the instruments immediately connected with it that were lately exhibited at the International Exhibition, each bearing silent witness to a fresh effort to divest the operation of some cause for anxiety, spare the sufferer some suffering, avoid some complication, attain some desired end, ward off some dreaded result.

Taken collectively, as they may fairly be, and tested by the laws that regulate supply and demand; what do they prove? Three points appear obvious to me—(1) the difficulty of early diagnosis; (2) the danger to life involved by the operation of lithotrity as now practised; and (3) the impediments to convalescence consequent on its successful performance. Under this last head I should be disposed to class the continuance in the bladder of fragments of stone too large to find their exit in a natural manner; the premature repetition of the first operation which the intense distress that their presence causes the patient is apt to render compulsory; and the protracted suffering consequent on abrasion of the mucous membrane from portions of the calculus being caught and drawn away—a process that not only considerably retards recovery, but occasionally results in permanent stricture.

I am taking in this rough grasp only such obstacles as may present themselves to the skilful operator—the man whose sense of hearing is quickened by constant use; whose touch is rendered delicate by familiarity with the cause of suffering; whose mastery of the instruments he handles renders his manipulation steady, gentle, and deliberate; and whose experience anticipates some of the evils he may not be able to avoid.

Given these impediments, or embarrassments, or perplexities,—whichever you choose to call them,—under such circumstances as these, and there need be little fear of over-rating the complications that may arise under less expert direction. This view of the subject having commended itself very strongly to me as the one that should be kept constantly before anyone who sought to improve the present method, I have worked continuously with one especial aim—to produce instruments that, by their simplicity of mechanism and manipulation, should insure efficiency in the hands of the less experienced practitioner.

I think I am correct in stating that there are few investigations into the primary cause of suffering in which accuracy is of greater importance in its bearing on the result than in that for the discovery of stone in the bladder; its removal in the first stage being so comparatively simple, but after a length of time so complex, as to rank when successful with the greatest triumphs of surgical art.

And there is in addition to this argument in favour of early detection another hardly less obvious. I mean the aggravated misery inflicted upon a person suffering from stone by mistaken diagnosis, and the consequently mistaken treatment that is apt to follow it. An instance comes to my mind of a patient with stone in his bladder being treated, although a young man, for enlarged prostate, and the application of a blister to the perineum being ordered for him, entirely in consequence of unsuccessful soundings.

That there is some imperfection in the present system of investigation is evidenced by the failure of one surgeon to detect the presence of a calculus which is discovered immediately after by a man only his own equal in ability, or possibly less experienced than himself. And this—being by no means a rare occurrence—points conclusively, I think, to something defective in the agent rather than in the operator.

To render a doubtful result to investigation conducted with ordinary care more exceptional than hitherto,—and I imagine that it is in the first stages of the disease that the percentage of uncertain issues is by far the greatest,—it seemed necessary to devise an instrument of peculiar sensitiveness and capability of application to minute objects.

Whether the one before you will fulfil these conditions in all instances remains to be proved. It has not failed me yet in the experiments to which it has been subjected. I believe it to be unique in its mode of action, depending as it does upon ocular instead of aural proof; and I cannot help hoping that, by reason of its exquisite susceptibility of impression, immediate manifestation of the existence of a foreign body may follow with absolute certainty its introduction into the bladder.

The calculus detector—for that is the name I have given it until a better can be found—is precisely similar in form to the ordinary sound. It is composed of steel up to the commencement of the curve, where it is reduced in diameter, and a coating of pure lead is cast round the smaller part of sufficient thickness to render the surface perfectly smooth and even along the entire length. The leaden extremity is then polished as highly as possible with a leather, and rendered keenly sensitive to the slightest contact with any rough or hard substance, of which it would be found to bear visible trace.

On some of these instruments I tried to increase the susceptibility by dipping the leaden end in a weak solution of nitrate of silver, or, what is better, chloride of platinum, which produces a black pigment on their surface; but further experiments have almost convinced me that this preparation is unnecessary, and that pure lead is perfectly efficient. The instruments that I showed before were coated with pewter, on which the use of lead is a great improvement, by reason of its readier impressibility.

Before the introduction of the detector it should be carefully rubbed with a leather, and submitted to the test of a magnifying-glass, so that no slight scratch or indentation previously incurred should, on its withdrawal, mislead the operator, who will find it satisfactory again to apply the same means for discovering the marks which contact with a hard substance may have produced during its employment in the bladder.

With regard to the other instrument, which I call the "calculus extractor," I may premise that I incline to confine its use to the removal of small stones—I trust that the day of large ones is at an end—and fragments of stone. And this because I do not myself believe that lithotrity should ever be resorted to when a stone has from any cause, such as absence from available medical assistance or the dread of the sufferer to submit to the necessary test, been allowed to attain to larger dimensions. Then the patient's chance for recovery must lie in lithotomy.

To be as concise as I can, I shall simply describe it as an instrument intended to withdraw from the bladder either a stone intact or crushed into fragments, so enveloped in a delicate elastic wrapper—I use the term advisedly, for, as you see, it literally folds itself round the substance in question—that injury to the passage will be simply impossible. It consists of a soft indiarubber tube, terminating at one extremity in a funnel-shaped orifice, greatly resembling the ordinary convolvulus flower, and is capable of containing a calculus or portion of calculus of considerable dimensions. Inserted into the bladder, its form and position render it the receptacle of such foreign substances as would, from the position of the patient and flow of urine, determine towards the natural outlet. This receptacle, enclosing such bodies within the folds of its delicate membrane, and permitting itself to be

gently withdrawn, retains them in its elastic envelope, and protects the urethra from direct contact with them.

After bringing it to the state of completeness in which you now see it, I was very much and very long perplexed as to the best means of introducing it into the bladder; and it was only after many trials, and as many failures, that I was able to see my way to the accomplishment of this, without which my instrument would be useless. My first idea had been to insert the convolvulus-shaped cup folded in the form and manner of a bud, and retained in its position by some adhesive substance that should permit it to expand on its introduction. But there were several objections to this.

At last it struck me that, inserted in a fine silver canula, it would be entirely at the direction of the manipulator, and I was successful in reducing my idea to practice; but then I was met by a difficulty that I feared at one time would be insurmountable. How was it possible to avoid the trouble that the insertion of a canula open at the end could not fail to give rise to? An artificial point appeared to be the only solution, and it seemed to me that cocoa-butter was possessed of a peculiar fitness for the purpose, and for this reason—that for a hard, dense substance its dissolubility under moderate heat is, I believe, quite without parallel, subjection to a temperature of 96° dissolving such a portion of it as my purpose requires with curious rapidity, in as nearly as possible one minute. There is, besides, the advantage that it serves as a lubricator during its entrance into the bladder.

And it is not in connexion with my instrument alone that this application of it will, I hope, be found to be a profitable discovery, but in every operation where it is expedient temporarily to close the mouth of a catheter or canula. I mean that I consider the cocoa-butter point *per se* worthy of attention.

I would now briefly suggest to your notice a further adaptation of the principle and form of the extractor that may be found useful. As a self-retaining catheter, I cannot help thinking it would prove as simple and effective an appliance as could be used, and I know that the increased demand for these instruments of late has called forth various improvements and emendations both in the means of introduction and retention.

After speaking so long of myself and my own labours, it is especially pleasant to me to turn from them to the more agreeable task of acknowledging—which I will do as briefly as possible—the obligations that I am under to those who have generously afforded me assistance that has been invaluable to me in surmounting the difficulties with which I have had to contend. Amongst my medical friends I must mention Mr. Barnard Holt, to whom I am indebted for sound practical advice. To Dr. Robert John Lee I owe more than I can express for the unwearying patience and kindness with which he has assisted me in my experiments on the dead subject; and to Mr. Warrington Haward, of St. George's Hospital, who deserves my warmest thanks, not only for facilities and personal help afforded me in the post-mortem room, but for the preparation now on the table, by which I hope to be able to exemplify practically the processes I have described.

The success that has attended the manufacture of the instruments is due in part to the care and attention bestowed on them by Mr. Charles Maw, of the firm of Maw and Son, Aldersgate-street, and in part to Mr. Jaques, the representative of the firm of Messrs. Warne and Co., Tottenham Indiarubber Works, who, in the cause of science and of suffering humanity, spared neither time nor trouble in bringing to perfection the indiarubber convolvulus-tube, devoting his best energies to the work in hand with unflagging interest until the end was accomplished. The calculus detectors which I have brought with me this evening were made by Mr. Hawksley, of Blenheim-street, Bond-street, who has taken especial pains to carry out my instructions.

For assistance in procuring suitable chemical agents for the solutions I have alluded to, my best thanks are due to Mr. Gale, of the firm of Bell and Co., Oxford-street, and to Dr. Flite, of the British Museum.

It remains only to commend the inventions to your criticism, and, if they meet with approval, to your adoption. That they are faultless, it would be too much to hope. Time and use would doubtless suggest improvements, modifications, and additions, but if the principles are sound, a step will have been gained. It would have been more satisfactory for you, and certainly for me, had I been able to bring evideuce of successful operations effected by their means. Perhaps on a future occasion some of the gentlemen present may be able to supply this omissiou; meantime I am content to handthem over to the profession for what they are worth.

ON EFFECTS OF ATMOSPHERE IN CUTANEOUS AFFECTIONS.

By GEORGE GASKOIN, M.R.C.S.,
Surgeon to the British Hospital for Diseases of the Skin.

There is a prejudice existing among the profession in London against sending patients to the seaside when suffering from eczema and some other skin complaints. This arises, no doubt, from common experience, though some more than others have partaken of it. Indeed, it is not uncommon to meet with patients who cut short their holiday and return to town with disgust. Instances of this, however piquant, need scarcely be given. The following I take from my note-book:—A. B., *Eczema*, presumably gouty—"The seaside is sure to bring it on." C. B., *Eczema manuum*, supposed to have come from drinkiug cold water when heated—"Only the seaside carries it away,"—so that I remain without a conclusion. Again, I see extensive and constitutional eczema, with or without asthmatic complication, in young people who return from the coast generally improved by their autumnal trip when allowed to accompany their brothers and sisters in the family circle.

So much may serve to introduce the notice of a case which has come before me in the course of the year. A young lad presented himself to me afflicted with that general and, so to speak, constitutional eczema that is seen in the lower classes, and which for the most part goes uncured while they struggle courageously with existence. This lad tells me that he has had it always, except once that he took a dip in the sea at Brighton, when he got freed from the eruption for three days, but he never had the opportunity of repeating the experiment. This seems to stand on a level with auother case which has occurred during the year. It occurred in a child two years of age. The mother informed me that the hooping-cough had cleared off the eczema in three days' time. On subsidence of the hooping-cough the eruption returned. The custom now much prevailing, of giving school-treats to parish children, is likely to furnish some items of disease. One of the worst cases I have seen of eczema capitis occurred in a school teacher in that way. This young man was of lymphatic constitution, and of Jewish parentage, residing in Houndsditch. The excitement, the heat, the sudden change to the air of Brighton, though but for a few hours, developed in him an eczema, whose copious flow and lingering effects made him an invalid for several months. "Disturbance" is the word which best explaius such cases. I have known it iu others who from London went for a day's holiday, or for a short spell into the country, and, curiously enough, sometimes when they visited their native place. In London shopgirls and shopwomen—rather a favoured class as regards diet and protection from weather—acne rosacea is very apt to follow on direct exposure, especially at the seaside, and when the day is warm. It is a complaint which is very apt to come on the coast, especially under a full dict, when there is a constitutional tendency. Among those of my patients who this year have received most benefit from country air, I may mention a case of urticaria in a national schoolmistress, which was wholly refractory to treatment. I recommended her going into the country for a while. The cure was rapid and complete. Two cases of alopecia have much benefited by the seaside. Let me here say a few words of the kind of weather which patients with eczema complain of most. This is what is generally termed "coarse weather," windy, damp, and wet. In another case of urticaria the patient complained more of the wind than of any siugle thing as increasing his distress; from whatever quarter the wind might come. In a French shoemaker from Toulouse now under treatment for eczema, I find him insist on the change of the moon as operative in increasing his discomfort. By a man of the condition of master mariner, who superintends work down the river, now suffering from a tedious sycosis, I am asked if "any of those fellows could have put it on him," which may be worth mention here as it serves to show that the superstition of the "evil eye" is uot yet, even in England, extinguished.

CHOLERA still lingers about her Majesty's 17th Regiment at Lucknow.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

OPERATIONS AT GUY'S HOSPITAL.

At the operations at this Hospital, on Tuesday, November 26, Mr. Bryant applied to an aneurism in the popliteal space a modification of the treatment which the late well-known surgeon, Mr. Moore, of the Middlesex Hospital, on one occasion tried upon a thoracic aneurism. The man was a young adult, with very considerable and advanced disease of the whole arterial system. The valves of the heart were much involved, and all the larger arteries of the body were degenerated. This being the case, Mr. Bryant was disinclined to subject the femoral artery either to compression or ligation. While the patient was under observation, however, Mr. Bryant received a note from Dr. J. Levis, of Philadelphia, in which that surgeon stated that he had lately had a man of about forty years of age under his care with a large sacculated aneurism of the subclavian and axillary arteries, extending from the innominate artery to the axillary border of the great pectoral muscle, whom he treated by passing into the sac, through a very fine puncture, twenty-four feet of ordinary horsehair. The introduction was effected with facility, and during the first week afterwards the pulsation gradually diminished until the aneurism was converted into a solid mass. No local irritation followed in or about the aneurism.

As the case now under remark was considered a fitting one upon which to repeat an operation attended with so favourable a result as in Dr. Levis's case, Mr. Bryant made a puncture with a very fine trocar and canula, and through the latter passed twelve pieces of fishing gut, each piece being from twelve to eighteen inches long. The details of this case will at some future time be made public either in these pages or elsewhere.

On the same day Mr. Bryant removed a large circular portion of the frontal bone from a patient the subject of constitutional syphilis. There was a large black mass of necrosed bone in view upon and a little to the left of the median line; around it there were raised, thickened, and red edges of skin, beneath which pus was burrowing. As the case had long been under observation, Mr. Bryant considered it best to give the patient chloroform, and remove the dead part. This he did easily, after dissecting up the skin all around by placing the point of an elevator beneath one edge and simply raising it. Some light dressing and a bandage were then applied.

Mr. Durham performed an amputation through the middle of the thigh upon a woman, suffering from constitutional syphilis, for suppuration of the knee-joint and extensive ulceration of the skin about the joint. The mode of amputation was by ordinary anterior and posterior flaps, the latter being somewhat the longer. In sawing through the bone Mr. Durham inclined the saw downwards and forwards, so as to make an oblique section of it, the object being to allow the superior flap to rest evenly upon the slanting upper surface of the divided bone, instead of falling abruptly over the sharp edge, as is the case when the section is quite vertical. In this way, too, there is no room left for the accumulation of pus or blood in a space between the flaps and the sawn surface of bone. This advantage is more especially marked, Mr. Durham considers, in amputation through the leg.

Mr. Howse amputated through the knee-joint of a woman who had previously been several times operated upon for talipes. The result of these operations, however, was a deformed, wasted, and useless limb, which sometimes caused her such distressing pain that she would often have permitted its removal there and then. Mr. Howse made a long anterior rectangular flap, out from which, after its formation, he dissected the patella; he then divided the ligaments of the joint, and cut straight through the soft parts behind. In his remarks, Mr. Howse expressed a strong objection to a long posterior flap taken from the calf, because of the large number of small arteries which exist there, and which, when once cut, give rise to a great deal of troublesome hæmorrhage. In this case Esmarch's elastic roller and constricting tube were used.

BIRMINGHAM GENERAL HOSPITAL.

A CASE OF ACUTE RHEUMATISM IN WHICH PERICARDIAL AND PLEURAL EFFUSION UNDERWENT REMARKABLE VARIATIONS AT DIFFERENT PERIODS OF THE CASE—TEMPERATURE RECORD.

(Under the care of Dr. RUSSELL.)

Dr. Handfield Jones, in writing on some cases of anomalous rheumatism (*Medical Times and Gazette*, January 4), comments very skilfully on the distinction between the phenomena of traumatic inflammation and those of transitory or fugitive inflammation as represented especially by the inflammations of rheumatic fever. The former inflammation "never shifts its seat, never comes to an end suddenly; the nutritive derangement of tissue-elements always subsides gradually;" "the tissue itself, its fibres and its cells, is principally affected, and the vessels and nerves only in an inferior degree." In the fugitive inflammations, on the contrary, he suggests that the vaso-motor nerves, and not the tissue-elements, are chiefly implicated, "so that when their paralysis ceases and healthy circulation is restored, the tissue-elements rapidly recover their normal state." He further observes, that locality seems to exert a material influence in determining the character of the inflammation, whether it shall be fugitive or permanent; and he quotes in illustration rheumatic fever, a disease in which the fugitive character of inflammation which is seated in the limbs is contrasted with the more permanent character of that which affects the thoracic viscera.

In the case of rheumatic fever which I have now to narrate, although it is true that the intra-thoracic inflammations did not assume a completely fugitive type, yet the singular fluctuations which their physical signs underwent approximated their phenomena very closely to those presented by the joints in an ordinary case of the same disease, as, indeed, was displayed by the patient herself. Moreover, the inflammation seemed almost confined to the production of a fluid effusion, the quantity of lymph upon the surface of the heart being apparently very small, and no evidence of solid effusion upon the pleura having appeared from first to last. In this case, too, the fugitive character of the effusion became a matter of much moment, and had direct bearing upon treatment, for the appearance of effusion in both pleura simultaneously suggested at once the question of paracentesis—a question which would be the more readily entertained now that the use of the aspirator probably diminishes materially the danger of tapping the chest in the acute stage of pleurisy.

A healthy young woman, aged 20, was admitted on August 31 with her second attack of acute rheumatism, then of two days' duration. Her lower extremities were painful, but the joints were not swollen. Over the cardiac space was faintly audible a single systolic sound, apparently exocardial. The temperature on the morning of admission was 104°, but the same evening fell to 100·6°, and continued at about 101° for the following three days.

No extension of præcordial dulness was discovered until September 3, when the extension was very limited; but on the next day it had reached the third rib, and incompletely the second, though without much lateral extension. The rub was faint and soft, and purely systolic; it never changed during the remaining period of the case. On this day the temperature ran up to 103°.

The rheumatic inflammation, which had fixed itself in the knees and ankles, was greatly relieved by a blister placed above each of these joints, but now the inflammation had passed to the left arm. I suspended the application of blisters to the last-mentioned limb on the assertion of the patient that she derived as much relief from a wet pack, in which the limb had been enveloped; and on the following day (September 5) both lower extremities and the left arm could be moved freely without causing pain; but now the right arm and shoulder were engaged in the inflammation, and were enveloped in a wet pack at her own request. On this same day the pericardial dulness had receded from the second intercostal space.

The right arm was relieved from pain on the following day (September 6), and thenceforward the pain in the joints wandered from joint to joint, leaving and returning, but not remaining fixed in any for more than twenty-four hours. On September 9, however, the second intercostal space again became dull, and on the 10th the dulness involved the first interspace, extending across the sternum to its right edge, and

in the other direction reaching beyond the left nipple line. The patient was very languid and distressed, and on this day passed urine in bed. During this period (from September 4 to 9) the evening temperature ranged about 103·6°, with morning remissions of two degrees. On the next day (September 11) the cardiac dulness had receded to the left edge of the sternum, and had so far descended as to render the first and second spaces quite clear, and the third space almost clear; but on the two following days it again extended, though not to reach its former area.

On the last-mentioned day (September 13) the posterior region of the chest, which had hitherto been resonant (with one doubtful exception), manifested the signs of pleural effusion on both sides, reaching on the right to the apex of the scapula, on the left not attaining so high a level. The commencement of this attack of double pleurisy was clearly marked by a pain on each side of the chest on the preceding afternoon. It is remarkable that on this day (the day of the access of double pleurisy) the temperature underwent a fall of nearly two degrees, remaining for that and the next day a little above 100°. With the occurrence of the pleurisy there was marked dyspnœa, and I visited the patient again in the afternoon, under the apprehension that surgical interference might be required to relieve the chest of fluid. I was relieved by finding that not only had no increase in the quantity of effusion taken place, but that the fluid occupied a decidedly lower level on both sides, and the respirations, which had previously varied between forty-two and fifty-four, had fallen to thirty-six.

The amount of the effusion in the chest, as indicated by the line of dulness, subsequently underwent considerable variations. Having diminished considerably, it rose again on September 18 on the right side, even to the middle of the scapula, the temperature having also risen two degrees the preceding day, but two days afterwards the fluid had entirely disappeared from both sides, and on that day the final decline of temperature to its normal standard took place. At no time could any pleural rubbing sound be distinguished. The cardiac dulness also again underwent further variations after the date of its last noted increase (September 13). The second intercostal space and the entire breadth of the sternum were again involved on the 16th, but on the 18th the dulness had declined, and on the next day had retreated finally within its normal limits.

Little need be added with reference to general symptoms, excepting that after the second day the urine was permanently without deposit, acid, and of specific gravity varying from 1013 to 1027, averaging about 1020. The tongue only presented a thin fur. Extreme languor and much expression of distress in the face were prominent symptoms throughout the case. Convalescence was not tardy and was complete.

The details of treatment have no important relation to the interest of the case.

THE ROYAL ACADEMY.—Professor Marshall, F.R.S., commenced his course of lectures at Burlington House on Tuesday last before a crowded audience, amongst whom were several distinguished academicians and hospital surgeons; his lecture was "On the Anatomy of the Foot," illustrated with diagrams, bones, and the living subject.

DINNER BY THE GOVERNOR AND COURT OF THE APOTHECARIES' HALL, DUBLIN.—On Thursday, the 27th ult., the Governor and Court of the Apothecaries' Hall of Ireland entertained a numerous company of the profession at dinner at the Shelbourne Hotel, Dublin. The chair was occupied by the Governor, Dr. Edward J. O'Neill. He was supported on the right by Dr. Brady, M.P. for Leitrim, Sir Dominic Corrigan, Bart., M.P., Mr. George H. Porter, Surgeon to the Queen, the President of the Obstetrical Society (Dr. Evory Kennedy), Mr. Wharton, Dr. Butcher, Dr. Macnamara, etc.; and on the left by Dr. Duncan, President of the College of Physicians, Dr. Denham, President of the College of Surgeons, Dr. Stokes, Dr. Hudson, Dr. Banks, Dr. Lyons, etc. In very felicitous terms he proposed the usual loyal toasts, the University of Dublin—"Our National University"—(coupling with this toast the name of the Regius Professor of Physic, Dr. Stokes), the College of Physicians, and the College of Surgeons. Very interesting speeches were made in response to the several toasts, and the guests separated after spending a most agreeable evening.

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Medical Times and Gazette.

SATURDAY, DECEMBER 6, 1873.

INDIARUBBER LIGATURES AND THEIR USE IN SURGERY.

So prominently has the subject of elastic ligatures for the removal of tumours and for other surgical operations been brought under the notice of the profession by the case which is now in one of the metropolitan hospitals, that we think it right to keep our readers informed of the progress of the case in question.

The patient has suffered very little pain throughout, but she has been attacked by erysipelas, which, though it subsided for a few days, has since spread over the thorax and back. One-half the pedicle has ulcerated nearly through, but the ligature had yesterday to be tightened, as it was no longer constricting the tissues. The other ligature gave way shortly after the operation, so that there still remains half the base of the tumour to be strangulated.

It will be seen on referring to an abstract of Professor Dittel's communication to the *Allgem. Wien. Med. Zeit.*, which we publish this week in another column, that this is exactly the process which he has adopted in all his most recent cases—*i.e.*, the halves of the tumour are strangulated at different times, so that the operation is divided into two periods. By this mode of operating Dittel says he is able to see and feel whether he has left anything behind, and if so he can include it in the second ligature or apply a third.

No one can in future doubt the power of elastic bands to cut their way through breasts or limbs, but we confess that we fail to see, either in theory or from watching the case in University College Hospital, any reason why parts that have to be removed should be submitted to this more tedious, and to some extent offensive, process, rather than at once be cut away by a few strokes with a knife. It is only in cases in which an operation is desirable, but where nothing will induce the patient to undergo a cutting operation, or in which there is some hæmorrhagic diathesis, that the application of this treatment to tumours of the breast should be thought of. Except in some such rare instances surgeons will do well, we are assured, to keep to the knife in preference to the ligature.

It was no doubt well that the treatment should be tried in this country, and too much stress must not, of course, be laid upon the fact of erysipelas occurring during its progress. This might arise in any person after an operation, but, apart from this accident, the length of time required for the strangulation to be complete (which Dittel says is fifteen days for the breast), and the presence of a large sloughy mass of tissue in the pectoral region, will be objections strong enough for most surgeons. Another very grave argument suggests itself against the last modification of Professor Dittel's procedure. This is, that as only one-half, say, of a breast is strangulated at the time, there is likely to be an interchange of material going on at the free surface of the breast between the blood in the unligatured part and the dead fluids in the strangulated part, and thus a great risk of septicæmia or pyæmia. It is stated in favour of the elastic ligature that it does not give rise to suppuration, and that granulations speedily fill up the space voided by the retreating parts; but this will be found not invariably the case.

The conclusion, then, that theory and the facts we have before us lead to, is that the knife ought not, and is not likely, to be displaced by the elastic ligature, though the advantages of an elastic over an inelastic ligature are no doubt practical and good.

As to the question of priority in the use of the elastic ligature, we think it unimportant to discuss. As we stated last week, indiarubber bands and cord have been used for the removal of nævi, hæmorrhoids, and pedunculated tumours at different times since 1863 by some few English surgeons; and it is now well known that Dr. Silvestri in 1862 published in the *Gazetta Medica Italiana* an essay on the use of the elastic ligature, and that later on he became aware that it would cut through bone. Professor Vanzetti's essay is, too, no doubt in the possession of many British surgeons. Possibly, and probably, the idea has occurred independently to several, for, as Professor Dittel observes, discoveries have often been made two or three times. We imagine, however, that no one has had so much to do in bringing the subject before the profession as Professor Dittel.

THE PHYSIOLOGY OF VISION.

IV.—The Lens and the Vitreous.

By far the most important structure of the eyeball, optically considered, is the lens. In some animals it is nearly spherical, but in man it is a doubly convex structure, whose antero-posterior diameter is one-third less than that from above downwards or from side to side. Moreover, its convexity is much greater posteriorly than anteriorly, so that the front of the lens looks, comparatively speaking, flattened. Two elements enter into its composition—the cellular and fibrous structures of its parenchyma, and its investing membrane or capsule. The parenchyma is composed of two layers—an anterior, which is thin; and a posterior, which is thick. The anterior layer is composed of flattened polygonal cells, perfectly clear and transparent. These cells are of various sizes and lengths, the longest being directly continuous with the fibres of which the posterior portion of the lens is composed. These fibres in turn form lamellæ, arranged concentrically like the coats of an onion. The line where the different fibres composing these layers terminate or unite with others constitutes a raphe. These raphes are to be found both on the anterior and posterior surfaces of the lens, but do not correspond. The raphes on the anterior surface are about nine in number—they all radiate from a common point, the axis of the lens, and so the raphes assume a distinctly stellate arrangement. The arrangement posteriorly is not so distinctly stellate. These stellæ are of considerable physiological importance. The fibres which compose the lens are of different degrees of consistence, the most internal being the most consistent, but all are highly elastic. The capsule of the lens is devoid of structure, but is thicker anteriorly than posteriorly, where it is thinner; it too, is very elastic.

Intimately connected with the lens is a structure known as the ciliary muscle. This body, which on perpendicular section seems prism-shaped, the base of the prism being directed forwards, consists of unstriped muscular fibres. These run partly parallel to the sclerotic, ending anteriorly in a mass of connective tissue which encircles the eye, and posteriorly gradually thin out, ending in the tissues of the choroid, or vascular tunic. But, besides these fibres, there are others which encircle the eye and run parallel to the margin of the cornea. Other fibres there are, but these are the most important. Now, it is quite clear that contraction of the circular portion of this muscle must to a certain extent compress the lens; and it was first described by H. Müller, who discovered these fibres, as the compressor lentis. But the exact influence of the contraction of the meridianal portion is not quite so clear. It is a curious fact that in short-sighted people the circular fibres are much more highly developed than they are in long-sighted individuals. However acting—whether by compressing the lens and increasing its tension, or by relaxing the capsule of the lens and so reducing its tension,—it is generally granted that contraction of the ciliary muscle or of some part of it has the effect of increasing the convexity of the lens, especially in front, and so of increasing its converging power. On one theory, this is done by causing the lens to increase in prominence anteriorly by compression, the lens, as soon as the compressing force of the ciliary muscle is withdrawn, tending to recoil by virtue of its own elasticity, and to assume its natural shape. On the other supposition, the contraction of the ciliary muscle relaxes the tension of the capsule of the lens, and so allows it, by virtue of its own elasticity, to assume a more spherical outline anteriorly. When the muscular action ceases, the elasticity of the capsule is strong enough to make the lens reassume its wonted figure. Which of these is the true explanation is not easy to say, but as on either view increased lens-power is the result of muscular action, so on either a hardening or loss of elasticity in the lens would interfere with the adaptation of the organ. How important these changes are, will be seen in connexion with long and short sight.

Immediately behind the lens lies the vitreous. This used to be described as enclosed in a proper tunica—the so-called hyaloid; now, however, that is looked upon as a retinal structure, and is described as the membrana limitans retinæ interna. In the substance of the vitreous we mainly encounter three kinds of cells—1. Round cells with large nuclei and coarse granular protoplasm; 2. Fusiform and stellate cells which send out long processes with varicose dilatations, ramifying, and frequently containing vesicles of colossal size; but these vesicular cells are (3) also sometimes rounded. All the cells are contractile, and can change their shape if not their place. In the centre of the vitreous these structures are not so readily recognisable, only nuclei and shrivelled vesicles being there found.

THE WAR ON THE GOLD COAST.

A great deal of the bustle consequent upon the receipt of Sir Garnet Wolseley's requisitions has now subsided. The three picked European regiments have sailed, the 42nd Foot having embarked in the *Sarmatian*, at Portsmouth, this week; the hospital-ship *Victor Emmanuel* is on her way; another store transport—the *Dromedary*—has been despatched; and the last of this class of vessels purchased or hired by the Government—the *Thames*—is completing her cargo at Woolwich.

In addition to the long list of Army Medical Officers already on their way to the scene of operations which we recently

published, the following names must also be noted:—Surgeon-Major Clutterbuck and Surgeons Troup, McCarthy, Kynsey, and Usher (all attached to the 42nd Foot), and Surgeon Steele, who took passage in the *Victor Emmanuel*. It will thus be seen that an ample medical staff has been provided to meet the exceptional requirements of the campaign which we have in hand; and a glance at some of the arrangements which have been made for the comfort of the sick and wounded will suffice to show how earnestly the authorities have laboured to obviate, if possible, a heavy rate of mortality.

In the first place, then, the *Victor Emmanuel* will be stationed off the Coast for the reception of invalids as they may be brought down from the front, and are capable of removal to her. She will, moreover, be a store depôt for reserve supplies of medicines, instruments, surgical materials, hospital utensils, flannel underclothing, pea-jackets, water-beds, etc.; also for cots, bedding, and medical comforts.

Her Majesty's troopship *Simoom* has been ordered to take up her station at Porte Grande, St. Vincent, Cape de Verde Islands. In this spot she will act as a depôt ship for invalids in transit, having one of the small transports attached to her to act as tender in obtaining supplies. A fast steamer will leave Cape Coast Castle about every ten days, calling on its way at Sierra Leone, to convey patients to St. Vincent; and for their further removal (when in a fit state) to Southampton, arrangements have been made by the Government with the Union Company, whose packets leave the Cape of Good Hope three times each month, for these vessels to call at St. Vincent *en route*, each one guaranteeing to convey at least twenty-four invalids if necessary. The first of these packets calling at the island will be that which leaves the Cape on the 25th inst., and they will continue to put in there for the above purpose until the end of March next.

In addition to the foregoing, arrangements have been entered into with the British and African Steam Navigation Company to convey twenty invalids to this country by each of their steamers calling at Cape Coast Castle twice a month during the months of January, February, and March next; and as far as practicable the cases selected for transport by this route will be sufficiently convalescent to bear the voyage, without the necessity of removal to a hospital immediately on landing, the above steamers plying direct to Liverpool, in which town there is no military hospital of any size.

A further means of safe and rapid transit for invalids from St. Vincent has been provided by the Government through an arrangement with the Royal Mail Brazilian Steam Packet Company, whose packets, calling at the island on the 5th and 19th of each month, on passage from South America to Southampton, will take ten convalescents on each occasion, provided their condition is such as not to endanger the health of passengers and crew. These patients on landing will be taken to the Royal Victoria Hospital at Netley, as will those brought to Southampton by the Union Company.

A steam transport from the West Indies is also to be available for bringing direct from Cape Coast Castle to England or Gibraltar any large number of invalids in a condition to return, or should there prove to be too many to be accommodated at one time on board the depôt-ship *Simoom* at St. Vincent.

Finally, the transports *Tamar*, *Himalaya*, and *Sarmatian*, after disembarking the three regiments which they have conveyed from this country to the Gold Coast, will remain on the station fitted up as auxiliary hospital-ships for the reception and conveyance of invalids. Any hired vessels and mail-steamers taken up for the transport of sick and wounded will receive all necessary articles for the voyage home, in the shape of cots, medical comforts, hospital clothing, and utensils, from the stores on board the *Victor Emmanuel*, from which source hospital attendants and medical officers will also be provided.

No cases will be removed from the *Victor Emmanuel* unless they are considered well able to bear such removal, or unless change of air is recommended on medical grounds; but patients will, as far as practicable, be sent to the *Simoom* at St. Vincent, from whence they may more easily be transferred to England, as their condition permits. Arrangements will very possibly be carried out for the removal to Gibraltar and Madeira of such cases as are not deemed fit to encounter the voyage to England during the winter months; but some difficulties are likely to be raised by the Spanish and Portuguese Governments on the question of quarantine.

So much for the preparations for the comfort of our sick and wounded afloat. On shore at Cape Coast the arrangements projected by Deputy Surgeon-General Home, V.C., are as complete as the unsettled state of the country will allow. He himself having accompanied the first advance against the enemy made by Sir Garnet Wolseley, has acquired an experience of bush fighting which will no doubt be of infinite service when larger operations begin. Our own advices from the Gold Coast would seem to advocate the formation of a station hospital at the extent of every ten or twelve miles covered; so that if the march on Coomassie really takes place, and the distance be calculated at one hundred and ninety miles, there would have to be from sixteen to nineteen of these hospitals, in which everything should be found suitable for a hasty treatment of both sick and wounded in their transit from the front to the shore. And here, our correspondent informs us, in the transit of the invalids the main difficulty of the Medical Department may be expected to lie. The natives engaged to act as hammock-bearers are so little to be depended upon, that they would not hesitate to put down their loads and make off *en masse*, either from caprice or panic, unless carefully watched, leaving the sick and wounded to their fate; and there would seem to be nothing for it—if the system of stations be adopted—but to appoint a sergeant and a file of men to each one, who would convoy every train of invalids over that portion of the road placed under their control.

The latest accounts which have been received of the fighting which has taken place at Abrakrampa and Dunquah appears still further to confirm the opinion that at this season of the year the Bush is not so deadly to Europeans as has been supposed. Unquestionably the active operations in which the little force has been engaged have been of great benefit in keeping all minds employed. Every officer on Sir Garnet's staff is fully occupied with the work entrusted to him; and, with the sad exception of Lieutenant Eardley-Wilmot, who was shot through the heart at Dunquah, after having been previously hit in the arm, most of them seem up to the present time to have escaped the combined effects of war and climate.

The *Tamar* and *Himalaya*, with the reinforcements on board, will most probably arrive on the Coast about the 12th inst., and there is every reason to believe that the long march to Coomassie will commence immediately after. If the reports of the Ashantee retreat are to be credited, the country as far as the River Prah will be entirely cleared for working operations, and stations for hospitals may be selected and huts erected along this portion of the road before the troops take their departure from Cape Coast Castle. One of the advantages, therefore, of Sir Garnet Wolseley's prompt and energetic action against the enemy will have been to enable the medical staff to organise their arrangements over nearly one-half of the tract in advance of the main body of the expedition.

We must not too hastily assume, from the success which has up to the present accompanied our operations and the comparative immunity from effects of climate enjoyed by our men, that the campaign will be finished with equally trifling losses; but we may sincerely congratulate ourselves that at any rate the gloomy forebodings indulged in at the commencement of the war have not as yet been realised, and hopefully anticipate

a termination to these hostilities as triumphant as that which characterised our Abyssinian expedition, without an inordinate amount of either bloodshed or sickness.

POISONING BY COAL GAS.

We wish to call the attention of our readers to the following important case which was reported in the daily papers of Dec. 1. At the Arno's Vale Convent, at Bristol, a woman named Boylan, aged 28, who had just returned from a situation and gone to bed rather tired, was found in her room the next morning in a state approaching asphyxia, and died twenty-seven hours afterwards without completely rallying. Her bedroom was about nine feet square, and without grate or ventilation of any sort. It was lighted with gas and warmed by a gas-stove, and when she was found the gas-burner was half and the stove jets fully on. These must have been burning the whole night up to 6 a.m., when the gas was turned off at the main. The woman had thus been inhaling an atmosphere which was gradually becoming more and more vitiated by the products of gas-combustion, and there is no doubt that they caused her death. A coroner's jury gave a verdict of "Accidental death from gas-poisoning."

Instances like the above are happily rare, but we fear that a chronic form of gas-poisoning, manifesting itself by head-aches, anæmia, and general weakness, is not uncommon in London and elsewhere. Gas is burnt in sitting- and bed-rooms, and gas-stoves are used in halls and shops, etc., without proper provision for carrying off the combustion-products; often, it is to be feared, from total ignorance of the necessity of doing so. We must hope that the greater diffusion of scientific knowledge among the rising generation in schools will in time partially remove this ignorance. Medical men happily can do much towards the prevention of further mischief by a few simple suggestions and explanations in cases where gas-poisoning appears to be a source of disease. Gas can be made an efficient ventilator of rooms by placing the escape-pipe for foul air above the burner. Gas-stoves should be absolutely forbidden unless they are provided with flues opening into a chimney or the open air, so that their products do not escape into the room at all. Several gas-stoves were exhibited this summer at the International Exhibition which did not satisfy this requirement. We can scarcely wonder at the room in which Boylan slept being without any ventilation whatever, when we see how little attention architects pay to such matters in almost every house we enter.

THE WEEK.

TOPICS OF THE DAY.

At the meeting of the Senatus of the University of London, held on December 3, a communication from the representatives of the University in the Committee of Reference for a Conjoint Examining Board for England was received, presenting the scheme adopted by the Royal Colleges of Physicians and Surgeons, together with a first and second report presented by the Committee to the co-operating medical authorities. The representatives report that the scheme is the same as that previously submitted to, and approved by, the Senate. The reports have reference to details required for carrying the scheme into operation. These documents will come under discussion at the next meeting of the Senate.

A meeting of the Branch Medical Council for England will be held on the 13th of the present month. The question of the time at which the next meeting of the General Medical Council is to be held will then probably be discussed. The future home of the Council is still uncertain. Hope is still entertained that the present Government will provide the Council with suitable apartments. That they ought to do so, there can be no reasonable doubt. The General Medical Council is a State institution. It is placed in close relation with the Privy Council by the Medical Act, and the Crown nominates a large percentage of its members. The validity of these pleas has been admitted, it is said, by certain members of the Cabinet, and a virtual promise has been made that premises will be granted. For the fulfilment of that promise the Council is still waiting.

We understand that the new issue of the British Pharmacopœia, with the addendum containing new medicines, is now in a forward state, and will be published before long. The "Addendum," when it is issued, will be to be obtained separately.

THE HISTORY OF OVARIOTOMY.

We are glad to find that the very interesting article "Progress of Medicine and Surgery," which appeared in the *Edinburgh Review* a year ago, is being reprinted by the author, Dr. Wynter, as part of a volume entitled "Peeps into the Human Hive." Our contemporary the *British Medical Journal* last week made some comments on Dr. Wynter's article which, in the interest of truth in the history of surgery, must not be allowed to pass without correction. The writer says—

"The eulogy of Marshall Hall is unjust to Prochaska; and the account of the 'revival' of ovariotomy by Mr. Spencer Wells is simply absurd. The splendid achievements of Mr. Wells have been often and cordially recognised in these columns; but an historical sketch which deals with him as the solitary British figure concerned in the 'revival' of ovariotomy, and which omits all mention of his predecessors—Warne, Samuel Lane, Baker Brown, Clay—is deficient in a very important point. Baker Brown was not only Spencer Wells's predecessor, and his contemporary in the operation, but to some extent his preceptor; although, for many reasons, the pupil quickly outstripped his master. Nothing is gained by a barefaced sacrifice of historical accuracy."

It certainly is a "barefaced sacrifice of historical accuracy" to speak of Baker Brown as the *preceptor* or *master* of Spencer Wells in ovariotomy. His *predecessor* he was, but, as stated in the preface to the first volume of Wells "On Diseases of the Ovaries," when he (Wells) began to operate, in 1857, "Mr. Baker Brown (who between his first case in 1852 and 1856 had lost seven out of nine cases) had not operated for more than two years." It was not until after Spencer Wells' cases and papers had *revived* ovariotomy that Baker Brown began to operate again, and achieved his great success and chief claim to be considered as contributing to the spread of the operation by his treatment of the pedicle by the cautery.

BRITISH MEDICAL SERVICE IN INDIA.

The discontent among the officers of the British Medical Service in India is quite as general as it has been in this country. Two memorials have been got up on the subject; one dated from Simla, but, though emanating as it were from the very mount of inspiration, its inspiration was not sufficiently plenary to include the retirement of Surgeons-General after five years' service, and consequently, in a great measure, we are informed the number of signatures attached to it was comparatively small. The other memorial, got up by Surgeons-Major Maclean and Skues at Morar, is very strong on this point, and has, we understand, been signed by almost every medical officer of the British Service in India. It had official difficulties to encounter in having in the first instance been sent through the head of the department in India, who did not consider himself in a position to forward it. Another memorial, however, with an extra paragraph, was promptly printed, and has, we hear, been sent on through the military authorities. Strange to say, the Simla memorial bore attached to it a draft warrant, which drew down a gentle rebuke from his Excellency the Commander-in-Chief.

IMPORTANT DECISIONS UNDER THE RAILWAY ACTS.

A CASE of some importance to the medical profession was tried in the Court of Common Pleas on Friday last, before Mr. Justice Honeyman. It involves a very important principle, and we are glad, in the interests of the profession, that the verdict was for the plaintiff with immediate execution. It was an action to recover a sum alleged to be due from the defendant to a surgeon for fees, medicine, attendance, and consultations. It was said that the defendant had been injured in a railway accident, and that the plaintiff had agreed to charge him nothing, and to look to the company for his remuneration. The now defendant, however, was nonsuited in his action against the company, but he said that the now plaintiff had urged him to go on, and not to settle, as he should charge him nothing. His attorney also had, according to the defendant's statement, agreed to conduct the action gratuitously, but he had since "put in an execution, and swept away all his property." The plaintiff, of course, denied that he had ever entered into any such agreement as the defendant set up. On cross-examination, the defendant's antecedents were found to be very unfavourable, and the jury, after some discussion, found a verdict for the plaintiff for the amount claimed.

Another trial, involving the responsibilities of railway companies, was also tried last week. A passenger by railway having been injured by alleged negligence of the company, had been removed to an hotel at the suggestion of an agent of the company. The company disputed the hotel charges on the ground that they were not responsible for the action of their officer. The court and jury, however, decided otherwise, and awarded the plaintiff the full amount he claimed. This is a valuable precedent, particularly so far as the interests of medical practitioners are concerned. It will be, no doubt, recollected by our readers that medical gentlemen who had attended cases of injury on railways were nonsuited, on the ground that "the agent" had no authority to pledge the credit of the company for services rendered to injured persons on their lines. This, to us, extraordinary line of defence was endorsed by the presiding judge, who directed a nonsuit. The result of the above trial, however, is likely to put a stop to acts of gross injustice against medical practitioners. Surely if an hotel-keeper is entitled to recover his charges under the circumstances detailed, a surgeon is entitled to the same privilege. Railway authorities invariably shelter themselves under the plea of non-responsibility. We hope this subterfuge —most unjust, and now pronounced illegal—will not for the future be successful.

THE ALLEGED ADULTERATION OF SPIRITUS ÆTHERIS NITRICI.

ON Saturday last, Mr. George Fenton, surgeon and chemist, of Great Smith-street, Westminster; Mr. E. D. Doughty, chemist, of William-street, Knightsbridge; Mr. W. S. Saxby, chemist, 11, Tothill-street, Westminster; and Mr. W. S. Barton, of 8, Moreton-street, Pimlico, were summoned before Mr. Arnold, at the Westminster Police-court, for selling an adulterated drug known as "spiritus ætheris nitrici." Mr. Dupré, of the Westminster Hospital, the analyst, gave evidence to show that the article purchased from the above-mentioned tradesmen was adulterated with about 10 per cent. with spirits of wine and a little water. On cross-examination, however, he admitted that his opinion was based on the principles laid down in the British Pharmacopœia of 1867, which prescribed how the spirit was to be manufactured, and further explained that the spirit was formerly manufactured from nitric acid and spirits of wine, whereas the Pharmacopœia of 1867 had introduced the use of sulphuric acid and copper. He considered that if not made in accordance with the latter method the preparation must be termed adulterated. There was too much spirits of wine in the samples he had analysed; but he could not say whether the extra spirit had been added before or after the process of distillation. He admitted that there was nothing deleterious in the compound he had analysed, but contended that it was sold under a false name, and was therefore a fraud on the public. Mr. Wontner, who appeared for the defence, proceeded to show that in reality the present proceedings were the commencement of a crusade against the pharmaceutists of this country, which would be resisted to the utmost. He denied the power of the Board of Works to insist that this preparation should be manufactured in accordance with the Pharmacopœia of 1867, and called a witness to prove that ten tons of the old compound had been sold, as compared with one ton of the new. Moreover, he showed that as the spirits of wine, with which Mr. Dupré had stated the articles in question to be adulterated, was dearer than the article itself, there could be no adulteration within the meaning of the Adulteration Act, which applied to something done with a view of fraud and gain. Mr. Arnold asked if, in the face of the evidence, it could be possible to go on with the cases. Mr. Rogers, solicitor, who prosecuted, left the matter in the magistrate's hands, the result being that the proceedings were stopped, and Mr. Arnold allowed costs to all the defendants, remarking that he considered the present a dangerous experiment to try, while one case would have been sufficient to raise the legality of the question. Surely, at a time when adulteration is being carried on to a large extent in articles of every-day use, it would be better to look out for cases of some utility to the public to be exposed, rather than to raise a legal question as to the method of manufacturing an official preparation, which the most liberal stretching cannot after all call actual adulteration.

PATHOLOGICAL SOCIETY OF DUBLIN.

THE first meeting of the present (the thirty-sixth) session was held in the anatomical theatre of the School of Physic, Trinity College, on Saturday last, the 29th ult. Before taking the chair, the President (Dr. Kidd) spoke of the irreparable loss sustained by the Society in the death of one of its founders, and its Secretary for thirty-five years—the late Professor R. W. Smith. Dr. Barton exhibited specimens of medullary cancer from the body of a young woman, including a large tumour, the size of a cocoanut, engaging the sternal end of the left clavicle, and cancerous deposits in both lungs and in the upper portion of the shaft of the right humerus. Mr. George H. Porter, Surgeon to the Queen, showed a remarkably large ovarian cyst which he had removed. It was of fifteen months' growth, and when emptied of its contents (210 ounces of fluid) after removal weighed one pound fifteen ounces. It was unilocular, and presented no malignant appearances. Mr. Porter also showed a fractured os calcis, in a lad aged 13, who had been run over by a tram-car. Dr. William Moore presented a specimen of enteric ulceration of the ileum. Violent hæmorrhages had occurred on two occasions in the course of the fever—the first, to the extent of thirty ounces, had been followed by a fall of temperature amounting to five degrees. The axillary temperature rose to 108° shortly before death. The President announced that the Council had selected as the subject for the prize essay, "Injuries and Diseases of Articular Cartilage." The following officers for the session 1873-74 were then elected:—*President:* Robert D. Lyons. *Vice-Presidents:* Robert Adams, Sir Dominic J. Corrigan, Bart., M.P., George H. Kidd, John Denham, George H. Porter, and Henry Kennedy. *Council:* Arthur Wynne Foot, John M. Purser, Benjamin G. MacDowel, Thomas Hayden, James H. Wharton, William Stokes, jun., Samuel Gordon, James Little, John Thomas Banks, Henry H. Head, William Moore, T. Joliffe Tufnell. *Honorary Secretary:* William Stokes. *Secretary and Treasurer:* Edward H. Bennett. *Secretary for Foreign Correspondence:* Robert McDonnell. The in-coming President (Dr. Lyons) subsequently took the chair, and a vote of thanks

to Dr. Kidd, the out-going President, was proposed by Dr. James Little, seconded by Dr. R. McDonnell, and adopted unanimously. Dr. Kidd having briefly replied, the Society adjourned.

A FATAL METAPHYSICAL DISPUTE.

THE following is taken from the report of the proceedings at Southwark Police-court on November 24 :—

"Eugene M'Gann, aged 38, warehouseman, was placed at the bar, before Mr. Partridge, charged with causing the death of John Pugh, by throwing him down in the Black Bull public-house, Freeschool-street, Horselydown."

Pugh was taken to Guy's Hospital, where he died four days later, from rupture of the bladder. Just before his death he made the following declaration :—

"I, John Pugh, do firmly believe I am at the point of death. I shall not recover. And I do hereby state that, last Tuesday night, at a quarter to twelve, I was in the Black Bull public-house, Freeschool-street, Horselydown, drinking with Eugene M'Gann, when a controversy arose between us. I said that the seat of life was in the heart. He said it was in the brain. M'Gann said that if I repeated my statement again he would throw me over. I repeated it, when he caught me round the neck, put his foot behind me, and threw me heavily on my back, falling on my stomach. I felt very much hurt at the time. M'Gann assisted me in rising, and I left the house to go home, but when I got a few yards I was unable to walk any further. I met two police-constables, who took me home in a cab. We were previously hail friends, and bore no ill-will to one another."

SURGICAL SOCIETY OF IRELAND.

THE opening meeting of the present session took place in the Albert Hall, Royal College of Surgeons, Stephen's-green, on Friday evening, November 28. There was a very numerous assemblage. The President delivered an address suitable to the occasion. He dwelt particularly on the topics of the non-routine treatment of disease, Professor Lister's antiseptic method, and anæsthetics. Allusion was made in appropriate terms to the death of Professor William Barker, and of the Vice-President of the Society, Professor R. W. Smith. Several interesting communications were made by members; and papers were read by Mr. Tufnell, Vice President, "On the Cure of Popliteal Aneurism by Position and Rest," and by Dr. W. J. Wheeler "On a New Instrument for the Treatment of Transverse Fracture of the Patella." The following are the office-bearers of the Society for the present year. *President:* John Denham. *Vice-President:* T. Joliffe Tufnell. *Council:* William Hargrave, Charles Benson, Christopher Fleming, M. Harry Stapleton, Richard G. H. Butcher, Hans Irvine, George H. Porter, Thomas Byrne, Philip Bevan, B. Wills Richardson, James H. Wharton, James S. Hughes, Rawdon Macnamara, Edward Dillon Mapother, William Colles, Edward Hamilton, Humphrey Minchin, Archibald H. Jacob, Henry Gray Croly, John Morgan, and Albert Walsh. *Honorary Secretaries:* B. Wills Richardson and Humphrey Minchin.

PEST-HOUSES.

ATTENTION is drawn by *Iron* to an important fact in the following remarks. It states that "this is the period of the year when the foundations of pest-houses are laid. The brickmaking season is over, and the fields from which the clay has been abstracted are being filled in with 'dry' rubbish without a fee, or wet with a fee. On this surface, houses which can hardly face the wind and easily absorb the water will next year be 'posted' side by side, and about every tenth building will be nothing better than a 'pest-house,' for it will be built with no foundation upon the clearing of some cesspool, or, as we saw the other day, a cartload of putrid fish disguised in dust. From time to time families will go into these houses, and be constantly leaving, minus one or two of the most promising members of the family, because they have 'taken the fever.' It is not too much to ask that such habitations should be put under quarantine, renewable at the will of the inspector of nuisances, until their owners can show a clean bill of health. Ships come near, but not within our midst, and quickly depart; but houses remain as standing nuisances." Such houses undoubtedly cause much of the rheumatism prevalent amongst the artisan class.

A WHOLESOME SUGGESTION.

DR. MACCORMACK, Medical Officer of Health for Lambeth, in his report to the Vestry states "that it would be true economy if the Guardians of the poor instructed their medical officers to report all cases requiring a supply of food, firing, and clothing, three great essentials in arresting the spread of mortality from those diseases which were originated by, and were dependent upon, the want of the vital power." No one can so well judge as the medical officer of the need of these necessaries in many cases of sickness and incipient diseases. No doubt it would be true charity and economy, and much disease and mortality might be arrested by a timely provision of food, firing, and clothing. We think Dr. MacCormack's suggestion should be generally adopted; we fully endorse his recommendation.

THE POISONOUS SNAKES OF INDIA.

OUR readers are aware that the experiments which have been made to test the value of artificial respiration in the treatment of snake-bite have at least demonstrated the fact that life may be prolonged for many hours by its use. The committee appointed, at Dr. Fayrer's suggestion, by the Government of India have, as to this point, amply confirmed the experiments which were made by Dr. Fayrer and Dr. Lauder Brunton with cobra poison sent to this country. We are glad to learn that a large number of the experiments in artificial respiration performed by the Calcutta committee will be recorded in a permanent form in a second edition of Dr. Fayrer's magnificent work on the Indian Thanatophidia, which we understand will be published before Christmas.

CHOLERA IN HOLLAND.

OUR correspondent at Rotterdam writes that since the date of his last communication (see *Medical Times and Gazette*, November 1) cholera had increased a little and afterwards diminished. From October 26 to November 1 there occurred 34 deaths; from November 2 to 8, 36; from November 9 to 15, 39; from November 16 to 22, 28; and from November 23 to 29, 24 deaths. In Rotterdam the mortality was, for the same dates—4, 4, 5, 12, 9; in Gouda, a town with 16,000 inhabitants, at the mouth of the river Wesel, 10, 22, 19, 5, 8. Disinfection is carried on in Rotterdam on a large scale.

HORSEFLESH AS FOOD.

THE Committee formed for the propagation of horseflesh has forwarded the following statements to *Galignani* for publication :—

"The consumption of this article of food is making continual progress in France; during the third quarter of 1873 in Paris alone 1548 horses, 140 donkeys, and 15 mules were killed, yielding 303,970 kilos. of meat. In 1872 the figures were 1046, 95, and 3 respectively. In the capital there are forty butchers for this article inspected by veterinary surgeons. The price is about half that of beef. As it has been shown that horseflesh is a wholesome and nutritious article of food, and moreover economical, we see no reason why it should not form a substitute in this country to the flesh of beeves and sheep. The prejudices against it being once overcome, and culinary preparation properly carried out, it would be a great boon not only to the poor, but to thousands of the struggling middle-class."

EPIDEMIOLOGICAL SOCIETY.

The Secretary of the Epidemiological Society wishes us to announce that at the next meeting of this Society, on Wednesday, December 10, at No. 11, Chandos-street, Cavendish-square, W., at 8 p.m., a communication will be read from Dr. Tholozan, Physician to the Shah of Persia, "On the Development of Plague in the High Grounds of Europe, Asia, and Africa"; and that Dr. Gavin Milroy will read a paper "On Quarantine in Relation to Epidemic Cholera." Visitors for the evening are invited to join in the discussion to follow this paper.

A HEALTHY VILLAGE.

In Pavenham, Beds, a village of over 500 inhabitants, there has not been one death since December 6, 1872. Four deaths only were registered in the previous year. The sanitary condition of the village is excellent—a favourable contrast to some villages in the same county, in which the water-supply is execrable, and disease and mortality something frightful.

ROYAL MEDICAL SOCIETY, EDINBURGH.

At a meeting of the Society on the 28th ult., the following gentlemen were elected presidents:—G. T. Beatson, B.A., Alexander James, M.B., C.M., J. Stevenson Forrester, L.R.C.P. and S. Edin., and C. Watson McGillivray, M.B., C.M., L.R.C.P. and S. Edin.

FROM ABROAD.—PROFESSOR DITTEL ON THE ELASTIC LIGATURE.

The following is an analysis of the communications which Professor Dittel has published concerning the elastic ligature:—He relates in the *Allgem. Wien. Med. Zeit.*, 1873, Nos. 7 and 8, that his attention was forcibly drawn to this subject by a case which fell under his notice in March, 1872. A girl aged 11, the victim of the utter neglect of her stepmother, was admitted into the hospital, her hair, swarming with vermin, collected in a net. The questions which were put to her were answered with a hesitation that seemed to betray intimidation, and the exactitude of her assertion that the net had not been removed from her head for a fortnight seemed to require some confirmation. As, however, she complained of pain in the head, this was very carefully examined, and a suppurating wound was found in the hairy scalp, at the bottom of which lay the fine, thin elastic cord which had secured the net to the hair. It was only visible in part, being also partly overgrown by granulations and even lying deeply in the corroded occiput and right parietal bones. Although after its removal the wound soon granulated, the girl died of meningitis. The autopsy exhibited, besides general anæmia, not only meningitis, but also gangrene of those portions of the dura mater which corresponded with the greatest loss of bone. The ulceration of the soft parts corresponded to a furrow running around the occiput below its tuber, and which was continued on each side to the tubera of the frontal bone—constituting, in fact, a circular furrow around the skull-cap, the portions of the skull situated above the elastic cord being held to the lower only by fragmentary bridges, measuring altogether from ten to twelve centimetres out of the forty-two centimetres which constituted the entire periphery. It was found at a later period that the stepmother had prevented the child loosening the ligature.

Taught by this fearful incident the potent action of an elastic ligature, Professor Dittel employed it (November, 1872) in treating a nævus, for which he had already employed insect needles and waxed threads. As after some days these lay loose in the suppurating wound which they had created, in place of again tightening the ligature he wound a caoutchouc drainage-tube around the mass of needles. When the child was brought again in a week he learned that this elastic ligature had been much easier borne than the threads had been, while the nævus had fallen, and a granulating wound, with commencing cicatrisation, had replaced it.

This success induced him to extend the practice to telangiectasis, fistula ani, prolapsus ani, sinuous passages, carcinoma of the breast, and ligature of the various arteries. The procedure, he observes, although simple, requires a certain amount of carefulness and exactitude, which are readily acquired by patience and attention. All unnecessary pain through the too tight constriction of the ligature and tearing of the parts must be avoided, the parts to be embraced being duly supported by an assistant. The ligature must of course be firmly applied, and secured by two knots. The pain upon the whole is not considerable, and often is quite trifling, and scarcely ever lasts more than an hour. The depth of the furrow produced by the ligature will depend upon the amount of constriction and the resistance of the tissues; but the constriction may be made much less stringent than was once deemed advisable, as the pressure acts continuously until the elastic ligature regains its primary size. The separation of the parts is brought about by this continuous pressure, which compresses the canals and vessels until these are "thrombosed" and the access of nutritious fluids is completely interrupted. Caoutchouc has another peculiarity in not giving rise to suppuration, granulations speedily filling up the space voided by the retreating parts. When the constricted part has separated, the ligature by its elasticity escapes from the wound, forming then a closed ring, the orifice of which is so small that it can scarcely be penetrated by a probe or needle. According to the thickness of the pedicle and the solidity of the tissues, the process of separation requires from three to fifteen days, the latter term being required in cancer of the breast. Febrile symptoms have not been met with, even when the surface operated upon has been a large one, and the pedicle a thick one.

In a communication to the *Wiener Zeitung*, No. 29, 1873, Professor Dittel states that since his former paper he has employed the ligature fifty-two times in the human subject and twice in animals. Of these cases, ten were examples of adenitis with sinuous passages in the inguinal region, thirteen were cases of fistula ani, four of prolapsus ani, three of hydrocele, three of phymosis, thirteen of malignant and other growths, one of castration, one of elephantiasis labii, and three of amputation of the leg.

Among his observations on these cases we may notice that he states that in adenitis the affected gland or periadenitic abscess may be completely separated in from two to eight days, the pain being usually trifling, and feverish reaction, when it does take place, only lasting a few hours. The wound which results is always a broad and gaping one, unfavourable to the detention of pus, while the linear opening made by the knife favours the formation of collections requiring future operations. The formation of wounds with large surfaces is a peculiarity of this method, which, with all its advantages, labours under a "cosmetic" disadvantage—*e.g.*, in the extirpation of tumours that are still covered with skin. That success attended the treatment of all the thirteen cases of fistula ani, some of which were of a complicated character, was also doubtless much due to this character of the wound as contrasted with the linear aperture made by the knife, for it opened up the fistula by means of a broad open wound, which greatly facilitated the future procedures necessary for success. Time was not even lost, for during the separation of the ligature granulations and new skin had begun to form, and the longest case only required forty-five days. In prolopsus ani from twenty-eight to forty-two days were required, the patient in most cases not being confined to bed until after the separation had taken place, prior to when there is only slight œdema in front of the ligature. In hydrocele the ligature may be carried by means of a needle through the tunica vaginalis, and tied above, the fluid trickling out, and the two punctures becoming slits

or the fluid is discharged in the ordinary way by the trocar, which is then pushed through the opposite side of the scrotum. The ligature is then passed through the canula and tied. In from four to eight days this has made its way, leaving a broad open wound. In these cases the operation has been attended with both fever and pain. Two cases which have occurred since this report was written induce Dr. Dittel to regard this procedure with increased favour. Of the thirteen cases of tumours operated upon, in two only (both of cancer) was there great reaction; and it is to be regarded as a circumstance very favourable to the ligature, that among these patients seven were from forty-seven to seventy-eight years of age. As to amputations, Professor Dittel has no intention of recommending the substitution of the ligature for the knife; but he thinks that in certain cases of compound fracture where further loss of blood is desirable, the ligature may be used with advantage.

In his last communication to the same journal (October, 1873, No. 42), Professor Dittel thus describes his most recent mode of operating by the ligature:—

"I have now so modified my procedure that I can secure the operative results as certainly as with the knife itself. The thing is very simple. I divide the operation into two periods. Say that I have a tumour of the breast to remove. Exactly as formerly I conduct the elastic ligature behind and around the tumour by means of the curved needle, but now I only tie the lower ligature. When this has separated, things are exactly as if I had executed with a knife the lower half of an elliptical excision. I am now able to see and feel whether I have left anything behind; and if this is the case, I can remedy the defect either by applying another ligature or by including what has been left within the upper ligature. If the first ligature have fallen, and the surface of the wound has been examined, I then occupy myself again with the tumour, carrying the ligature by means of the needle from the middle of the wound upwards and behind the tumour, so that it is embraced within the two cords, just as by the old method the entire tumour was. In this manner the operation is as complete as if performed by the knife, lasting several days longer, but causing much less pain."

In this same number Professor Dittel replies to a claim of priority in the use of the elastic ligature made in favour of Dr. Silvestri, of Vicenza, who is stated to have performed operations by its aid in 1862. With this Dr. Dittel says that he has nothing to do, as the means was brought under his notice in the curious manner which he has related; but, as he truly adds, whoever first discovered it, he is the person to whom is due any of the reputation it now enjoys, and which, he thinks, will be durable. Discoveries have often, he observes, been made a second or even a third time before they have borne fruit and taken root.

LETTERS FROM MADRAS.

No. V.

A First Lesson on the Leprosy—Three Different Diseases called by that Name—The Leprosy of the Middle Ages was the Elephantiasis of the Greeks—Anæsthesia and Atrophy—Sketch of a Leper's Hand—Leper Beggars—Mass at St. Lazarus.

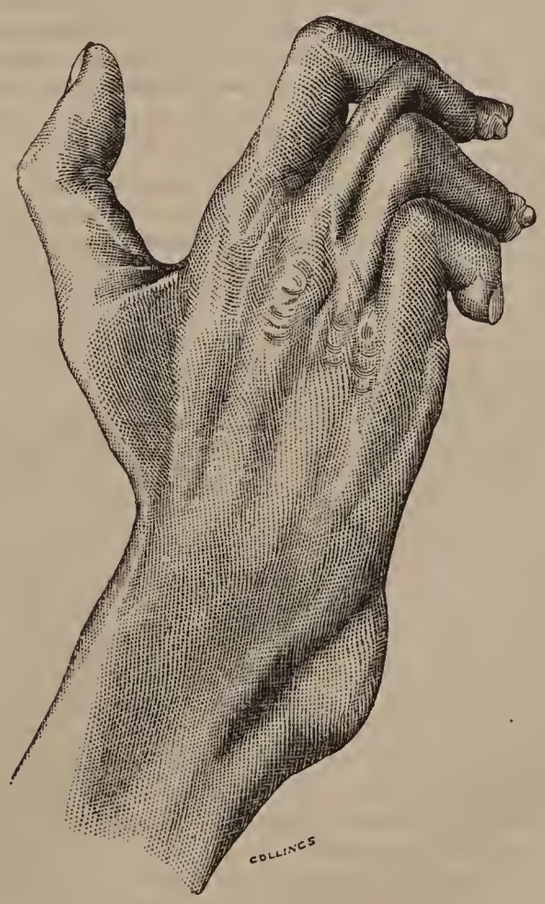
One of the medical sights to be seen here is the Leper Hospital—a large collection of single wards, situated in an ornamental garden just out of the town. The gaily coloured furniture and decorations of the wards, combined with good diet and skilful medical treatment, testify to the humanity and ingenuity of the physician—Dr. Van Someren—in cheering the fretful, despondent minds of a large number of poor creatures afflicted with one of the most lingering, loathsome, and hopeless of human ills.

There are three conspicuous diseases which have received the name of "leprosy." There is the true lepra, described by Hippocrates and Paulus Ægineta—the scaly or scurfy disease, as its etymology shows. There is the elephant-leg, or Barbadoes-leg, which is a huge pachydermatous tumour of one leg or of the scrotum: this is now commonly called "elephantiasis" simply, or elephantiasis Arabum. Then there is the tubercular leprosy of the middle ages, the elephantiasis Græcorum—so-called because described by Celsus and Aretæus under the name elephas, or elephantiasis. This was once common in Europe, now almost extinct there, though lingering in Spain and Norway, and still prevalent enough in the East. The subject has, too, a mysterious interest from the notices of it in the Old and New Testament.

The first lesson I got on leprosy was this. One morning, at the General Hospital, Dr. George Smith brought a patient into the verandah, and invited me to look at him. He was a boy of seventeen, an East Indian,—that is, of mixed European and Indian blood,—and slightly marked with the small-pox, but there was little else very noticeable at first sight.

On being asked what was the matter, he held up his right hand and complained that he could hardly use it. Even then there was nothing very obvious, till my kind instructor made me compare the two hands and demonstrated the morbid changes in the right. He bade me notice the tendency to a stiffened, birdclaw-like attitude of the hand, with apparent shortening of both flexors and extensors; insomuch that the knuckles and first phalanges were bent backwards, and the last phalanges forwards; the muscles of the hand atrophied, as shown by the thinness of the fold between the thumb and forefinger, and by the wasting of the muscular cushion on the metatarsal bone of the little finger. When once pointed out and compared with the left hand, these things were obvious enough; still, they were in themselves not conspicuous. No more were certain other marks which Dr. Smith made me notice, and especially that the ulnar nerve above the right elbow was cordy and prominent. Besides, there was a very little thickening of the eyebrows and loss of their hair, and the slightest possible thickening of the ears, from the presence in or under the skin of flat indolent swellings; and a very little flat tubercular thickening of the soft palate, with a hoarse voice. This Dr. Smith showed me as an example of an early stage of leprosy.

Soon afterwards another victim came under notice, in whom the same appearances exist in the right hand, of which I present a drawing by M. Moonesawmy Moodeliar, the draughtsman to the Medical College. The hand is depicted upright, so as to show the wasted forearm, the thinned fold between the thumb and fingers, the wasting of the muscles of the little



finger, so that the os pisiforme sticks out like a heel, the bent-up fingers, the atrophy of the ring finger (without any ulceration), and the still greater atrophy of the middle finger, the last phalanx of which is reduced to the merest stump crowned by the vestige of a nail. In this patient the ulnar nerve above the elbow is large, prominent, and carries in it a swelling as big as a large pea. There seems, to a superficial observer, nothing else the matter with the patient—his voice is clear, the throat, face, and ears quite free from change, and his skin seems as clean as possible; but Moodeen Sheriff (the accomplished Mahommedan surgeon to the Triplicane Hospital) told me that there was considerable anæsthesia of the right arm, and some loss of pigment, and that these symptoms had been considerably benefited by the full diet of the Hospital—a thing which all observers say effects an immediate though transient check to the disease.

But with regard to this patient it must be added that in addition to this mediæval leprosy, or elephantiasis Græcorum of his right hand, he has also had the quite independent disease, the elephantiasis Arabum, or tumour in the scrotum, which has been removed by Moodeen Sheriff. Of this more anon. There is nothing very astonishing in the fact of meeting two very common diseases of the country in one patient, but the two diseases are radically distinct *ab initio*. The one is an example illustrating Professor Laycock's doctrine of local change in nutrition following disease of the nerves, and so thoroughly diffused that it affects in time the most distant parts of the body; the other, the elephantiasis Arabum, does not travel beyond the original seat, when cast off does not return, and is not known to have anything to do with the nerves.

To resume. The above two cases of withered hand show one variety of leprosy; but the beginning may be far more insidious. There may be merely a spot of skin which is insensible to the touch; and this for years may be the only precursor of the terrible disease which follows, the symptoms hitherto described being those of the atrophic and anæsthetic variety of the disease. The tubercular condition may precede or may follow, and it is this which was described so well by the Greek physicians as elephantiasis or leontiasis, from the resemblance of the features to those of an elephant or lion. I shall never forget the first morning when I visited the Leper Hospital with Dr. Van Someren, as case after case was shown, —some of mere anæsthesia and disturbed pigmentation of the skin, some in which the peculiar tubercular swellings had given that extraordinary animal aspect to the face: the forehead swollen, the hairless eyebrows protruding, the ears projecting forward and of enormous size, the upper lip pouting and swinish, the nose first flattening then falling in, and the eyes in time following.

I forbear to give anything like a description of the leprosy which I saw here, because I hope Dr. Van Someren himself may be induced to give your readers the results of his own prolonged experience, and especially of the results of various methods of treatment, including the temporary relief obtained from the external use of the cashewnut-oil and an improved diet. I do but give the impressions made on a stranger and passer-by, and only pretend to show things as they seem, without aspiring to treat of them as they are.

This disease seems to be a kind of "missing link," combining the features of cancer, scrofula, tertiary syphilis, lupus, tuberculosis, and phthisis. Of exudation or tumour there is abundance, especially into the structures of the face, whence the extraordinary perversion of features. The existence of similar deposit in the nervous trunks and centres accounts for the anæsthesia and atrophy of the parts supplied. The atrophy of the hands and feet may be aided by ulceration or dry gangrene, so that toes and fingers vanish by interstitial absorption or drop off one after another. But yet there is usually very little pain—the anæsthesia forbids that; so that a leprous beggar may stump after you on a foot little more than a heel, and may hold out a hand reduced to the metatarsal bones. Abscess, ulcer, sloughing, and every form of skin disease may be superadded.

Shocking enough it is to see these poor people under the humane discipline of the Leper Hospital; still worse is it to be pestered by them as beggars at large. There is a little chapel in an out-of-the-way place near the sea, in the village called St. Thomé, about three miles from Madras; it is dedicated to St. Lazarus, and is believed by the common people to have special privileges of healing attached to it, and on every Tuesday morning mass is said there, which is attended by crowds of people of "all denominations," who have the common bond of disease and superstition. Hindoos with the staring mark of Vishnu or Siva on the their foreheads, Mahommedans, and Christians—all come in the hope of cure, whether sick themselves or on behalf of some sick person at home. The building is a small chapel, and is crowded to repletion. The people surge up so as almost to touch the priest at the altar, and whilst he is saying his service in a low tone, devotees in the chapel one by one sing hymns in the vernacular Tamil to native tunes of the wildest and rudest sort. Then, in order that the people present may have something to carry away with them, showers of peppercorns are from time to time scattered over the congregation, which are eagerly caught, and treasured by the devotees present as being excellent remedies against small-pox and other diseases of the skin consisting of pimples or pustules. At last mass was over, and the priest left his half-suffocated congregation, when there was a general move, everybody coming forward to pluck each a leaf or flower from the bouquets which had been placed on the altar, or to touch some consecrated object or light a taper on the altar; whilst, as the chapel became empty, people on their knees were eagerly picking up the peppercorns from the pavement. Outside it was that the horrors of leprosy struck me, as they are shown in persons who are not cleansed nor cared for as they would be in a hospital, who throng around you, mixed with the blind, lame, and diseased of all sorts clamouring for alms, I think I have seen a feeble attempt to pourtray the Veiled Prophet in Tom Moore's "Lalla Rookh;" but nothing can be imagined more horrible than some of the spectre-like creatures with projecting ears and eyebrows, and with a hole for a nose, stumping about on their mutilated feet, and holding out the remnant of a hand. They come as near as they can, and trust to their horrible aspect to be bought off. "Master please don't give him, sar; him very bad beggar, sar," said a respectable native to me, as he thought I was going to give one of them a few piee to buy him off. There was besides, all the hubbub of a country feast or fair, sellers of toys and gimcracks, of cakes and sweetmeats, and of *objets de piété*, wax tapers, garlands, and waxen models of arms and legs to serve as votive offerings.

I have been informed that the peppercorns are scattered by people who have skin disease, which they hope will be scattered as the peppercorns are; and that others scatter salt and jaggery—*i.e.*, sugar—in the faith that their diseases may vanish as these melt.

We cannot without thankfulness think of the absence of this disease from civilised Europe at present, considering that it was so prevalent once, as Sir James Simpson tells us in his most interesting "History of Lepers and Leper Hospitals."(a) From the eighth to the sixteenth century it prevailed all over Europe, where it is now confined to Norway, Iceland, and Spain. Leper hospitals were founded everywhere, and an order of knights, the Knight Hospitallers, devoted themselves to the care of the sick; these knights are supposed to exist still in an Order of St. John that is heard of in time of war. The disease was called "leprosy" by the educated, who followed the word *lepra* in the Vulgate; but in the words of the common people it was known as *se mycle adl*, in old English "the mickle ail," the great disease, *la grosse maladie* of Froissart. In most of the languages of India it is called "the disease," or "the great disease." As once in Europe, so still in India, it pervades all climates, and is more prevalent on the high and dry plateau of Bangalore than on the sea-shore at Madras. I visited the Leper Hospital at Bangalore in company with Surgeon-Major Oswald, who also has charge of a lunatic asylum adjoining, where the cheerful gardens and the savoury steams of the kitchen bear witness to the mental and bodily care of the afflicted.

No age, sex, nor rank is exempt. At Madras it is said that even European members of the medical profession have suffered; the only broad fact that comes out being that it seems to prevail generally in proportion to the misery and poor diet of a people. It lingered in Scotland after it was unknown in England, and the last place in which it was found in Great Britain was in Shetland.—(Simpson, *ut supra*.)

Although the unscholarly part of mankind are apt to sneer at the ancients, yet anyone who reads the old medical classics, with due regard to the state of general science at the time the writers lived, must admit that they were men of acute observation, careful describers, and conscientious in their treatment. Nowhere do these eulogies belong more justly than

(a) *Edinburgh Medical and Surgical Journal*, vol. lvi., No. 149, October, 1841, and vol. lvii.

to the mediæval writers on leprosy, quoted by Sir James Simpson. Thus Bernhard Gordon of Montpellier, whose "Lilium Medicinæ" was written about 1305, mentions "atrophy of the muscles, especially of those between the thumb and forefinger, and insensibility of the extremities" amongst the infallible signs of leprosy, after the "enlargement of the eyebrows and loss of their hair"; rotundity of the eyes, swelling of the nostrils; aspect of the face terrible, with a fixed stare, etc. And, considering that when a man was condemned as a leper he was shut up for life in a lazaretto, or else turned out as a wild beast, it is satisfactory to find the great minuteness with which the premonitory signs were watched, the good diet prescribed by Guidus de Cauliaco, and the fact quoted by Simpson, that persons wrongly suspected and shut up for leprosy might appeal to the king, who might issue a writ in Chancery for examination by the best physicians, which, as in the case of one lady recorded, ended in an acquittal—a fortunate thing so far as she was concerned, for the existence of a leper, whether shut up or at large, must be a most dismal thing. But, besides their deformity, they seem to suffer little; they do not die of the leprosy, but are weak, irritable, capricious in appetite, and prone to fall victims to phthisis, diarrhœa and dysentery, and disease of the kidneys. They marry when they can, and beget children. Some observers whom I have asked confirm the old statement that they are much given to sexual indulgence; others say that they are like the rest of the world in that respect. The offspring of leprous parents may be healthy and fine children; but no one doubts hereditary transmission. But as for the exciting cause of the disease *de novo*, or for the question of propagation (which Dr. Tilbury Fox very properly distinguishes), no two opinions agree. Dr. Van Someren does not believe in contagion.

(*To be continued.*)

REVIEWS.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D. Glasgow: Maclehose. 1873.

Considering the rapid strides that have been made in the science and art of obstetrics during the last few years, it is a wonder that no new work on the subject has been given to the profession.

The author boldly declares in his preface that his object has been to furnish to students and practitioners a complete system of the midwifery of the present day, and assures us that "he has made himself familiar with the modern works of approved merit, whether British or foreign."

To condense in one systematic treatise the opinions of the various obstetric authors of the present day is no mean task, but to accomplish this in such a manner that the student, in place of being bewildered by the *tot sententiæ*, can glean the experience of so many counsellors, reflects great credit upon the author.

In his introductory chapter he briefly sketches the history of obstetrics, commencing with Hippocrates, "who was the first to bring a profound intellect and a truly scientific mind to the observation of the phenomena of parturition," and who for so many years hindered the progress of obstetrics by his assertion that the head was the only natural presenting part. The comparative anatomy of the pelvis will prove of great assistance in arriving at a proper understanding of the mechanism of parturition.

Space will not allow of more than a brief reference to the more important subjects; suffice it to say that for the most part the anatomical and physiological chapters are clearly and concisely given, and are all that could fairly be expected in a "system of midwifery," although, without entering fully into many controversial subjects, it would have been well had the opinions of those with whom the author does not agree been fairly stated or at least referred to. The anatomy of the placenta, with the vexed question of the placental circulation, is not given so fully as the importance of the subject demands, Hunter's views being those accepted by the author.

His description of the changes that take place in the cervix uteri during the latter months of pregnancy, even though the author limits it to primiparæ, is not quite in accordance with the experience of most modern authors, Dr. Matthews Duncan having clearly shown that the shortening is more apparent than real. A reference to the elaborate plates of Professor Brown, of Vienna, where he gives us a section of a pregnant uterus immediately preceding labour, is also opposed to the author's statements.

Dr. Leishman lays more stress upon "quickening" as a guide to the time of pregnancy than we are inclined to endorse, regarding it as very fallacious.

In treating of extra-uterine fœtation, we think the author relies too much upon the expectant treatment, considering the formidable risks incurred by allowing gestation to go on until rupture of the sac probably occurs, and the life of both mother and child is sacrificed. Cazeaux's plan of passing electric shocks through the abdomen to destroy the life of the fœtus is not only sound treatment, but also practicable; and even Scanzoni's method of perforating the sac by a trochar per vaginam in many cases is certainly advisable.

When the pregnancy has advanced to the eighth month or later, and the diagnosis is clear, gastrotomy offers a better chance to both mother and child than leaving the case to nature, providing only we leave the placenta *in situ*, and do not attempt its extraction, as Dr. Leishman seems to think is requisite, although he clearly appreciates "the great and special danger" of so doing.

Considering the prominence that has been given to this subject of late, we think the author might fairly have advocated a more active plan of treatment.

The disorders of pregnancy are ably discussed. The employment of local sedatives in cases of excessive vomiting deserves, however, a more extended trial than the author accords them. In the treatment of retroversion of the pregnant uterus we think the necessity of inducing premature labour might in a considerable number of cases be averted by confining the patient to her bed or couch for a week or two after the uterus has been replaced, with instructions to lie on her face as much as possible. We have thus succeeded in many instances where previous miscarriages had been frequent.

We do not agree with the author in his management of the third stage of labour. We object *in toto* to traction upon the cord, or even in the majority of cases introducing the hand into the uterus, Crede's system of expression by compressing the uterus externally being far preferable and much simpler as well as efficacious, the risk of post-partum hæmorrhage being thereby greatly diminished, and the efficient contraction of the uterus insured, and thus the probability of after-pains materially lessened.

The mechanism of labour, as we should expect from the author having devoted so much consideration to it previously, is ably and clearly given, and deserves careful study, for, without a proper understanding of the question, operative midwifery should never be attempted.

In the management of transverse presentations, we regret the author has not laid more stress upon ascertaining the abnormal position early by external manipulation; for though he alludes to it he evidently does not place that reliance upon it that those who have read Wigand's views and practised them will feel inclined to support.

Instead of "waiting patiently till full dilatation has been attained, or till rupture of the membranes takes place," we strongly urge upon all who practise midwifery familiarising themselves with this simple method, whereby version, or at least rectification, can be readily accomplished, irrespective of dilatation of the os, the danger to both mother and child being thus materially lessened.

In reference to funis presentations, the author says—"When that stage is reached at which the dilatation of the os is what we call complete, the membrane being as yet unruptured, it may occasionally be a matter of some difficulty to determine upon what principle we are to proceed in the management of the case." In place of resorting to the ingenious expedients suggested by most authors, we should depend upon placing the patient in the knee-shoulder, not the knee-elbow position as stated, and in the event of reposition by simple means being unsuccessful, turn and deliver as Mauriceau strongly advised, more especially as since the employment of the external and the bimanual method the facilities for doing so are so greatly increased, and the risk diminished.

The subject of premature expulsion of the ovum is well given, and though "under ordinary circumstances abortion is attended with little risk to the mother," we quite agree with Dr. Leishman "that no more fruitful source of menstrual disorder or of chronic uterine disease exists than what arises

from a want of due precaution at this critical period of a woman's existence."

The treatment of placenta prævia is one of great importance. The views of different authors who have written upon the subject are fairly given, and the various methods conveniently epitomised. The author thinks "that the operation of turning is that in which the great majority of experienced practitioners still place the greatest confidence."

In describing the preventive treatment of hæmorrhage after delivery, beyond the mere general advice to promote labour when the pains are feeble, no mention is made of applying the forceps and so shortening the duration of labour, and thus lessening the risk of hæmorrhage. Nor is the importance of following up the contraction of the uterus by external manual compression sufficiently insisted on. Transfusion is briefly referred to, but not so amply as we should have expected.

In describing the treatment of inversion of the uterus, Dr. Barnes's recent method of nicking the os in several places is not alluded to; this being a great improvement upon the method described by him in 1869, and promising fair to supersede "the only possible remedy in severe cases—viz., the removal of the inverted uterus."

In citing the cases requiring the use of forceps, the failure of the *vis a tergo*—familiarly known as "uterine inertia"—is stated to be the most frequent cause necessitating operative interference. This, we do not hesitate to affirm, is in our experience a condition that should never be allowed to supervene, arising as it most frequently does from some slight disproportion between the fœtal head and pelvic cavity; or, still worse, from contraction of the brim, where the unaided efforts of nature are insufficient to complete delivery. It is in these cases that by a timely application of the long forceps much needless suffering is spared the patient, and the fœtal mortality greatly diminished. Forceps should be looked upon not as a "*dernier ressort*," only to be employed when nature fails in her efforts, but as a valuable aid to be employed whenever nature intimates that she is unequal to her task. The risk in employing them has been greatly exaggerated—the danger generally is in having waited too long before resorting to them. We regret much that Dr. Leishman has failed to express in these chapters—more perhaps than in any other portion of his work—the prevailing notion of most of our modern obstetricians; and we trust that in his subsequent editions he will see fit to urge more prominently a more frequent and early resort to their application.

We differ also from him in his preference for the short over the long forceps: those who have given both a fair trial cannot fail to have experienced the great advantage of the latter over the former in the large majority of instances requiring their employment.

The subject of turning is ably discussed and well illustrated, the bipolar version being justly regarded as "one of the most important improvements in modern obstetrics."

In the treatment of rigidity of the os, the use of belladonna is advocated, but nothing is said about chloral, which has proved so successful of late.

The remaining portion of the work, especially the chapters on puerperal complications, is well written, and will prove a valuable guide to the accoucheur; the author evidently possessing a practical acquaintance with his subject, and much power of expressing his opinions tersely and explicitly.

We may as well state at once that, after a careful perusal of the work, we feel we owe a debt of gratitude to Dr. Leishman for having devoted so much time and labour in giving to the profession such a valuable "System of Modern Midwifery," and we confidently expect that it will have a large and rapid sale. It is a work that every obstetric practitioner should possess, for it stands alone in being the only volume that expresses the modern views upon this important branch of the profession. We can conscientiously recommend it as a work of great merit.

The Baths and Wells of Europe: their Actions and Uses; with Notices of Climatic Resorts and Diet Cures. By John Macpherson, M.D. Second edition, revised and enlarged. London: Macmillan. Pp. 378.

Dr. Macpherson has contrived to produce a thoroughly readable book out of materials which are only too abundant, and which, being so, would in most other hands—after being condensed as they are—have afforded only a sorry bill of fare to the reader in the shape of a dry *résumé*. Dr. Macpherson's book is more than this, but it lacks that fulness of information which a conscientious medical practitioner should seek to acquire before sending his patient abroad to any but the best-known watering-places. Even of the watering-places best known by name, how many have been visited by those who are in the habit of sending abroad patients to this or that spa, without any certainty that it is likely to suit them! Most of the good to be derived from a foreign watering-place depends on its exposure, on the kind and quality of food procurable, on the walks obtainable in the neighbourhood, and so on. Yet few details can be acquired on these important points, save by an actual visit to the place. Dr. Macpherson has personally visited many of the spas, and the details he gives are thoroughly reliable, but his space is far too limited to give more than the merest sketch even of the principal spas, to say nothing of grape cures, herb cures, whey cures, water cures, air cures, and spring cures, to be found all over the Continent.

A Treatise on the Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College. Fourth edition. Philadelphia: H. C. Lea. London: Trübner. Pp. 1070.

In the present volume Dr. Flint publishes his first preface dated 1866, and his last dated 1873. Not much need be said for a work under such circumstances. It is an established success; and, in truth, Dr. Flint deserves it. His book is a very good book, the fruit of much reading and of much practice. All we need say is that the present edition is somewhat enlarged; that the chapters on nervous diseases especially have been revised and increased—in short, that it is made fully abreast of the times, and worthy of confidence in every respect.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, November 17.

Lists of Lecturers—Sée on Cerebro-Spinal Nervous Disorders—Béhier on Typhoid—Lasègue on Method in Research—Richet on Lipoma in the Neck—Gosselin on Popliteal Aneurism—The Discussion on Cholera—M. Le Fort's Opening Lecture.

As announced in my last, the lectures at the School of Medicine were opened on the 4th instant. To the list of the Professors then given may be added the names of MM. Liouville, Chef de Laboratoire, and Hardy, Chemical Assistant at the Hôtel-Dieu. MM. Cornil, Pozzi, Coyne, and Daremberg (the latter as Chemical Assistant) are attached to the laboratories of the Charité Hospital, and M. Nepveu at la Pitié. These gentlemen carry out investigations in morbid anatomy and pathological chemistry, and give demonstrations once or twice a week in their respective branches; the student is at the same time instructed in the art of dissection, histological preparations, and in chemical manipulations relating to pathology. In addition to these there are a number of professors who lecture *ex officio* on the different branches of medicine and surgery. Some of these are specialists, and for the eyes alone there are no less than eight—namely, MM. Fano, Galezowski, de Wecker, Desmarres, Abadie, Meyer, Sichel, Piéchaud. For the throat—MM. C. Fauvel, Krishaber, Mandl. Urinary organs—MM. Mallez and Reliquet. Accouchements—MM. Verrier and Chantreuil.

The clinical lectures have also begun at the different hospitals. These are, as usual, most interesting, and the professors seem to vie with each other, not only as to the manner of delivering their lectures, but they all seem earnestly desirous of imparting their stock of knowledge and experience to those who care to follow them. I cannot in a single letter give even a summary of these lectures; I may, however, refer briefly to some of the subjects touched upon. At La Charité, Professor Sée selected for his winter lectures the diseases of the nervous system, or, more properly speaking, affections of the cerebro-spinal system, not only as regards the nerves themselves, but their influence on other organs, such as the heart, brain, etc. By a remarkable coincidence there are at

present to be found in his wards specimens of almost every variety and form of neurotic affections, from simple hysteria to epilepsy and locomotor ataxy. M. Sée repudiates the division of nervous and other affections into "essential" and "symptomatic," as, according to him, there can be no symptom without a lesion, as there can be no smoke without a fire; and if at autopsies we sometimes find nothing, it is because our knowledge and our means of investigation are defective. Physiologists, he continued, and particularly those of the French school, have rendered great service by their researches in this class of diseases, but their experiments were, if we may so say, too highly refined; so much so, that the symptoms observed at the bedside of a patient did not altogether tally with the results produced by experiments. In the pathological department there has been real progress; but if sometimes the symptoms during life are not confirmed by post-mortem appearances, it is because those who had undertaken such researches, and committed their observations to print, had to deal with a class of patients which could bear no comparison with another as regards age, habits of life, etc. For instance, MM. Vulpian and Charcot, than whom no living physiologist and pathologist have done more to throw light on the nature or mechanism of this most difficult class of diseases (neuroses), yet the results of their researches were not always in accord with the observations of others equally eminent but differently situated as regards the subjects they had to deal with. MM. Charcot and Vulpian are attached to the Salpétrière Asylum, where its inmates are in a state of decrepitude: their observations of disease, whether before or after death, cannot possibly tally with those taken at a hospital where its inmates are in the prime of life. This would account for the discrepancy in the description given in different books of one and the same disease, and it is only by clinical observations in a *general* hospital that a just estimate can be formed of the nature of any particular malady.

At the Hôtel-Dieu, Professor Béhier, with his usual eloquence, opened his lecture by a few remarks on the necessity for clinical observation or study before one can aspire to be anything of a practitioner. Experimental medicine, he said, may have its advantages, but it is at the bedside alone that one can study the different phases of disease. The experimental method without clinical observation (he added) is a dead letter, which only tends to lead young minds to form an erroneous conception of that more complex process termed "pathogeny." Several cases of typhoid fever having lately presented themselves in his wards, M. Béhier took occasion to lecture on the subject, and pointed out the advances that have been made in the diagnosis of this affection, and dwelt particularly on the utility of instruments of precision in clinical investigations in general. Thus, with the thermometer and sphygmograph alone, we can often diagnose a case of simple typhoid fever from any other disease of an adynamic or typhoid character. He then referred to the thermometric signs of typhoid fever and to the correlation that exists between these and the characteristic lesions of the affection—that is to say, the temperature in typhoid fever is constantly in relation to the extent or condition of the lesion in Peyer's patches, so that with the aid of the thermometer one is enabled to describe the progress of these lesions. For instance, when the lesion is only in its congestive stage, the temperature of the body gradually rises until it reaches its maximum of 40° C. or 41° C. In the ulcerative or eliminative stage this temperature remains stationary for a short time, and then it gradually falls. Here commences defervescence, which corresponds to the stage of cicatrisation, and when the temperature reaches its normal standard (37° C.) the patches are quite healed, and the patient is in a state of convalescence. This, indeed, may be observed even in surgical affections. Take, for instance, a common abscess. Here, as in typhoid fever, we have, though in a less marked degree, the three stages—that of ascension, which corresponds to the stage of congestion; the *periode d'état*, or when the fever is stationary, which corresponds with the process of suppuration; and the stage of defervescence, or decline, with that of cicatrisation.

At La Pitié, Professor Lasègue opened his course by a lecture on what he terms "Méthodologie," or the science and art of method in the investigation and research adopted by physicians, those resorted to by surgeons, such as the sense of touch and palpation, as an illustration of which he cited among other examples the advantages he derived by the use of the touch in the diagnosis of diseases of the throat, in which, in his opinion, this method of examination is generally neglected. By this method of exploration one may be enabled either directly or indirectly to ascertain, as in nervous affections of the throat, the different degrees of sensibility (anæsthesia or hyperæsthesia), of direct or reflex contractility, or of motor paralysis of the different parts connected with this region.

The surgical *cliniques* were not wanting in interest, but as there was nothing particularly new to note, I shall not trouble your readers with details. I may, however, observe that at the Hôtel-Dieu Professor Richet removed on Tuesday last a lipomatous tumour, about the size of a man's fist, from the right axilla of a female patient, which was effected by enucleation. The patient had another on the left hip, but M. Richet did not think proper to remove it at the same sitting. The Professor then went through the differential diagnosis of tumours, and said that the case under notice reminded him of a similar one he had removed from the throat of a man about 72, residing in Normandy, adding that it was the first time in his practice he had met with a lipoma in that situation, and he is not aware of any being on record. The microscopic examination of the tumour, after its removal, confirmed the diagnosis he had made. But the most remarkable part of the patient's history was that he was so little incommoded by the presence of the tumour of such a size and in such a situation. The act of deglutition was not interfered with, and the function of respiration scarcely impeded, and the man's health was good. The tumour was removed by the knife, and the patient made a good recovery.

At the Charité Hospital, Professor Gosselin's first lecture for the session was devoted to a case of spontaneous popliteal aneurism in a man aged about 35. It was about the size of a small orange, and situated in the popliteal space of the right leg. The patient was admitted some months ago, and could not give any information respecting its origin. M. Gosselin, however, was of opinion that the tumour belonged to the class of spontaneous aneurisms, but which are developed under the influence of an atheromatous condition of the vascular system. For the cure of the aneurism steady digital compression was first resorted to, and kept up without interruption for thirty-eight hours, but as the man got impatient from the increase of his sufferings, this method of treatment was given up, and replaced by ligature of the main trunk that fed the aneurism. On July 14 last the femoral artery in Scarpa's triangle was taken up and tied, which produced a favourable result, the pulsations in the tumour having completely disappeared, and the aneurism itself became hard, and was considerably reduced in size. The circulation in the limb seemed to be unimpeded, and the patient was doing well, when, about the twelfth day after the operation, the pulsations became again apparent in the tumour, without, however, any increase in its size. The aneurismal sac had evidently become permeable to a fresh current of blood, but M. Gosselin imagined that this latter was supplied by the collateral branches. He was, however, soon undeceived, as the tumour continued to pulsate, increase in size, and began to soften. This, he said, was evidently a renewal of the aneurismal tumour, which, however, was produced by a different mechanism, and the tumour now assumed the character of aneurisms known under the name of diffuse aneurism. Shortly after this the tumour became inflamed, the patient suffered a good deal from pain in the part, and as this was accompanied by a general febrile condition, M. Gosselin was afraid that suppuration was setting in. The doubt, however, was removed by the use of an exploring trocar, which gave issue to a few drops of thick blood without any trace of pus. But as there was no amendment in the condition of the patient or tumour, M. Gosselin thought the time had arrived when amputation was necessary for the safety of the patient's life, as he was afraid of rupture of the aneurism taking place. To this, however, the patient would not consent, and M. Gosselin had recourse to moderate compression, hoping that with rest, and keeping up the strength of the patient, the tumour would disappear by absorption. On my return to the ward a day or two ago to follow up the case, I found that, instead of the tumour, the man himself had disappeared, as he obtained, at his own request, his discharge from the Hospital.

In my last I mentioned that the discussion at the Academy of Medicine on cholera was closed. I find, however, that at the request of some of the members who were absent the discussion has been resumed. M. Chauffard and others have taken up the subject, but nothing new has been advanced; and the discussion, like the disease itself, may be said to be dying out, the mortality for the week ending November 10 having been reduced to four in the hospitals and town.

M. Le Fort, recently appointed Professor of Operative Surgery, delivered his maiden lecture at the School of Medicine on Saturday, the 8th instant, on which occasion the building was literally thronged. M. Le Fort, who is a relative of the late M. Malgaigne, is very popular, and his lecture was a perfect success. After having paid a graceful tribute to his predecessors, he went through the history of surgery from its earliest times, and pointed out the intimate connexion that exists between this branch of the art of cure and medicine properly so called. He endeavoured to show that the progress of medicine depended upon the degree of liberty that the human mind enjoyed at the different periods of its history. Thus, during the period of philosophical liberty, important discoveries were made in medicine and surgery; whereas during the rule of intolerance and absolutism progress was all but in complete abeyance. Progress, he continued, is neither the property of an individual nor of a nation. He enjoined his hearers to make themselves acquainted with the discoveries of other nations, for which it was indispensably necessary they should acquire a knowledge of foreign languages. "You may, if you please, forget your Greek and your Latin, but study the living languages if you wish to keep pace with your neighbours." "This advice," he continued, "is given not only for your personal interest, but for the welfare of France, which it is the duty of all loyal citizens to render great and happy."

GENERAL CORRESPONDENCE.

THE ELASTIC LIGATURE.

Letter from Mr. Henry Lee.

[To the Editor of the Medical Times and Gazette.]

Sir,—Upwards of two years ago, in consultation with Sir James Paget, I proposed to remove a breast with the elastic ligature. The tumour was very large, and bled so freely that amputation appeared out of the question. The operation was agreed upon, but was delayed from one cause or another until it could no longer be undertaken. In 1866, Mr. Blaise, of St. James's-street, obtained at my request some elastic material adapted for such an operation, and it has constantly been kept in St. George's Hospital since that time. There was great difficulty in getting this material, and Mr. Blaise, having failed to obtain it in London, had to send to Derby for it. Previous to that time I had been in the habit of operating with the elastic thread, such as is used in the sides of boots. This answered the purpose sufficiently well, and with it, and more recently with that supplied by Mr. Blaise, I have removed a considerable number of small tumours. The mode of operating is especially adapted for hæmorrhoidal tumours, nævi, and warts, and I should have used it more frequently than I have done had not experience proved the superiority of the curved clamp and the actual cautery where there is no objection to their use. With these I recently removed a considerable portion of the tongue, in St. George's Hospital, with scarcely any hæmorrhage. I am, &c., Henry Lee.

9, Savile-row, November 29.

UMBILICAL HERNIA IN INFANTS.

Letter from Mr. John Gorham.

[To the Editor of the Medical Times and Gazette.]

Sir,—In Mr. Wood's lecture on umbilical hernia, published in the *Medical Times and Gazette* of November 29, I notice that this gentleman recommends, as "the readiest way of applying pressure to the umbilical ruptures of children, common adhesive strapping placed over a flat piece of lead or pewter, or, what is usually more at hand, a penny-piece. This should be first enclosed in folds of strapping applied with the sticking side outermost, so as to adhere to the skin over the tumour. Over this broad strips of soap or adhesive plaster should be placed across the entire abdominal surface, and surrounded by a belt or bandage." This, says Mr. Wood, "though a valuable temporary expedient, can with difficulty be long maintained, on account of the constant trouble of changing, the liability to soreness of the skin, and a certain degree of skill which is demanded for its proper application." Mr. Wood then proceeds to notice an ingenious pad, devised by himself, consisting of "an indiarubber ring adapted to the size and shape of the edges of the opening, which should press only on the edges with the same tendency to close them as by pressure with the fingers in reducing the protrusion."

An experience of forty years of active practice enables me to speak very decidedly as to a plan of treatment which has been adopted, and in every case with uniform success, so that I am not able to point to a single instance in which it has failed. I am induced therefore to request an insertion of the plan adopted in the pages of the *Medical Times and Gazette*. It is as follows:—Having placed the child on its back in the mother's lap, the hernia is pushed in with the forefinger. The skin of the abdomen on either side is now pinched and folded up with the finger and thumb, and brought over so as to make both folds meet. The hernia now lies underneath the folds, which are represented by two parallel lines in contact with one another. Holding the folds in close apposition, by applying the thumb and forefinger of both hands above and below, the mother or an assistant now applies six strips of diachylon plaster—four transverse, two oblique. The transverse are three inches long by half an inch wide; the oblique are four inches long by half an inch wide. The small belly-band which has been used from time immemorial is now applied, and serves to keep the plasters in their place. These plasters will remain on, although the infant is washed well every night and morning, for four days, when they can be removed, and fresh ones substituted. It may be as well to notice, however, that the whole of the strips should not be removed at once, but one by one; and as fast as one strip is removed another fresh one should replace it. In this way the chances of protrusion during the crying or coughing of the child are much diminished.

I was induced to follow this mode of treatment from a remark made so long ago as 1805 in Dr. Underwood's book "On Diseases of Children," in which the author says he has for some years succeeded well by the ingenious contrivance of Mr. Kelson, of Sevenoaks. "This consists only in bringing the parts together by means of three or four strips of plaster applied star-wise across the navel, which are to be removed as occasion may require." After a little while, the mother, with the assistance of the nurse, generally becomes sufficiently adroit to apply the plasters herself, and I have had several cases in which they have been thus applied for months or even a year with perfect success. When once the mother can take upon herself the duty, it is doubly advantageous, because a child is less likely to cry under the manipulations of one with whom it is so familiar, and because it prevents the repetition of visits, which, to parents of slender means, is a consideration.

I am, &c., John Gorham.

THE CAUSATION OF DICROTISM OF THE PULSE.

Letter from Dr. A. L. Galabin.

[To the Editor of the Medical Times and Gazette.]

Sir,—In his paper on the sphygmograph, published in the *Medical Times and Gazette* of November 1, Mr. Mahomed, while criticising my view of the causation of the dicrotic wave of the pulse, has advanced a theory of his own which differs quite as much as mine from any of those hitherto accepted. The explanation of the dicrotic wave is so important, as the most elementary step in the study of the pulse-curve, that any contribution to the discussion which tends towards the settlement of the question may be considered of value. While fully appreciating the valuable results of Mr. Mahomed's practical researches with the sphygmograph, I am unable to avoid the conclusion that his theory on this point is mechanically unsound.

Mr. Mahomed, like myself, believes that the closure of the aortic valves plays only a secondary part in the production of the dicrotic wave, but its primary cause he considers to be simply the contraction of the elastic coat of the aorta, which he says is the result of a distinct mechanical power—namely, that of elasticity. That elasticity is a mechanical power is a proposition which it would be difficult either to deny or to affirm; but mechanical power is a term which has been rather consecrated by usage to mechanical appliances of practical use—such as the lever, the wedge, or the screw.

We both of us agree that the dicrotic wave is a wave of expansion, proceeding from the centre towards the periphery. By the principles of hydro-dynamics it must therefore be at the same time a wave of increased pressure, the expansion being the result of the pressure within. Being, therefore, the transmission of an increased pressure, its origin, at whatever point that occurs, must itself be an increase of pressure; and the point is to explain how that should arise.

Now, the contraction of an elastic surface is simply the result of the diminution of tension, and the contraction of the aorta is in this way due to the diminished pressure within after the cessation of the heart's contraction. The mere fact of contraction, therefore,—itself an effect of lowered tension—could not at the same time be a cause of such a raised tension as would be required to produce a second increase of fluid pressure. The theory of Mr. Mahomed, in fact, amounts to supposing that the lowering of pressure is by itself the cause of an elevation of pressure; if not at the same point, yet at a little distance off.

I do, indeed, myself believe that the dicrotic wave is due to the contraction of the large arteries, but that this result only occurs because, owing to acquired velocity, their expansion is carried beyond that point at which the tension of the tube would be in equilibrium with the pressure within. The effect of this is that the contraction takes place with such a spring-like recoil as to carry it again within the point of equilibrium, and so cause a second increase of fluid pressure; and this oscillatory movement may be several times repeated. The dicrotic wave would thus be the first of a descending series of waves of expansion and contraction. These are constantly observed in experiments with elastic tubes, when the contractions of the artificial heart are made at sufficiently long intervals, and the second of the series, or tricrotic wave, is now and then seen in the pulse when the tension is very low, but the rate not rapid. These waves have some analogy to those which occur when a stone is thrown into water, for that case affords an instance in which the production of one wave gives rise to a series of waves, each smaller than the last, not reflected, but travelling in the same direction as the first and largest wave.

I agree, therefore, with Mr. Mahomed so far as to consider that the elastic distensibility of the arterial walls is a necessary condition for the production of the dicrotic wave; and that, other things being equal, that wave becomes lessened if such distensibility be diminished, and conversely. I believe, however, that a second necessary condition is to be found in the effect of the inertia of the arterial walls, and that without this the dicrotic wave would not occur at all. For a statement of the evidence in support of my view I must refer to a paper published in the last number of the *Journal of Anatomy and Physiology*.

I am, &c., A. L. Galabin.

DR. CHAPMAN AND THE METROPOLITAN FREE HOSPITAL.

Letter from Dr. Charles R. Drysdale.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you favour me by space in your much-respected journal to say that I was not one of the gentlemen who signed the resolution recommending Dr. Chapman to resign on account of his now well-known article in the *Pall-mall Gazette*.

I am, &c.,

Charles R. Drysdale, M.D.,
M.R.C.P. Lond., F.R.C.S. Eng.,
Senior Physician to the Metropolitan Free Hospital.

London, December 2.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 25.

Dr. C. J. B. Williams, F.R.S., President, in the Chair.

Dr. Samuel Gee gave the history of a case of Calculous Disease of Both Kidneys in a man who had suffered from gout. In the pelvis of the right kidney there were found—(1) a great stone, weighing thirty-six ounces and a quarter; (2) eight smaller stones, each larger than a cherrystone, weighing from nineteen grains to fifty grains; (3) about a thousand flattened stones, like melon-seeds in shape; (4) a large quantity of gravel. In the pelvis of the left kidney was found a stone weighing nine ounces and three-quarters. The chemical composition of the greater part of the large stones, and of the smaller stones and the grit, was phosphate of magnesia and ammonia, nearly pure. The large stone had a nucleus of oxalate of lime, phosphate of magnesia, carbonate of lime, and uric acid.

Mr. Charles Hawkins had seen nothing of the kind. He believed it the result of a stone lodged in the pelvis of the kidney, and gradually causing absorption of the organ. He had removed a stone similar in composition from the body of a gouty patient, whose health and comfort were wonderfully little affected. He had a patient who one year would have a fit of gout, and the next one of gravel.

Mr. Arnott said Dr. Murchison had shown a stone about half as large to the Pathological Society. The patient had passed crystalline cholesterin in the urine, and had long suffered from intermittent hæmaturia. One kidney was an abscess, the other filled with shining crystals. The stone had not been made out during life.

Mr. F. Clarke thought it interesting that the deposits were symmetrical. Was there any trace of stone in the bladder, or any idea of operation?

Mr. T. Smith understood that the enlargement had been considered scirrhous, so there was no idea of operating.

Dr. Gee, in reply, said he had not seen the patient during life. He had been admitted during holiday time, and the case was not fully investigated. He did not know if he had ever passed blood or stone during life. His account was defective, but he was anxious to put the case on record.

Dr. T. Snow Beck read a communication from Sir William Jenner, Bart., on a case of Fatty Degeneration of the Contractile Tissue of the Uterus, with some Remarks on the Nature of the Cauliflower Excrescence of the Os Uteri. The following case was first seen in October, 1871:—A spinster, aged 59 years, without any appreciable alteration in her previous good health, and in whom the catamenia had ceased for nine years, was suddenly seized with a gush of blood from the vagina, with a considerable thick, slightly yellow-coloured discharge. This discharge, always worse at night, gradually increased, and became very copious. At first it was thin, serous, and slightly yellow-coloured; afterwards became whitish, slightly yellow or greenish, without any offensive odour until it had existed for about three years. During the fourth year, and especially towards the end, it became very offensive. This discharge was accompanied, at uncertain intervals, with an escape of blood, sometimes so slight as only to colour the discharge red, at other times accompanied by the formation of small coagula. Three or four times a considerable amount of blood was lost, and towards the last severe hæmorrhage occurred. But from the first to the last there was neither ache nor pain present. The appetite became impaired, and ultimately extinguished; the tongue red, coated, and tremulous; the bowels always constipated, pain at the epigastrium after eating, much flatulency, frequent sickness, distressing hot flushes, occasional giddiness, and sleepless nights. There was comparatively little loss of flesh, and nothing in the general appearance to indicate the presence of serious disease. After the affection had existed for three years, the lips of the uterus were found swollen, the external orifice open to admit the end of the finger, and several small fleshy prominences a little within it, which freely poured out blood, of an arterial character, on the slight pressure of the finger during examination. A month later the soft growths protruded through the external orifice; and three months later the upper part of the vagina was filled with a soft pulpy mass, much resembling, to the touch, the fœtal portion of the placenta. The woman became weaker and weaker, and died, four years after the first indication of the disease, by a sudden gush of blood from the vagina. In the examination of the body after death, the uterus was found somewhat enlarged, and the cavities filled with a soft shaggy tissue, which hung down, for about an inch and a half, into the upper part of the vagina, and filled this portion of the canal. With the exception of a thin shell at the fundus, the whole of the contractile or muscular tissue of the uterus was converted into the soft shaggy tissue, which ceased abruptly at the external orifice where the vagina begins. With the aid of the microscope, the contractile fibre-cells at the fundus were seen slightly altered; lower down they contained in their substance a varying amount of fat-globules; still lower down, all form of the contractile fibre-cell was lost, and, instead, collections of large-sized fat globules mixed with diffluent tissue were seen; and at the lowest portion it consisted of structureless diffluent tissue mixed with the numerous and various-sized fat-globules. The symptoms in this case closely resembled those given by Sir Charles M. Clarke as indicating the presence of

cauliflower excrescence of the os uteri, yet differed from them in some material points. Cauliflower excrescence was described as being attached to the surface of the os uteri—never extending into the cavity of the uterus,—being sometimes so large as to fill the vagina and project through the labia, when it was of a bright flesh-colour. It might be completely cured by excision, or even by the assiduous use of local astringents, and had proved fatal at the early age of twenty; whilst in the case recorded the disease was essentially one involving the cavity of the uterus, was most probably incurable, and probably only met with after the middle period of life. The preparation of cauliflower excrescence of the os uteri preserved in the Museum of the Royal College of Physicians, presented by Sir Charles M. Clarke in 1829, was examined This preparation was found to be one of those villous growths which spring from the surface of mucous membranes, well known under the name of "papilloma." Cauliflower excrescence of the os uteri, as shown in this preparation, was essentially distinct from the fatty degeneration of the contractile tissue in the previous case, and also distinct from any forms of malignant disease—cauliflower excrescence consisting, in the words of Professor Rindfleisch, "of a number of arborescent groups of villi, and of nothing else," and "having nothing whatever to do with cancer."(a) A case of cauliflower excrescence of the os uteri recorded by Sir James Y. Simpson was referred to; also seven cases reported under the name of cauliflower excrescence by Dr. J. Braxton Hicks.(b) But those cases recorded by Dr. Hicks did not present any of the characteristic symptoms of cauliflower excrescence; and were examples, not unfrequently met with, of "encephalomatous" and other malignant disease of the lower portion of the uterus, attended with the usual severe pains and offensive discharge of these diseases.

Mr. Arnott had seen two or three portions of the so-called cauliflower excrescence removed for examination. He found only a villous outgrowth covered with epithelium, which last was readily shed after soaking in alcohol, and gave the growth a leaflet-like appearance. Sometimes malignant growths of the os threw out villous excrescences, but these were not to be confounded with the cauliflower excrescence. This was a true papilloma, and malignant only by virtue of its discharge of blood, and consequent drain on the system.

Dr. Routh said the disease ordinarily called cauliflower excrescence was not the same as that described by Sir Charles Clarke. In the ordinary form the base is hard, and it is distinctly malignant. The symptoms were by no means characteristic. The growths were, he thought, epitheliomatous; but the patient got well if they were snipped away and caustics applied.

Dr. Snow Beck said the hæmorrhage came in gushes; beyond this there was neither ache nor pain. Sir Charles Clarke's specimen was evidently a papilloma.

THE PATHOLOGICAL SOCIETY.

Friday, November 18.

Dr. Dickinson, Vice-President, in the Chair.

Mr. Kesteven exhibited Sections from the Spinal Cord of a case of Paralysis in which the symptoms were bilateral and affecting both upper and lower extremities, but in which the lesion was found to be unilateral. The grey substance on the left side was throughout the length of the cord, up to the medulla oblongata, smaller than the right, and its constituent parts had undergone varying phases of atrophy. This was very strongly shown about the middle of the dorsal region. In rather more than an inch of its extent the anterior horn was atrophied and had so lost its normal shape as to appear simply a mere narrow curve of grey matter. The multipolar cells were also small, misshapen, and granular. The cut ends of the nerve tubes in the white columns on the left side showed also this same condition of atrophy when contrasted with those of the right side.

The Chairman thought the term reflex had been wrongly used, inasmuch as there were well-defined alterations in the cord.

Dr. Murchison was about to ask why the term reflex was used. The changes in the cord were quite enough to account for the symptoms.

(a) "Manual of Pathological Histology," p. 454.
(b) "Guy's Hospital Reports," vol. vii., p. 245.

Mr. Kesteven quite agreed, but read the paper as sent to him. He considered the change a subacute inflammation.

Mr. Pugin Thornton exhibited two specimens of Cancer of the Œsophagus taken from cases which had been under Dr. Morell-Mackenzie's care at the Throat Hospital. In the first case—that of a woman aged 31, the carcinoma had extended into the trachea, and during the last few weeks of her life had caused complete aphagia. Her symptoms had commenced about July of the present year, and she died October 20. She had suffered from an enlarged thyroid gland, which after a month's treatment by injections of iodine had been reduced three-quarters of an inch. The post-mortem showed the thyroid gland to be enlarged, the lobes embracing the œsophagus from the cricoid cartilage to the tenth ring of the trachea, the canal between these situations being obliterated by a new formation, the centre portion of it projecting into the trachea, forming a growth of the size of a hazel-nut. In the second case the carcinoma was situated at the orifice of the œsophagus, and had been followed by a cervical fistula. The patient, a woman aged 42, had experienced uneasiness in swallowing in January, 1873. This trouble increased, and in April she could only at times take a little minced meat, and that occasionally brought on hæmorrhage. The laryngoscope showed a growth, extensively ulcerated, springing from the lower part of the posterior wall of the pharynx, blocking up the œsophagus, and covering the arytenoid cartilages. She grew rapidly worse. An abscess formed on the right side of the neck, through which, after it had burst, all the food she took passed. She died on October 23. A growth after death was found arising from the posterior wall of the pharynx above the level of the epiglottis to below the cricoid cartilage, forming a very tight stricture for a distance of half an inch at its lower part. There were also large masses on each side of the pharynx, which pressed the arytenoid cartilages forwards towards the epiglottis. A fistula near the cricoid cartilage, large enough to admit the little finger, passed forwards to the right side of the neck. The left lung had numerous strong adhesions; otherwise all the internal organs were healthy. Both these specimens had been examined by Dr. Gowers, and pronounced to be epitheliomatous. The tissues of the thyroid gland in the first case were normal.

Mr. John Wood next showed a specimen of Cancer of the Male Breast in a patient aged 68. It had been growing nine months, and began as a hard lump near the nipple. It became lobulated, and the nipple was drawn in. About three weeks ago some hæmorrhage occurred from the nipple, and the growth seemed to take a fresh start. When removed, section showed it to be a hard cancer with dilated canals filled with blood. Cancer of the male breast was rare; Sir W. Fergusson had seen three cases, but they were not all scirrhus.

Mr. Hulke had seen three examples, all scirrhus.

Dr. Cayley asked if there was the same tendency to recur and to infect the system as in the female.

Mr. Goodhart asked the microscopic structure.

Mr. Hulke said that in one of his cases the behaviour of the tumour was just as in the female breast.

Mr. Goodhart showed a specimen of Mediastinal Tumour, from a patient the subject of exophthalmic goître. No history could be obtained, as the patient (a woman aged 26) died under chloroform. There was general enlargement of the lymphatics, and the thymus was enlarged; so, too, was the thyroid, and its veins were dilated. From it a mass of gland tissue ran down the neck to the pericardium. It seemed a kind of outgrowth of the connective tissue in the mediastinum. A large ganglion of the sympathetic was examined and found healthy, but its capsule was thickened. The heart was rather thick. He thought enlargement of the thymus at such an age rare. Another instance in exophthalmic goître was recorded. He considered the malady due to an intracranial neurosis.

Mr. Arnott asked for evidence on this point, but there was none.

Dr. Crisp asked if the blood had been examined for white blood-corpuscles.

Dr. Powell asked if there was any difficulty in separating the thymus. He had shown a specimen where there was much greater thickening and adhesion.

Dr. Gibbon thought the malady due to a blood, not a nerve, change.

Mr. Goodhart had not examined the blood. The thymus was encapsulated. There was nothing in the orbit.

Dr. Dickinson said he also had failed to find anything unusual in the orbit in such cases.

Mr. Butlin showed a specimen of Nerve illustrating the

Effects of Former Injury. The patient, a male, died of a broken back. Fourteen years before, he had been wounded in the arm; he consequently lost all sensation in its inner side, but after a time partly recovered. The hand wasted on the ulnar aspect, and the nerve was found atrophied. There was no connexion between its upper and lower portions. In the central portion the nerve fibres were found normal, but hardly any were to be seen in the peripheral division. Both ends were bulbous, and some distance apart—the upper three-quarters of an inch above the point of section. In reply to Mr. W. Tay, he said no difference in temperature had been noted; and to Mr. John Wood, that it was not observed whether the communication between the median and ulnar was enlarged.

Dr. Broadbent said such a renewal of sensation had been noticed in other cases. There seemed to be some means of conveying sensation from points near the divided nerve.

Dr. G. Harley said that if one axis cylinder remained, that was quite enough; and if one was found, it was probable that many more escaped notice.

Mr. Butlin said sensation returned in about six months. He thought finding an axis cylinder was not enough; we should also find the mode of communication.

Mr. Kesteven then exhibited Sections from the Brain and Spinal Cord of a case of Puerperal Mania. In this case a very remarkable lesion was found. The horns of the grey matter were throughout smaller on the right than on the left side; but in the dorsal region for about the extent of a third of an inch there was observable an absence of the cells of the posterior vesicular columns. Above and below this point, for about half an inch each way, the cells gradually reappeared until the columns presented their normal characters. The person from whom this cord had been removed had been the subject of repeated attacks of puerperal mania, through which Mr. Kesteven had attended her, and in the last of which she had died from exhaustion. She had never shown any evidence of disease that could be referred specially to the spinal cord. The brain of this patient, a section of which was on the table, exhibited a great abundance of points of miliary sclerosis, varying in size from $\frac{1}{300}$th to $\frac{1}{800}$th of an inch in diameter, crowded together to the extent of between three and four thousand to the inch.

Mr. Kesteven also exhibited a brain he had received from Mr. H. P. Harris, of Mildenhall, Suffolk. It had been removed from the head of a boy who had fallen from the top of a cartload of straw, having in his hand at the time a hayfork with the tines upward. One of the tines entered the head, an inch behind, and on a level with, the lobe of the left ear, passing upwards and backwards its whole length. It was with difficulty withdrawn by a fellow-workman, and its point found to be bent upon itself to the extent of two inches. No other wound was made than that caused by the entrance of the fork. Some blood was lost, and he vomited before the arrival of the surgeon, three-quarters of an hour after the accident. He was lying on his side with his legs drawn up, and was cold and almost pulseless. He was unconscious, and could be roused only to indistinct mutterings. About a teaspoonful of brain substance had escaped from the wound during the act of vomiting. The principal subsequent symptoms and results were—unconsciousness, convulsions, opisthotonus, paralysis of the sphincters, partial temporary recovery of consciousness, exhaustion, and death on the ninth day after the accident. The fork had passed through the edge of the left lobe of the cerebellum, and had ploughed its way through the left hemisphere of the brain, driving before it a fragment of the occipital bone.

Dr. Crisp asked if there was any special symptom due to injury to the cerebellum.

Mr. Kesteven said the only symptoms were opisthotonus and convulsions.

Dr. Dickinson said that the so-called miliary sclerosis of the brain was often due to preserving the specimens in spirit. They even presented crystals.

Mr. Kesteven said he had often seen these scleroses, however the specimen was preserved.

Dr. Crisp showed a Cast of the Crop of a Cock, which had become enormously distended. He opened it, and the opening did not heal. The animal wasted, and was killed. The obstruction lay between the stomach and gizzard, in the form of a piece of ligamentum nuchæ from some Australian meat. In another cock was a traumatic aneurism from a pin, which had penetrated the gastric artery, and seemed to give rise to no inconvenience.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, November 5.

E. J. Tilt, M.D., President, in the Chair.

Dr. Playfair exhibited a specimen of Malignant Sarcoma, apparently originating in the right broad ligament, but which at death nearly filled the whole abdominal cavity. The points of interest in the case appeared to be—first, the difficulty and obscurity of the diagnosis during pregnancy, there being nothing in the physical condition of the patient to cause the least suspicion of the real nature of the tumour; secondly, the extremely rapid growth of the tumour after delivery. This pointed to the probability of the growth having been kept in abeyance, as it were, possibly by the presence of the gravid uterus.

Dr. Wiltshire thought the case might be an example of a polypoid growth arising from a clot which had become organised.

Dr. Playfair exhibited a specimen of Necrosis of the Pubic Bones following delivery, which, he said, was a form of puerperal disease of extreme rarity. Three weeks after labour an abscess burst at the anterior portion of the left labium, and a highly offensive discharge came from the vagina. The upper part of the thigh became œdematous. An incision was made, from which bad-smelling pus was evacuated. The patient soon after died from exhaustion. The ossa pubes were found necrosed, and the symphysis destroyed. Dr. Playfair thought the disease originated in some obscure form of septicæmia, rather than in a purely mechanical cause.

Dr. Aveling asked if the measurements of the pelvis were taken. From the bones exhibited he thought it must have been below the normal size. If this were the case, inflammation might have been set up in the symphysis in consequence of mechanical disturbance taking place during delivery.

Dr. Routh asked if the patient had received any blow on the pelvis before confinement.

Dr. Meadows and Dr. Squarey stated that they had seen similar cases.

Dr. Hayes asked if the case began with the ordinary symptoms of puerperal fever.

After some remarks by Drs. Grigs and Wiltshire, Dr. Playfair replied he had not measured the pelvis, as it appeared to him of the usual size. There was no history of the patient having received a blow.

Dr. Aveling exhibited a New Instrument, which he called a "Loop Saw," which he believed might be used with ease and advantage in some cases where the écraseur was at present employed. It consists of two tubes, with pulleys at the upper end, over which a loop of whipcord or chain works. The two tubes are united by a hinge at the handles, and the tumour is divided by drawing alternately upon the ends of the cord. As the loop divided the tissues from below upward, there was no passing of the cord over the tumour, as was the case with the écraseur.

Dr. Squarey read a note on the Cure of Flexions of the Uterus by Flexible Stems. The author had been induced to try the curative effects of flexible stems, in consequence of his belief that inflammation was sometimes set up by stems which were rigid. His stem speedily cured pain resulting from the retention of the catamenial discharge, and the removal of this pain had a curative effect upon flexions. There seemed a natural tendency to recovery when the most troublesome symptoms were removed.

Dr. Aveling stated that he had exhibited to the Society in 1866 a flexible intra-uterine stem of coiled wire, and suggested that Dr. Squarey's instrument might be improved by the introduction of a coil inside the indiarubber. It would then have the power of straightening in the uterus, which it at present lacked.

Dr. Rogers said that he had found great use from the employment of flexible stems.

Dr. Routh hoped he would have the opportunity of entering upon the whole question at the next meeting.

Dr. Heywood Smith thought it best to use stiff stems, and keep patients quiet until they could bear them.

Dr. Playfair could not understand how a stem which adapted itself to flexed conditions of the uterus could have a curative effect.

Dr. Godson had seen great relief given by the use of flexible stems similar to Dr. Squarey's.

Dr. Farr read a paper communicated by Dr. Block on a Case of Spontaneous Salivation associated with Pregnancy. The mother of four children, pregnant for the fifth time, suffered from such excessive salivation that it was considered necessary to propose the induction of premature labour. The symptoms, however, suddenly abated upon the occurrence of quickening, and the patient speedily regained strength and required no further medical treatment.

Dr. Alfred Wiltshire read a paper on the Common Skin Diseases of Children. The forms of skin disease described were of two classes—parasitic and inflammatory; scabies and ringworm in the former, and erythema, eczema, and impetigo in the latter. The author dwelt on the importance of looking to the general health in the parasitic skin diseases, as well as to the local treatment. He also pointed out that the seats of eruption in the infant and little child varied somewhat, and explained why. The treatment thought most appropriate was indicated. Stress was laid on the importance of diagnosing the superadded skin affections in the parasitic forms—such as urticaria, eczema, ecthyma, etc., from the eruption proper to the parasite. With reference to the inflammatory skin diseases, it was pointed out that much clearer ideas of the pathology of the various forms of eczema, erythema, and impetigo were gained by regarding them all as varieties of dermatitis. The clinical and diagnostic features of each variety were detailed, and remarks were made on some peculiarities as regards these affections in children. The paper concluded with practical remarks on treatment.

Dr. Cleveland remarked upon the necessity of attending to the general health. Local remedies without this were often useless. He had found arsenic useful in scabies, exposure to the air and a solution of nitrate of silver in impetigo. With regard to eczema, he had found arsenic and zinc ointment useful.

Dr. Rasch had seen many cases of itch amongst the Polish Jews, who were very dirty; they had it all over their bodies, and whole families were smitten with it. He had never given anything internally for it, having found external treatment perfectly satisfactory.

Dr. Hayes said that he had always found sulphur ointment would cure any case of itch.

Dr. Phillips remarked that he did not think constitutional remedies were necessary in itch. The importance of recognising the influence of improper food in producing eczema should not be overlooked. Now we had a national education plan, he thought we ought to have some elementary teaching in physiology. We could not expect to have decreased mortality among children until women knew how to feed them.

Dr. Wiltshire agreed with Dr. Cleveland's views as to the necessity for constitutional treatment. Arsenic was of most use in chronic eczema.

LEGAL INTELLIGENCE.

COURT OF QUEEN'S BENCH, IRELAND.—Nov. 24.

(Before the Lord Chief Justice, Mr. Justice O'Brien, and Mr. Justice Fitzgerald.)

Lawlor *v.* Alton.

This case was specially stated for the opinion of the Court. An election took place for the post of surgeon to the County Kerry Infirmary, in July, 1869. Three candidates appeared—Dr. Lawlor, Dr. Alton, and Dr. Fitzmaurice. Twelve governors were present, six of whom voted for Dr. Lawlor, four for Dr. Alton, and two for Dr. Fitzmaurice. The last-mentioned gentleman's name was then struck out, and on a vote being again taken, six voted for each candidate. A casting vote was given by the chairman in favour of Dr. Alton, who was accordingly declared elected. Dr. Lawlor subsequently applied in the Queen's Bench for a *quo warranto* to test the validity of the election, contending that Dr. Alton was not properly qualified, inasmuch as he had not letters testimonial from the College of Surgeons in Ireland. The Court held that this objection was good, and that Dr. Alton was not properly qualified on account of the absence of letters testimonial. Dr. Alton having, pending the proceedings in the Queen's Bench, exercised the duties of the office, the grand jury presented him with £47. Dr. Lawlor then brought an action against Dr. Alton for having had and received the money, and claimed the £47. The question now for the Court was whether Dr. Lawlor was entitled to recover the £47. The Court decided in favour of the plaintiff, but on the money count for the defendant. Counsel for plaintiff—Mr. Murphy, Q.C., and Mr. Hickson; for the defendant—Mr. Gerald Fitzgibbon, Q.C., and Mr. P. O'Brien.

NEW INVENTIONS.

EXTRACT OF ENGLISH BEEF.

We have received from Messrs. Harvey and Reynolds, of Leeds, some specimens of extract of beef, prepared according to Liebig's process, which are of great excellence. Their extract makes very palatable beef-tea, and it will bear the test of being eaten cold with a biscuit. It has a full flavour of fresh meat. Patients, we can assert, take it readily; and as far as we have been able to judge from the trials we have made with it, it is a valuable addition to the dietary of the sick-room. Messrs. Harvey and Reynolds inform us that it is made from the best English beef, from which they maintain a far better extract can be obtained than from the beef of South America or Australia. Hay-fed beef does not yield so good an extract as grass-fed, and it seems only reasonable to believe that the succulent pastures of England would produce a finer kind of meat extract than the plains of a hotter and drier country. Messrs. Harvey and Reynolds assert that comparisons they have made between extracts prepared by their own process from Australian beef and the extract of English beef fully support this opinion.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, November 27:—

Redmond, John, York Town, Surrey.
Travers, Otho Robert, Cheam.
Turnell, Arthur Pythias, Brixworth, Northamptonshire.
White, James Benjamin Kelly, Whitechapel, E.
Whitten, William John, Commercial-road, E.

The following gentlemen also on the same day passed their primary professional examination:—

Barlow, Thomas Carey, of Guy's Hospital.
James, Walter Culver, of Guy's Hospital.
Hames, George Henry, of St. Bartholomew's Hospital.
Makins, George Henry, of St. Thomas's Hospital.
Paxon, Herbert Elliott, of the London Hospital.
Pettigrew, Augustus Joseph W., of St. Thomas's Hospital.
Snook, William Ernest, of Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Atkins, Francis Thomas, M.R.C.S., L.R.C.P. Edin., L.S.A.—House-Surgeon at the Kent and Canterbury Hospital.

Chestnutt, Joseph Wallace, B.A., M.D., L.R.C.S. Edin.—Medical Officer for the Ahoghill Dispensary District of Ballymena Union, co. Antrim.

Maunder, Charles F., F.R.C.S. Eng.—Consulting Surgeon to the Merchant Seamen's Orphan Asylum, Snaresbrook, *vice* Mr. Startin, deceased.

Robertson, William, M.D.—Medical Officer for the Whittingham District of Rothbury Union, Northumberland.

NAVAL APPOINTMENTS.

Admiralty.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Staff-Surgeon of the second class Frederick Piercy has been placed on the retired list from the 22nd inst.

BIRTHS.

Mactier.—On November 25, at Strone House, Blairgowrie, Perthshire, the wife of W. F. Mactier, M.D., late Bengal Medical Service, of a son.

Myers.—On October 2, at Cheefoo, North China, the wife of Wykeham Myers, M.B., C.M., of a daughter.

Watson.—On November 26, at Little Huthwaite, Wortley, near Sheffield, the wife of Alfred M. Watson, M.D., of a daughter.

MARRIAGES.

Bell—Ringwood.—On November 29, at Leney Church, Westmeath, John Albert Bell, M.R.C.S. Eng., L.S.A., Rochester, to Anne Selina, eldest daughter of the late Rev. John Ringwood.

Brock—Robinson.—On September 11, at New South Wales, F. Aungier Brock, son of Frederick G. Brock, Esq., of Shortlands, Kent, to Bessie Fraser, daughter of J. Robinson, M.D., late of Aberdeen.

Burroughs—Warren.—On December 1, at All Saints' Church, Finchley-road, N.W., George Edward Elton Burroughs, L.K.Q.C.P., L.M., M.R.C.S. Eng., L.S.A., of Prees, Shropshire, only son of G. F. Burroughs, Esq., of Battersea-park, S.W., to Frances Mary Anne Bramley (Fannie), only daughter of the late Henry Warren, Esq., of St. John's-wood, and Morda, Oswestry.

CUMMING—BAILLIE.—On November 25, at St. Jude's Church, South Kensington, William Gordon Cumming, Esq., Captain Royal Engineers, third son of the late G. W. Cumming, M.D., Madras Army, to Grizel Mary, second daughter of the late William Robert Baillie, Esq., W.S., Edinburgh.

EDGER—LUCAS.—On November 29, at St. Giles's Church, Oxford, Alfred J. M. Edger, son of John W. Edger, M.D., L.S.A., of Kirkby Stepheu, Westmoreland, to Amelia, third daughter of the late W. Lucas, Esq., of Oxford.

GRAY—HULL.—On November 6, at Benares, Surgeon-Major R. Gray, H.M.'s Bengal Medical Service, Civil Surgeon, Mooltan, to Alicia Dawson, youngest daughter of the Rev. John Dawson Hull, Vicar of Wickhambrook, Suffolk.

HALPIN—MONSELL.—On November 27, at the British Embassy, Brussels, Druitt, only son of the late Charles Halpin, M.D., Cavan, Ireland, to Catherine Georgina, only surviving daughter of the late Wm. Monsell, Esq., Windsor.

NIXON—WOODWARD.—On November 27, (chorally), at the Church of St. Mary Magdalene, St. Leonard's-on-Sea, Henry Cotton Nixou, of Mostyn, St. Leonard's-on-Sea, youngest son of the late Henry George Nixon, Esq., of Canterbury-place, London, to Alice Mary, only surviving child of the late Thomas Charles Woodward, M.R.C.S., of Penton Mewsey, Hants.

SKENE—ROBINS.—On November 27, at St. John's, Buckhurst-hill, William Skene, M.D., F.F.P.S.E., to Eleanor, third daughter of C. T. Robins, Esq., of King's-place House, Buckhurst-hill, Essex.

SLADDEN—POTTER.—On November 26, at St. John's, Lewisham-road, Francis Nixon, third son of the late John Sladden, M.R.C.S. Eng., L.S.A., of Ash-next-Sandwich, to Edith, third daughter of the late Robert Potter, of Shepherdswell, Dover.

SYME—ATHERTON.—On November 27, at the Church of St. Michael and All Angels, Paddington, James Syme, son of the late Professor Syme, Surgeon-in-Ordinary to the Queen in Scotland, to Jessie Annie, fourth daughter of the late Sir William Atherton, M.P., her Majesty's Attorney-General, and granddaughter of T. J. Hall, Esq., late Chief Stipendiary Magistrate.

WHITTY—NELSON.—On November 27, at Holme-next-the-Sea, Norfolk, Charles Richard Whitty, B.A., M.B., C.M., of St. Edmund's, Hunstanton, son of the Rev. David La Touche Whitty, to Annie, eldest daughter of Matthew Nelson, Esq., of Holme.

WILSON—SHEPPERSON.—On November 26, at St. Thomas's Church, Ponder's Bridge, Whittlesea, J. Mitchell Wilson, M.B., Chatteris, to Mary Ann, only daughter of W. Shepperson, Esq., of Underwoods, Whittlesea.

DEATHS.

BURGESS, FANNY, wife of F. J. Burgess, L.R.C.P., F.R.C.S. Eng., L.S.A., at 254, Bethnal-green-road, on November 27.

CROSS, WILLIAM, M.R.C.S. Eng., Medical Officer at the Sand Heads, at Calcutta, on October 25, aged 57.

HENSMAN, WILLIAM VALENTINE PATRICK, son of Surgeon William Hensman, 14th Hussars, at the Royal Barracks, Dublin, on November 17, aged 3 years and 9 months.

MCTERNAN, JAMES, Deputy Inspector-General of Hospitals R.N., at Blackheath, on November 26, in his 83rd year.

MEREDITH, HELEN, widow of the late E. T. Meredith, M.R.C.S., L.S.A., at 3, Darlington-street, Bath, on November 29, aged 69.

MURIEL, SUSAN, the beloved wife of J. Muriel, F.R.C.S., L.S.A., J.P., D.L., at Ely, Cambridgeshire, on November 27.

RICHARDS, DINAH, widow of the late Joseph Richards, M.R.C.S. Eng., L.S.A., formerly of St. Clement's Danes, at 17, Oxford-terrace, Islington, on December 1, aged 70.

WAUGH, ARTHUR, eldest son of John Neil Waugh, M.D., M.R.C.S. Eng., L.S.A., at Brisbane, on September 7, in the 5th year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BEDFORD GENERAL INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Weekly Committee, on or before December 10.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Medical Committee, Temple-row, Birmingham, on or before December 20.

BRISTOL ROYAL INFIRMARY.—Assistant House-Surgeon. Candidates must be F. or M.R.C.S., or M.S., and also possess medical qualifications.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Two Assistant-Surgeons. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary, on or before December 9.

CHELSEA.—Resident Medical Officer for the New Infirmary and Workhouse. Candidates must be duly qualified and registered. Applications, with testimonials, to W. Miller, Clerk to the Guardians, Arthur-street, Chelsea, on or before December 10.

CONWAY UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Wm. Hughes, Clerk to the Guardians, on or before December 10.

GAINSBOROUGH.—Medical Officer of Health. Candidates must be legally qualified medical practitioners and registered. Applications, with testimonials, to the Clerk of the Union, on or before December 8.

GERMAN HOSPITAL, DALSTON.—Honorary Medical Officer to the Eastern Dispensary. Candidates must be natives of Germany and be duly qualified. Applications, with testimonials, to Dr. Walbaum, Hon. Secretary, on or before December 29.

GENERAL HOSPITAL, NOTTINGHAM.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before March 10, 1874.

KENT COUNTY LUNATIC ASYLUM, BARMING HEATH, MAIDSTONE.—Two Assistant Medical Officers. Applications, with testimonials, to Messrs. Beale and Hoar, Maidstone, before December 10.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Assistant-Surgeons. Applications, with testimonials, to P. Goldschmidt, Esq., 100, Albert-square, Manchester.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before December 29.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

TEWKESBURY UNION, FORTHAMPTON DISTRICT.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to George Budham, Clerk to the Guardians, on or before December 16.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Applications, with testimonials, to the Honorary Secretary, Exe Villa, Tiverton, Devon.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATIONS.

Driffield Union.—Mr. A. Moore has resigned the Weaverthorpe District; area 14,430; population 1676; salary £30 per annum.

Halstead Union.—Mr. E. Andrews has resigned the Fifth District; area 7700; population 3251.

Hartley Wintney Union.—Mr. T. A. Freeman has resigned the Hartley-Wintney District; area 10,075; population 3480; salary £60 per annum; and the Workhouse, salary £40 per annum.

Smallburgh Union.—Mr. E. Meade has resigned the Barton District; area 10,841; population 2574; salary £40 per annum.

Tewkesbury Union.—The Forthampton District is vacant; area 8297; population 1912; salary £55 per annum.

APPOINTMENTS.

Chesterton Union.—Joshua S. Grubb, L.R.C.S. Ire., L.R.C.P. Edin., to the Waterbeach District.

Denbighshire.—Mr. John Jones Bancroft, as Analyst for the County.

Plomesgate Union.—Henry J. Robbins, M.B., C.M. Aber., L.S.A., to the Aldborough District.

Stroud Union.—Richard C. Gardner, L.R.C.P. Edin., L.F.P. and S. Glasg., to the Sixth District.

ROYAL COLLEGE OF SURGEONS.—At the examinations for the Fellowship which were brought to a close on Saturday last, ten candidates offered themselves, all of whom were members of the College; of this number only five were successful. The list cannot, however, be published until submitted for confirmation to the Council on Thursday next. The following were the questions on Pathology, Therapeutics, and Surgery at the written examination; all the questions were required to be answered:—1. Give the different forms of stricture of the œsophagus, and their usual seat; and describe the symptoms, diagnosis, and treatment of each form. 2. What are the causes of, and pathological changes occurring in spontaneous gangrene, say of the foot? Describe the process of natural separation of the gangrenous part, and the subsequent repair. 3. State what you understand by the term "cancer." In the examination of a tumour recently removed, describe fully the characters by which you would be led to the conclusion that it is cancer. 4. A man receives a punctured wound in the middle of the anterior part of the thigh, followed by profuse arterial hæmorrhage. The external bleeding is arrested by pressure, but the thigh becomes rapidly distended and tense. What condition does this indicate? What course is the case likely to take? and what treatment would you adopt for the sequences of this injury at their different stages?

ARTS EXAMINATION.—The half-yearly examinations in Arts, etc., for the diplomas of Fellowship and Membership of the Royal College of Surgeons, will commence at Burlington House on Tuesday next, and be carried on through the week: it is stated that there are 71 candidates for the Fellowship, and 188 for the Membership.

MR. SYDENHAM J. KNOTT has been appointed Medical Tutor and Curator to St. Mary's Hospital Medical School, and Superintendent of Galvanism to the Hospital. The office of Resident Registrar and Chloroformist to the Hospital (which Mr. Knott has held for the last four years) thus becomes vacant.

THE Burton-on-Trent, Lichfield, and Peakridge Rural, and the Lichfield and Rugeley Urban, Sanitary Authorities propose to appoint a medical officer of health jointly.

School of Physic, Trinity College.—The Haughton Clinical Prize Medals for the session of 1872-73 were awarded to Mr. James W. Eakin in medicine, and to Mr. Charles Young in surgery. Dr. John Barton, House-Surgeon to Sir P. Dun's Hospital, has been appointed to the Demonstratorship of Anatomy in the School, vacant by the appointment of Dr. T. E. Little as University Anatomist.

Typhoid fever is very prevalent at Stretford, Manchester.

We regret to notice a report that Dr. Gore, an Army Medical Officer, has been wounded in the recent operations against the Ashantees.

Typhoid fever has been for some weeks past prevalent in some of the colleges at Cambridge, and the epidemic is increasing. The students are leaving several of the colleges in large numbers.

There were 1585 deaths in London last week, being 105 below the average. Of these 121 were from measles.

Mr. Sharman, the Medical Officer of Norwood Schools and of Norwood Out-relief District, has had his salary increased from £100 to £125 per annum.

Notwithstanding the precautions taken by the Holborn Guardians for preventing the spread of ophthalmia in the Mitcham Schools, the disease still continues very prevalent.

The Hospital Sunday collections in Melbourne this year amounted to about £4000.

An examination for eighteen appointments as Surgeon in the Indian Medical Service will be held in London in February, 1874. Copies of the regulations for the examination may be obtained on written application to the Military Secretary, India Office.

Académie des Sciences.—At the meeting of the Academy on November 24, Professor Williamson was elected Corresponding Member in the Section of Chemistry, the whole of the forty-four members who were present voting for him.

Dr. Frankland, in his report on the quality of the water delivered during November by the metropolitan companies drawing their supplies from the Thames, states that it was greatly inferior to that delivered in October. The water distributed by the Chelsea and Lambeth Companies, and by the Grand Junction Company in a lesser degree, was polluted, owing to inefficient filtration. The New River and East London Companies' water was greatly superior to the Thames water, and it was efficiently filtered.

A Quarterly Court of the Governors of the Hospital for Consumption and Diseases of the Chest at Brompton was held last week. The report of the Committee of Management stated that the works for the extension of the Hospital were progressing satisfactorily; that two more of the houses opposite to the Hospital were being fitted up as wards for male patients, and would be brought into use as soon as ready. The number of patients admitted since August 7 was 262; discharged (many greatly benefited), 229; died, 30; new out-patient cases, 3380.

Condensed Swiss Milk is in our opinion one of the most valuable foods for infants. We have tried it in numerous instances, and have never found it produce the bad effects so often referable to the use of ordinary cows' milk, even when diluted and sweetened. Messrs. Kaltenbach and Schmitz have submitted for our opinion a specimen of their "Alpina" Swiss condensed milk. It is a very good specimen of milk thus prepared. It has preserved the flavour of fresh milk in a higher degree than most condensed milks we have seen, and it is scarcely so thick and paste-like in consistence. We think it would be well adapted for use in the nursery or sick-room.

Royal Institution of Great Britain.—At the general monthly meeting, held on Monday, December 1, George Busk, Esq., F.R.S., Treasurer and Vice-President, in the chair, the following letter to the family of the late President was unanimously adopted by the members present:—"The members of the Royal Institution beg to be permitted to express to the family of their late President, Sir Henry Holland, their deepest sympathy in the great loss they have recently sustained. It is a loss in which the Institution largely shares; and it has to deplore a President esteemed by all for his distinguished scientific and literary attainments, for the abilities and varied experience he brought to the performance of his duties; and beloved for the uniform kindness and consideration with which he discharged them. In the published record of his life, Sir Henry Holland has ackuowleged that his connexion with the Royal Institution has been very valuable to him. It is now for the members of the Institution to testify their profound sense of the exceeding advantages conferred by that association upon the Royal Institution. In it, as he himself has related, he stood by the cradle of some of the most wonderful discoveries of the age, and watched their progress to maturity and fame. He was one of the earliest to witness the production of the alkaline metals by Davy, and among the first to see the small luminous spark elicited from the magnet by Faraday. In later times he was foremost in establishing the Royal Institution Research Fund, and was unceasingly generous in his own large persoual contributions to it. As President he was always at his post, ever prompt with assistance and counsel; a sound adviser and a courteous friend. The recollection of his presence in the Institution will not soon be forgotten, and will long remain to be cherished by its members with affection and regard. The close of such a career must be noted with no ordinary feelings of interest and regret, and the members of the Royal Institution desire to assure the family of their lamented President how fully they enter into the universal sorrow for his death." The Duke of Northumberland, D.C.L., was unanimously elected President of the Royal Institution, in the room of the late Sir Henry Holland. The following lecture arrangements for the ensuing season were announced:—*Christmas Lectures* (adapted to a juvenile auditory):—Professor Tyndall, D.C.L., LL.D., F.R.S.—Six lectures "On the Motion and Sensation of Sound," on December 27 (Saturday), December 30, 1873; January 1, 3, 6, 8, 1874. *Before Easter*, 1874.—Professor Rutherford, M.D., F.R.S.E.—Eleven lectures "On the Nervous System," on Tuesdays, January 13 to March 24. Professor P. M. Duncan, F.R.S.—Seven lectures "On Palæontology, with reference to Extinct Animals and the Physical Geography of their Time," on Thursdays, January 15 to February 26. Professor W. C. Williamson, F.R.S.—Four lectures "On Cryptogamic Vegetation," on Thursdays, March 5 to 26. Professor G. Croom Robertson, of University College, London.—Four "Lectures on Kant," on Saturdays, January 17, 24, 31, and February 7. R. Bosworth Smith, Esq., M.A.—Four lectures "On Mohammed and Mohammedism," on Saturdays, February 14, 21, 28, and March 7. Charles Thomas Newton, Esq., M.A., Keeper of Greek and Roman Antiquities, British Museum. Three "Lectures on Ephesus," on Saturdays, March 14, 21, and 28.—The Friday Evening Meetings will commence on January 16, at 8 o'clock p.m. The discourse will begin at 9 o'clock. Friday Evening Discourses during the season will probably be given by Professors Tyndall and Sylvester, Sir Julius Benedict, Mr. A. H. Garrod, Dr. Doran, Mr. Vernon Heath, Mr. Francis Galton, Dr. Burdon-Sanderson, M. Cornu, Dr. Carpenter, and Professor Ramsay.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. Drysdale, Port Chalmers.—Enclosure received.

Dr. A. Weber, Tokomairiro.—Enclosure received.

Dr. Sorley, Dunedin.—Enclosure received.

Mr. W. De la Porte, Steiglitz.—Enclosure received.

Country Practitioner.—We cannot advise as to whom you should consult gentlemen pretising in the special department you mention are attached to all the London hospitals.

J. F. B.—The new wing to the Queen's Hospital, Birmingham, was opened on the 7th ult.

Osmond T.—There are, we understand, about fifty medical officers under orders for the West Coast of Africa.

Dr. McM.—There will be a preliminary examination in Arts, etc., next Tuesday. If your son passes the ordeal, he could commence his hospital studies at once, and thus only lose half a session. Address yourself at once to Mr. Trimmer or to Mr. Stone, at the College.

A Senior Student.—Write to Professor Marshall; and if not contrary to any regulations of the Royal Academy, we feel sure he will admit you to his lectures at Burlington House. They are delivered on Mondays and Thursdays.

Associate, King's College, Stockwell.—We believe about £700 or £800 has been subscribed for the portrait of Sir William Fergusson. It is not stated that an engraving of it will be presented to subscribers.

Puerperal Mania and Chorea.

To the Editor of the Medical Times and Gazette.

Sir,—I should feel obliged if some of your readers would refer me to any case of puerperal mania occurring to a subject of chorea, or to any work where such a complication is described. I am, &c., F. W. J.

THE STUDENTS AT ST. THOMAS'S HOSPITAL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you allow me space to contradict certain statements made in the *Daily News* of the 2nd, which are absolutely unfounded accusations against the students of this Hospital, and which have been repeated with equally gratuitous comments in other papers. What really occurred was as follows:—At 4 p.m., nearly a hundred students had to go from one lecture theatre to another, passing on their way a room in which an inquest was being held; the lecturer had not arrived, and some noise was made in the theatre while the men were waiting his arrival. After waiting about twenty minutes (the lecturer having been unable to come), the men left the theatre and proceeded down the corridor to the cloak-room prior to leaving the hospital. Not more noise was made than ordinarily occurs under such circumstances. I can positively affirm, having been there, that the statement that the men paraded the corridor in dozens, uttering ear-piercing shouts, cat-calls, groans, etc., is altogether untrue; nor was the noise in the lecture-room, made with any intention of annoying the coroner, as few, if any, of the students were aware that an inquest was being held at the time. I think the coroner has acted with scant courtesy to the authorities of St. Thomas's Hospital, through whose kindness he is permitted to use the room in which he holds his court, and to which he has no manner of right. If he had any complaint, real or imaginary, to make against the students, he should have laid it before the Dean, Dr. Peacock, instead of encouraging the publication of a libel on the conduct of the students here, with but small chance of refutation. I may add that an explanatory letter sent to the *Daily News* was refused insertion. I am, &c.,

St. Thomas's Hospital, December 4. F. HAMILTON PECK.

COMMUNICATIONS have been received from—

A COUNTRY PRACTITIONER; F. W. J.; THE SECRETARY OF THE EPIDEMIOLOGICAL SOCIETY; Mr. R. B. NORMAN, Great Yarmouth; Mr. G. CUTCLIFFE, London; Mr. A. C. FOSTER, Leeds; Dr. LIONEL BEALE, London; Mr. POOLE, London; Mr. G. GASKOIN, London; Mr. J. CHATTO, London; Dr. EDIS, London; Rev. CHARLES DRUITT, Weymouth; Dr. B. FOSTER, Birmingham; Mr. W. D. NAPIER, London; Miss DALTON, Bournemouth; Mr. J. GORHAM, Tunbridge; Mr. B. VINCENT, London; Mr. HENRY LEE, London; Dr. PEACOCK, London; Dr. J. W. MOORE, Dublin; Mr. C. J. CULLINGWORTH, Manchester; Dr. J. S. FORRESTER; Dr. CHEADLE, London; Mr. F. SORDON BROWN, London.

BOOKS RECEIVED—

Barnes's Diseases of Women—Maclachlan and Stewart's Pathological Charts: No. 1, The Brain—The Conservation of Energy, by Professor Balfour Stewart—What to Wear, by Elizabeth Stuart Phelps—Du Massage des Frictions et Manipulations, par N. Laisné—Jeffries on White Sarcomatous Intra-ocular Tumour Enucleation.

PERIODICALS AND NEWSPAPERS RECEIVED—

Allgemeine Wiener Medizinische Zeitung—Nature—The West Country Lantern—The Obstetrical Journal of Great Britain and Ireland, No. 9—Gazette Médicale—La France Médicale—Melbourne Age—Bulletin Général de Thérapeutique—Gazette des Hôpitaux—Le Progrès Médical—Edinburgh Medical Journal—Monthly Microscopical Journal—Science Gossip—Il Tagliamento-Nosogeni-Panspermi, ved Professor Dr. F. C. Faye—Canada Medical and Surgical Journal—Transactions of the Odontological Society of Great Britain, vol. vi., No. 1—Melbourne Medical and Surgical Review—Canada Medical Record.

APPOINTMENTS FOR THE WEEK.

December 6. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

8. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Dr. J. M. Fothergill, "On the Depressants of the Circulation and their Rise." Dr. Semple, "What is Diphtheria? Illustrated by a Recent Outbreak in Italy."

9. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ANTHROPOLOGICAL INSTITUTE, 8 p.m. Meeting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (Ballot, 8 p.m.), 8½ p.m. Mr. Joliffe Tufnell, "Case of Aortic Aneurism (Abdominal) cured by Position."

10. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

HUNTERIAN SOCIETY, London Institution (Meeting of Council, 7½ p.m.), 8 p.m. Mr. Rivington, "On Psoas Abscess."

12. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

CLINICAL SOCIETY, 8½ p.m. Mr. Wheelhouse, "Case of Aneurism of the External Iliac cured by Pressure with Liston's Abdominal Tourniquet." Dr. Cayley, "On a Case of Hæmoptysis." Dr. Douglas Powell, "On some Cases illustrating the Rheumatic Origin of Aneurism of the Aorta." Mr. Brudenell Carter will show a Patient cured of Sarcoma of the Orbit by Extirpation and Cautery; and also a Patient with Sarcomata of both Irides.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 29.

BIRTHS.

Births of Boys, 1127; Girls, 1095; Total, 2222.
Average of 10 corresponding years 1863-72, 2110·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	769	816	1585
Average of the ten years 1863-72	770·5	765·3	1536·8
Average corrected to increased population	...	...	1690
Deaths of people aged 80 and upwards	...	...	56

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	15	1	3	...	...	1	...	5
North	751729	...	45	3	2	8	1	6	2	...
Central ...	334369	...	9	...	...	3	2	4	...	2
East	639111	1	35	9	...	14	...	4	...	3
South	967692	1	17	3	3	9	4	11	...	5
Total	3254260	3	121	16	8	34	7	26	2	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·645 in.
Mean temperature	48·0°
Highest point of thermometer	57·0°
Lowest point of thermometer	35·6°
Mean dew-point temperature	43·4°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·44 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 29, 1873, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Nov. 29.	Deaths Registered during the week ending Nov. 29.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2222	1585	57·0	35·6	48·0	8·89	0·44	1·12
Portsmouth ...	118280	12·4	76	44	61·2	41·0	50·5	10·28	0·38	0·97
Norwich	81677	10·9	52	38	55·0	35·5	44·8	7·11	0·07	0·18
Bristol	189648	40·4	142	103	54·6	33·4	47·8	8·78	0·64	1·63
Wolverhampton ...	70084	20·7	47	49	53·9	33·7	46·1	7·83	0·36	0·91
Birmingham ...	355540	45·4	259	178	55·5	34·0	46·9	8·28	0·23	0·58
Leicester	102694	32·0	64	50	57·5	32·7	47·0	8·33	0·28	0·71
Nottingham ...	89557	44·9	72	38	57·6	33·7	45·5	7·50	0·27	0·69
Liverpool	505274	98·9	339	268	55·2	40·0	47·2	8·44	0·69	1·75
Manchester ...	354057	78·9	262	174	55·5	33·0	46·4	8·00	1·04	2·64
Salford	130468	25·2	102	63	55·2	32·5	46·0	7·78	1·20	3·05
Oldham	85141	20·4	64	37	52·0	...	...	...	1·38	3·51
Bradford	156609	23·8	137	75	56·2	38·8	46·6	8·11	0·28	0·71
Leeds	272619	12·6	221	167	56·0	37·0	47·6	8·66	0·21	0·53
Sheffield	254352	11·1	206	122	56·0	37·0	48·0	8·89	0·39	0·99
Hull	128125	35·9	99	43	55·0	34·0	45·2	7·33	0·33	0·84
Sunderland ...	102450	31·0	91	37	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	109	78	...	...	...	...	...	...
Edinburgh	208553	47·1	117	109	...	...	...	...	...	...
Glasgow	498462	98·5	355	254	53·2	40·1	45·8	7·66	1·55	3·94
Dublin	314666	31·3	205	151	57·5	36·1	48·0	8·89	0·47	1·19
Total of 21 Towns in United Kingd'm	7507575	34·5	5245	3663	61·2	32·5	46·9	8·28	0·57	1·45

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·64 in. The highest was 30·01 in. on Tuesday at noon, and the lowest 29·29 in. on Thursday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON RUPTURE OF THE AORTIC VALVES FROM ACCIDENT.

DELIVERED AT THE BIRMINGHAM GENERAL HOSPITAL, NOVEMBER 17, 1873.

By BALTHAZAR FOSTER, M.D., F.R.C.P.,
Physician to the Hospital;
Professor of Medicine in Queen's College, Birmingham;
and Consulting-Physician to the West Bromwich District Hospital.

GENTLEMEN,—The case of heart disease to which I wish to call your attention to-day is of much interest, as illustrating one of the rarer causes of valvular incompetency. The man H. was admitted some ten days ago suffering from great dyspnœa, palpitation, and œdema of the legs, with the physical signs of aortic insufficiency. His expression was anxious, face pale, carotid pulsations very distinctly visible, cough frequent and troublesome, with little or no expectoration, respirations 48, radial pulse jerky and thrilling, beating 112 times per minute. On further examination the lung percussion-note was found to be healthy, and the breath-sounds natural anteriorly, but posteriorly there was dulness at both bases, extending as high as the inferior angle of scapula on the left side and into the axilla as far as the heart dulness. Over the dull area the breath-sounds were indistinct, and there was diminished vocal fremitus on the left side. The heart's area of dulness was greatly increased, and extended from the second to the seventh intercostal spaces, and from one inch beyond the right edge of the sternum to the dull pulmonic region outside the nipple-line. There was no distinct apex-beat, but a diffused systolic heaving seen in the fifth, sixth, and seventh intercostal spaces, and in the epigastrium. Auscultation gave the following results:—At the base of the heart there were heard two murmurs—viz., a short blowing, almost flapping, murmur with the first sound, followed by a loud, harsh murmur which replaced the normal second sound. The systolic murmur was heard most distinctly at junction of second right costal cartilage with the sternum and over the midsternum opposite third and fourth ribs. It was not propagated with any distinctness, either along the great vessels or towards the apex. The diastolic murmur was heard loudest at midsternum, opposite the third costal cartilage, was distinct at the ensiform cartilage and at the manubrium sterni, and was audible under both clavicles and in the carotids, replacing the second sound; it was not propagated towards left apex, but was audible down the spine in the interscapular region. At the apex of the heart there was audible a murmur with the first sound, louder and longer than that heard at base, and propagated towards the axilla. The diastolic murmur, so loud at the base, was scarcely audible at the left apex, but became more distinct as the stethoscope approached the ensiform cartilage. The abdomen was rather full, especially in the upper part from the enlarged liver, which extended three finger-breadths below the costal arch, and was tender on pressure. There was also evidently some fluid in the abdominal cavity. The urine was scanty, high-coloured, with a copious deposit of urates and about one quarter of a column of albumen. There was some œdema of the lower limbs.

From these data we concluded that our patient had insufficiency of the aortic valves, with slight aortic obstruction, and secondary insufficiency of the mitral valve, leading to engorgement of the lungs, liver, and general venous system, and to serous effusion into the pleural cavities and peritoneum. The case was regarded at the time of admission as illustrating defective compensation and the supervention of asystoly.

Our next step was to find out, as far as possible, the circumstances which had led to these troubles. His previous history gave us the clue. He had been originally brought up as a jeweller, but some fourteen years ago he enlisted in the Royal Marines, served in India, China, and through the Abyssinian expedition, and then, having completed his first period, asked for his discharge. Throughout the period of his service, as previously, he had enjoyed splendid health; never had syphilis, never had rheumatic fever, and although he drank freely, never suffered from it. After his discharge he returned to Birmingham, and worked for a time at Soho. In February, 1872, he emigrated to America, but, finding no occupation, he enlisted in the American service as a marine. At this time he was in good health, and passed his medical examination as a sound, strong man. His ship was ordered to Valparaiso, and while on the voyage he volunteered to act as cook, and did the baking for the ship's crew (500 men). During the voyage there was some very heavy weather; and one day, on coming up on deck, he was thrown violently forward by a lurch of the ship. He made a great effort to save himself, and partially did so with his right hand by catching hold of the side of the hatchway, but was struck in falling on the left side of the chest. He felt faint and hurt internally, was taken below, and for two days was unable to continue his work. When he resumed it, however, he found the cooking too much for him, and he was obliged to give it up. Shortly afterwards, while on watch one night, and all being quiet, he thought he would lie down on deck. He was much surprised, however, to find that the perfectly horizontal position made his breath, which had been short since the accident, much worse—so bad, indeed, that he was obliged to get up and walk the remainder of his watch. He mentioned this to his medical officer, who examined him, and on his arrival at Valparaiso invalided him, and sent him back to Norfolk Island, whence he was discharged, and sent home to England. On the homeward voyage he was very ill; his legs and body began to swell, and on landing at Liverpool he was sent to hospital. He recovered sufficiently to return to Birmingham in August last, and from then to time of admission (November 7) he has been troubled by cough, shortness of breath, and more or less œdema of his limbs.

From this history, which told of no rheumatism nor other cause of heart mischief, but of perfect health (confirmed by the medical examination for admission to the American service) up to the date of an accident, we could draw but one conclusion—that the aortic insufficiency was primarily due to a tear of the valve segments produced by the fall, or rather by the effort he made to save himself.

For some days after admission he improved a little, and under the use of morphia, given hypodermically, he had more refreshing sleep than he had had for weeks, and his dyspnœa became less urgent. Several attacks of syncope, however, occurred; his stomach refused nourishment; and although for two days these syncopal attacks were averted by the free use of liq. ammoniæ, ether, and brandy, he died quite suddenly early one morning from syncope.

The post-mortem examination was made by the Resident Pathologist, Dr. A. H. Carter. On opening the thorax, the lungs were seen to be widely separated by a very large heart. The pericardium was empty, but each pleural cavity contained serous fluid—the left about a pint, the right less. There was also a moderate quantity of fluid in the peritoneum. Lungs: The right—upper lobe emphysematous; lower lobe nearly solid from large hæmorrhagic extravasation, not very recent, and undergoing inflammatory change. Several smaller and more recent spots of hæmorrhage in same lobe. The left lung had the upper lobe emphysematous, and a recent large wedge-shaped extravasation into lower lobe and anterior angle of lower lobe. The liver was firm, granular, undergoing contraction; weight 47 oz. Kidneys enlarged and congested. Spleen and other viscera healthy. The heart showed a well-marked white patch on anterior surface near apex; all the cavities were full of uniform black blood-clot. Weight of organ when emptied, 18 oz. Both auriculo-ventricular orifices were dilated—the right admitting four fingers and the thumb, the left four fingers. The tricuspid, mitral, and pulmonary valves were healthy, but the papillary muscles of the mitral valve were thinnish and undergoing degenerative changes near their apices. The aortic valves, tested by water, were freely incompetent. When further examined, this incompetency, as you can now see, was found to be due to a rupture of the posterior and right segments at their angles of attachment. The posterior segment was torn down five-sixteenths of an inch at its angle of attachment to the left segment; the other (right) angle of attachment of this segment, together with the neighbouring angle of the right segment, were torn down to almost the same depth (five-sixteenths of an inch). The angle of attachment of the right aortic segment to the left aortic segment was also torn down about one-sixteenth of an inch. The posterior segment, which was the most incompetent, had its right angle of attachment torn towards the corpus arantii, but contracted, thickened, loose, and retroverted towards the ventricle, so as to flap idly in the blood-current. The corresponding half of the right segment was attached to wall of ventricle on a level with the attached part of the posterior segment, and was thickened and sloped obliquely from

the middle of the valve to its attachment. The other half of this segment, although slightly torn down as described above, was healthy and competent. Both the ventricles were greatly dilated, and to a less degree hypertrophied, and their walls were undergoing degeneration. The aortic orifice measured three inches and one-eighth in circumference. The extreme length of the left ventricle was four inches and a half, while its greatest diameter was three inches and a quarter. The walls were three-eighths of an inch thick near apex, eleven-sixteenths of an inch at mid-point, and three-quarters of an inch at base. The aorta showed patches of recent atheroma near valves, but in other parts was healthy.

The phenomena observed during life, and the facts of the man's history, were thus found to be consistent with the conditions discovered after death. The valvular injury was clearly traceable to the accident, and occurred to healthy valves. The few weeks which had elapsed since his medical examination for admission to the American service, as well as his previous good health, strongly corroborate this view. I refer to it because some of you have seen with me tears in valves previously softened by degenerative change. Only last week, indeed, we had a specimen of such a rupture. The tear of a valve previously healthy is much rarer, and has special interest for us in the manner of its occurrence, in the symptoms which it occasions, and the effect it has on the duration of the patient's life. These points will demand our attention later on, but first I wish to make a remark or two on the murmurs we heard in the case of H. The systolic murmur heard at the left apex was due—as was held during life—to regurgitation through the enlarged auriculo-ventricular orifice, and was a necessary consequence of the dilatation of the ventricle, and the weakened and degenerating papillary muscles. The aortic murmurs are explained by the condition of the aortic valves. The systolic murmur was caused by the loose valve segment, which gave the special blowing and flapping character to the murmur. Twice previously in other cases of ruptured valves have I noticed similar characters under similar conditions; and this peculiarity may possibly guide you to a correct opinion in these cases. The diastolic murmur finds its explanation in the utter incompetency of the valves to act as stop-valves. There is only one feature of it on which I would dwell: it is this—the diastolic murmur was not propagated towards the heart's apex, but was propagated towards the ensiform cartilage, and was more audible over the right ventricle than over the left, into which the reflux occurred. This, indeed, is the rule as regards the conduction of diastolic aortic murmurs. Only a few days ago, however, we had a case of aortic insufficiency in which the diastolic murmur was very distinct at the apex—equally, if not more so, than over the ensiform cartilage. How are we to account for this variation? In this last case the post-mortem, as I predicted, showed that the regurgitation took place through *incompetency of the left aortic segment*. The regurgitant blood-column fell on to the upper segment of the mitral valve, as we could prove by experiment after death, and as the thickening of the upper segment of the mitral valve showed it had during life. This, then, as I have several times shown to you in other cases, is the explanation of the conduction of a diastolic aortic murmur to the left apex. It depends on the regurgitation taking place through incompetency of the left aortic segment, either at its posterior angle or through perforation of its curtain. My attention was first called to this by an instance of rupture of this segment through effort (case of M. W.), which you will find described in the *Pathological Transactions*, vol. xviii., p. 49. In that case the diastolic murmur was distinct at the apex, and some observers thought it was generated at the mitral orifice. It was really produced by rupture of the left aortic segment and perforation of its curtain, so that the regurgitant current fell on to the mitral valve, and the murmur was thus carried with the stream so that it was heard in the same position as mitral murmurs usually are. This point, then, I wish you to remember—viz., that an aortic diastolic murmur, propagated to the heart apex, usually means incompetency of the left aortic segment. I believe we may also say that a similar murmur propagated towards the ensiform cartilage indicates incompetency of the right and posterior segments, by which the regurgitant current is thrown more upon the septum of the ventricles. I dwell upon the point because, as we shall see soon, it is not merely a matter of curious diagnosis, but has a possible bearing on the prognosis in this form of valvular defect.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

ON DIPHTHERIA: WITH ESPECIAL REFERENCE TO A RECENT EPIDEMIC IN ITALY.

By ROBERT HUNTER SEMPLE, M.D., M.R.C.P.L.,
Physician to the Bloomsbury Dispensary.

(*Continued from page* 606.)

Dr. Leopoldo Nesti, who writes from personal experience of the epidemic of diphtheria in and around the city of Florence, especially during the years 1870-71, confirms the general opinion that the disease appears to show a predilection for infancy, although no period of life is really exempt from its attacks. Children from two to six years of age were the chief victims, but above that age a progressive diminution of attacks was noticed up to the age of fifteen, and beyond that period of life the cases became more rare and less fatal. Children at the breast were seldom attacked, but still Dr. Nesti observed some well-marked cases which were followed by death; but he saw none under the age of six months, and those which he did see were almost always in houses where diphtheria had already appeared. He mentions one instance in particular where a child of three years old having died of the disease, his infant brother at the breast, six months old, was attacked two days afterwards, and died also about the third or fourth day. The mother who was suckling the infant was also attacked at the same time, but in her the disease assumed a mild form, and she recovered in five or six days. On the other hand, he saw a case where an infant of six months old was the first of the family attacked, but recovered; and a brother and sister, aged seven and six respectively, took the disease, of which the latter died.

Diphtheria co-existed with the common causes of mortality, as small-pox, measles, and hooping-cough, but the other diseases did not remarkably participate in the diphtheric character except that in the case of surface-wounds there was a great disposition to be covered with diphtheric exudations.

There was no remarkable difference in the sex of those who were attacked, for although at different periods there was sometimes an excess of one sex over the other, yet on the whole there was a perfect equilibrium when the totals were summed up.

The physical constitution and the temperament exerted no influence on the development of the disease, the weak subjects being as liable to the attacks as the robust; but the results were very different, for in the lymphatic, the weak, and the cachectic, and in the scrofulous and in those who were exhausted by previous diseases, the malady ran a more rapid course and was more fatal.

As in the case of the epidemics observed by Bretonneau and Trousseau, and in those of Great Britain, that of Florence sometimes seemed to run here and there into distant districts by leaps (*saltuariamente*) but more generally (as in the case of the former epidemics just mentioned) it invaded the adjoining places. When once it appeared in a street or a house, its victims were almost always multiplied in such a manner that it seemed rather to spread in districts or in groups than in an isolated and indiscriminate manner (*alla spicciolata*). If it appeared in a family it was seldom limited to a single person, but it generally attacked several, either successively or contemporaneously, and sometimes all of those who were of juvenile years. Occasionally only those escaped who happened to be away from home at the time of the visitation. Sometimes when the disease had altogether ceased, it returned, after a long interval and in a different season, to visit the same localities and the same families.

The contagious character of diphtheria has, it is well known, been asserted by some authorities and doubted by others; but Bretonneau and Trousseau have given some striking instances in support of the affirmative side of the question. In the Italian epidemic, Dr. Nesti states that the disease was transmitted by preference to the persons who had most frequent relations with the patients—such as the mother, the grandmother, the friends, the nurses, the servants, and sometimes even the medical attendant himself. He thinks that the disease is propagated in different ways—sometimes by imperceptible emanations, either solid, fluid, or gaseous, proceeding from the patient, and constituting around him a kind of

atmosphere of infection; and sometimes by immediate contact of the products of the diseased mucous membrane, whether expelled in some way or artificially extracted. He thinks that the easiest and most frequent mode of infection is by the vaporous and fluid form of emanation, and that in this case the period of incubation is shorter than when the disease is transmitted by the contact of solid matters. He has observed in many persons who were assisting the patients, and who took every precaution in respect to the expelled matters, that they were attacked by the disease in all probability from having breathed the infected air of the room in which the patients were lying.

Dr. Nesti himself is convinced that he took the disease while assisting a little patient in the last stage of the malady; for while he was engaged in extracting from the fauces the numerous fragments of half-detached and hanging pseudo-membrane which embarrassed the respiration, a violent fit of coughing threw in his face several small pieces of the corrupted and sanious membrane—which, however, did not reach his lips or his mouth. Nevertheless, he felt during a movement of inspiration the pestilential odour of the membranes reach to his throat, and he suddenly thought that he had contracted the disease. The suspicion turned out to be well founded, for scarcely had twenty-four hours elapsed of perfectly good health when he was suddenly seized at bedtime with the preliminary morbid phenomena in the tonsils, which symptoms were, however, removed by treatment on the fifth day.

The fact of a person being once affected with diphtheria did not protect him from subsequent attacks, and Dr. Nesti saw some persons who had suffered in 1871 again seized with the disease the next year. He says, however, that he never saw any relapses among those who had had very severe attacks; but he adds that the reason probably was that the instances were rare of recovery under such circumstances.

A peculiarity which diphtheria shares with some other infectious maladies is the tenacity with which its active principle (whatever that may be) remains attached to certain localities, maintaining its pernicious power in spite of the most diligent attempts at disinfection. Dr. Nesti gives an instance where, in consequence of the death of several persons in a family, a young man was removed by way of precaution; but, being brought back after it was thought that all traces of the disease had disappeared, he was soon attacked with diphtheria and died.

Dr. Nesti gives other instances of a similar kind, and they are entirely in accordance with facts previously observed and recorded by Bretonneau and Trousseau in the French epidemics.

Again, it has been observed that sometimes a person who returned home after visiting infected patients has been attacked with the disease, and has communicated it to others of his family, or to the domestics, and has thus become, as it were, the first source of infection in a locality previously exempt from the scourge. A remarkable instance is given of such an occurrence where a young woman had gone to pay a visit to a relative who was suffering from diphtheria, and, after remaining some time in her company, returned to her family. She was soon seized with the disease in a most aggravated form, and on the fourth day from the attack she died, apparently from suffocation. At the time when her malady was increasing, other persons of the same family were attacked, and all of them in nearly the same manner, so that out of seven cases five died, the eldest victim being nine years old, and the youngest a child at the breast. The father of these children survived, and also a youth of fourteen, who was sent out of the house, yet nevertheless took the disease; but both these survivors remained for some time affected with paralysis of the lower limbs.

The fearful mortality of the recent Italian epidemic is shown not only by the general accounts given by practitioners in various parts of the kingdom, but more especially by the perusal of the official returns published by the Florentine authorities. Many cases occuring in the rural districts of Italy are not tabulated, and, although it appears that Naples has been lately visited very extensively by the epidemic, I have not seen any Neapolitan official returns. But Florence is divided into eighteen medical districts, and from each of these, returns of the course of the disease were received, the particulars including the number of attacks, the proportion of recoveries to deaths, and the sex and ages of the patients. The tables thus obtained by the Municipal Board of Health (Ufficio Municipale di Sanità) have been arranged, and their contents classified, by Signor Tiburzi, and from them we learn that in a single district (that of St. Salvi) there occurred in about twelve months (years 1871-72) 180 cases, of which 133 recovered and 47 died; that in all the districts of Florence, in the first six months of the year 1872, 820 cases occurred, of which 435 died and only 385 recovered; and that in the whole year 1872, in all the districts, 1058 cases occurred, of which 563 died and only 495 recovered. This enormous mortality shows in itself that none but genuine cases of diphtheria are reported, and there is evidence, moreover, that other fatal diseases are not introduced in order to swell the returns, for the mortality from other epidemic maladies is entered in separate tables.

The unsatisfactory character of the official returns made during the epidemic of diphtheria in Great Britain in 1856 and following years arises from the fact that cases which did not at all belong to the diphtheric category were returned together with those that did; and the mortality tables at that period, notwithstanding the zeal and labour of the Registrar-General and his staff, were consequently of comparatively small value. It was well known that cases of scarlet fever were often returned among the diphtheric ones, especially at the commencement of the epidemic, when the distinctions between the two diseases had not yet been clearly pointed out. Another source of confusion was that fatal cases of diphtheria were often entered under the head of "croup," but it was remarkable that, as the epidemic continued its ravages and the features of diphtheria became more generally known, the deaths from "croup" were greatly diminished in the official returns, and those from diphtheria were largely increased, the reason, of course, being that the so-called cases of croup were really instances of laryngo-tracheal diphtheria. On the other hand, there is very little doubt that many cases of malignant disease of the throat, such as cancer and tertiary syphilis, not to mention malignant scarlet fever and cancrum oris, have lately figured among the mortality returns as diphtheria. It must also be observed that since the name of diphtheria has become popular an enormous number of cases, comparatively trifling, and some not really presenting any diphtheric character, have passed under that name, and hence we find a host of infallible remedies almost daily recommended to the notice of the profession and the public, and a multitude of cures are announced of a malady which in all probability never existed.

Such sources of fallacy are no doubt in existence at all times and in all countries in reference to the treatment of disease; but whatever may be the erroneous views, intentionally or unintentionally published as to the cure of dangerous epidemics, it is the duty of the medical profession at least to tell the truth—to take care that the diseases mentioned should be really those which their names denote, and, if any means of cure really exist, to recommend such means for general adoption.

In reference to this part of the subject the Report presented to the Committee of Practical Medicine in Florence offers some valuable remarks, and the deliberation on the Report by the Medico-Physical Society of the same city is worthy of all respect and imitation. "All diseases," says the Report,(a) "not excluding those which assume the features of epidemic maladies, may sometimes present themselves with such a mild character that the most simple methods of treatment, and even the healing power of nature alone (*la sola forza medicatrice della natura*)—which is as much as to say the physiological powers of the system—are sufficient to cure them. Thus even diphtheria in some epidemics has appeared in so mild a form as not to excite all the alarm which it now inspires, and it has credited some remedies as specifics, which will be administered in vain when the experiment is made in more serious circumstances."

The discussion on the value of the proposed remedies on the part of the Medico-Physical Society, and the resolution then passed, show that the difficulties of this part of the subject were fully appreciated; for after a long deliberation they declined to pronounce in favour of any specific method of cure, and gave a very guarded opinion even as to the value of local applications, and a still more guarded one as to the admissibility of tracheotomy—an operation which, it may be observed, has not been popular in Italy in the treatment of laryngo-tracheal diphtheria.

I will only observe, in conclusion, that the question of the identity or non-identity of laryngo-tracheal diphtheria and pseudo-membranous croup having been ably discussed in

(a) "Studi sulla Difterite." Rapporto del Dottore Faralli, p. 35.

all its bearings by the same Society, they unanimously came to the conclusion that the two were identical, the so-called croupous form and the diphtherie form appearing to the Society to be only phases and modifications of one and the same morbid process.

NOTES OF

A REMARKABLE SPECIMEN OF TAPEWORM, TÆNIA LOPHOSOMA (COBBOLD).

By CHARLES J. CULLINGWORTH, M.R.C.S.,
Surgeon to St. Mary's Hospital, Manchester.

A RESPECTABLE married woman, named Ann H., forty years of age, residing in Salford, brought to my out-patient room at St. Mary's Hospital, Manchester, on September 3, 1873, a few segments of tapeworm as a sample of what she had been passing per anum for about two years. Although never in the habit of taking meat absolutely raw, she told me, on inquiry, that she was particularly fond of tasting it when only partially cooked. The segments were unlike anything I had seen before, and I took them home for examination, ordering the patient meanwhile a draught containing a drachm of the oil of male fern, and giving her strict injunctions to bring to me every fragment that passed away as a result.

On September 17 she brought me portions of a tapeworm corresponding throughout to the segments I had already seen, and measuring altogether nine feet in length. Unfortunately, the head was not to be found. Along the middle line of every segment in the body a crest or ridge runs longitudinally, and in the centre of the margin of this crest the genital pore is situated.(a) Underneath the segment there is a longitudinal groove, and the lateral portions are folded together by the apposition of their under surfaces. When hardened in spirit, the section of a segment presents a three-branched appearance, the branches being of unequal length, but placed at equal angles. The uterus sends vessels into the crest as well as into the sides of the segment; and the contained ova are exactly like the ova of an ordinary Tænia medio-canellata. Wedged in between, or attached to the segments here and there, is a stunted and ill-shaped joint, with irregular and unequal sides. A mature joint measures from five-eighths of an inch to three-quarters of an inch in length, and about half an inch in breadth, and the breadth or depth of the crest is usually one-eighth of an inch.

Remarks.—There are only two specimens that I can find on record at all similar to the one here described, and both of these differ from it in several important particulars. Küchenmeister mentions, as a variety of Tænia medio-canellata, a tapeworm sent to him from the Cape of Good Hope by Dr. Rose.(b) This worm possessed a longitudinal ridge, but he describes its mature segments as "extremely massive"—more than an inch in length and 3-5‴ in breadth. The genital pores, too, were irregularly alternate, and not situated on the crest. On March 20, 1866, Dr. Cobbold exhibited to the Pathological Society of London(c) a specimen of crested tapeworm which had been discovered in the museum of Middlesex Hospital, and to which he proposed to give the name Tænia lophosoma (λόφος, crest; σῶμα, body). The reproductive papillæ were all on one side of the chain of segments, a peculiarity which entirely distinguished it from the Cape of Good Hope variety of Küchenmeister. The head of the creature was wanting. It will thus be seen that my specimen does not correspond with either of these in the situation of the genital aperture. Here it is placed in the crest itself, and not unilaterally, as in Dr. Cobbold's specimen, or alternately, as in Küchenmeister's. It further differs from the Cape variety in the more moderate dimensions of its proglottides. I have adopted, however, the name suggested by Dr. Cobbold in the communication referred to, inasmuch as it sufficiently indicates the principal distinguishing feature of the specimen. I may mention, in conclusion, that Dr. Cobbold saw the specimen during his recent visit to Manchester, and that he regards it as a most remarkable and unique abnormality.

(a) In 304 segments examined, only four had the genital opening placed laterally. One segment had two openings—viz., one at the lateral margin and the other in the crest.

(b) F. Küchenmeister: "On Animal and Vegetable Parasites of the Human Body." Translated from the second German edition, by E. Lankester (Syd. Soc.), vol. i., Lond., 1857, pp. 139 to 141, and pl. iii., 14 to 16.

(c) *Transactions of the Pathological Society of London*, vol. xvii., p. 438.

OUTLINE OF OBSERVATIONS AND INVESTIGATIONS ON YELLOW FEVER.

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No. I.—Notes upon the Early History of Yellow Fever.

(*Continued from page* 575.)

If the history of yellow fever in the Western Hemisphere be critically examined, it will be found that the accounts and dates of its origin varied with the extent and character of the information of the writers in each city, locality, or island; and each one in turn was tempted to assign to the disease a foreign origin. No city or place has been found to claim the honour of the origin and continuous propagation of yellow fever. Thus, the French writers called this disease *mal de Siam*, and held the *tradition* that the disease had been imported in the ship *Oriflame*, which sailed with French colonists from Siam in the latter part of the year 1690. Monsieur Pouppe Despertes, who practised at St. Dominique from 1732 until 1748, says that this fever was so called from its first being taken notice of in the island of Martinique at a time when some vessels were there from Siam.—("Hist. des Malad. de St. Dominique," vol. i., pp. 191, 192). But it is well known that the *Oriflame* touched at Brazil when yellow-fever had been prevailing for several years, and Father Labat, who arrived at Martinico on January 29, 1694, tells us that the passengers of this ship caught the disease in Brazil.

Equally incorrect was the account given by Dr. Warren of its introduction into Barbadoes between the years 1732 and 1738. Dr. Warren concluded that the yellow fever which he saw at Barbadoes in 1732 and the following years was a continuation of the *plague* which in 1720 and 1721 had been brought from Palestine to Marseilles, and which he imagined had been brought from the latter place to Martinico, and thence to Barbadoes in 1721 by the *Lynn* ship of war.

Dr. Tiyne, who lived and practised as a physician at Barbadoes at the time of the alleged introduction of the plague from Marseilles (1721), and who wrote in 1724 (before the arrival of Dr. Warren) on yellow fever under the denomination of *febris ardens biliosa*, made no allusion to any such importation, but considered it as an endemic disease in the West Indies to which Europeans were subject upon their first arrival.

Mr. Hughes says, in his "Natural History of Barbadoes," that Dr. Gamble remembers that it was very fatal in 1691, and that it was then called the "new distemper," and afterwards "Kendal's fever," also the "pestilential fever," and "bilious fever." This statement is also confirmed by captain Thomas Phillips, who was at Barbadoes with a large ship in 1694, and says, in the account of his voyage to Africa and Barbadoes, that it was the fate of that island to be then "violently infected with the plague."—(Churchill's Collect., vol. i., p. 253).

It appears, however, from the statement of Mr. Richard Vines, a planter and practitioner of physic in Barbadoes, that yellow fever prevailed with destructive effect as "an absolute plague" as early as 1647; and Dr. Edward Nathaniel Bancroft, in his essay on yellow fever, suggests that it was called "a new distemper" in 1691-94, because all who had had any accurate knowledge of it in 1647 were probably dead or removed.

Mr. Richard Ligen, in his history of Barbadoes, published in 1657, says that when he arrived there in 1647, in the early part of September, the inhabitants of the island and shipping too were so seriously visited by the plague (or as deadly a disease) that "before a month was expired after our arrival the living were hardly able to bury the dead." In considering the causes of this disease—whether it was brought thither in shipping, or was occasioned by the irregularities, debaucheries, and ill diet of the people, and the unhealthy, low, marshy situation, subject to overflow—he inclined to the latter.

A similar fever, and probably from the same causes, prevailed at the same time at St. Christopher, Guadaloupe, and other islands, and there died at St. Kitt's and Barbadoes each five or six thousand inhabitants.

P. Du Teste also mentions this disease, and calls it the plague. He says that it began at St. Christopher, and in

eighteen months carried off one-third of the inhabitants, and that it was accompanied with violent pain in the heart, great debility of the limbs, and a constant vomiting; and that in three days it sent the patient to the grave.

Dr. Hillary, who enjoyed a high reputation as a successful practitioner and learned physician in Barbadoes, affirms that the disease was indigenous and endemic to the West India Islands.

The testimony of Alexander Humboldt is similar to that of Dr. Hillary, and is worthy of the most careful consideration in the light in which it presents the history of yellow fever. In his "Political Essay on the Kingdom of New Spain," this distinguished traveller, naturalist, and philosopher says:—

"The typhus, which the Spaniards designate by the name of 'black vomiting' (*vomito prieto*), has long prevailed between the mouth of the Rio Antigua and the present port of Vera Cruz. The Abbé Clavigero(a) and some other writers affirm that this disease appeared for the first time in 1725. We know not on what this assertion, which is so contrary to the traditions preserved among the inhabitants of Vera Cruz, is founded. No ancient document informs us of the first appearance of this scourge; for throughout all the warmer parts of equinoctial America, where the termites and other destructive insects abound, it is infinitely rare to find papers which go fifty or sixty years back. It is believed, however, at Mexico, as well as at Vera Cruz, that the old town, now merely a village, known by the name of La Antigua, was abandoned towards the end of the sixteenth century(b) on account of the disease which then carried off the Europeans.

"Long before the arrival of Cortez there has almost periodically prevailed in New Spain an epidemical disease called by the natives 'Matlazahuatl,' which several authors(c) have confounded with the *vomito* or yellow fever. . . .

"It is certain that the *vomito*, which is endemical at Vera Cruz, Carthagena, and Havana, is the same disease with the yellow fever which since the year 1793 has never ceased to afflict the inhabitants of the United States. This identity, against which a very small number of physicians in Europe have started doubts,(d) is generally acknowledged by those of the Faculty who have visited the island of Cuba and Vera Cruz, as well as the coast of the United States, and by those who have carefully studied the excellent nosological descriptions of MM. Makilbrick, Rush, Valentin, and Tuzuriaga. We shall not decide whether the yellow fever is perceptible in the *causus* of Hippocrates, which is followed, like several remittent bilious fevers, by a vomiting of black matter; but we think that the yellow fever has been sporadical in the two continents since men born under a cold zone have exposed themselves in the low regions of the torrid zone to an air infected with miasmata. Wherever the exciting causes and the irritability of the organs are the same, the disorders which originate from a disorder in the vital functions ought to assume the same appearances.

"It is not to be wondered at that at a period when the communications between the Old and New Continents were far from numerous, and when the number of Europeans who annually frequented the West India Islands was still small, a disease which only attacks the individuals who are not seasoned to the climate, should have very little engaged the attention of the physicians of Europe.

"In the sixteenth and seventeenth century the mortality must not have been so great.—1st. Because at that period the equinoctial regions of America were only visited by Spaniards and Portuguese—two nations of the South of Europe less exposed, from their constitution, to feel the fatal effects of an excessively hot climate than the English, Danes, and other inhabitants of the North of Europe who now frequent the West India Islands. 2ndly. Because in the islands of Cuba, Jamaica, and Hayti the first colonists were not assembled together in such populous cities as were afterwards built. 3rdly. Because on the discovery of continental America the Spaniards were less attracted by commerce towards the shore, which is generally warm and humid, and preferred a residence in the interior of the country, on elevated table-lands, where they found a temperature analogous to that of their native country. In fact, at the commencement of the conquest the ports of Panama and Nombre de Dios(e) were the only ones where there was a great concourse of strangers; but from 1535 the residence at Panama(f) was as much dreaded by the Europeans as in our times a residence at Vera Cruz, Oma, or Porto Cabello. It cannot be denied from the facts related by Sydenham and other excellent observers that, under certain circumstances, germs of new diseases may be developed;(g) but there is nothing to prove that the yellow fever has not existed for several centuries in the equinoctial regions. We must not confound the period at which a disease has been first described, on account of its having committed dreadful ravages in a short space of time with the period of its first appearance.

"The oldest description of the yellow fever is that of the Portuguese physician Joam Ferreyra da Rosa,(h) who observed the epidemic which prevailed at Olinda, in Brazil, between 1687 and 1694, shortly after a Portuguese army had made the conquest of Pernambuco. We know in the same manner with certainty that in 1691 the yellow fever manifested itself at the island of Barbadoes, where it went by the name of 'Kendal' fever, without the smallest proof appearing that it was brought there by vessels from Pernambuco. Udoa,(i) speaking of the *chapetonadas*, or fevers to which Europeans are exposed on their arrival in the West Indies, relates that, according to the opinion of the people of the country, the *vomito prieto* was unknown at Santa Martha and Carthagena before 1729 and 1730, and at Carthagena previous to 1740. The first epidemic at Santa Martha was described by Juan Josef de Gastelbrude,(k) a Spanish physician. Since that period the yellow fever has several times raged out of the West India Islands and Spanish America, on the Senegal, in the United States,(l) at Malaga, Cadiz,(m) Leghorn, and, according to the excellent work of Cleghern, even in the island of Minorca.(n) We have thought it proper to relate these facts (many of which are not generally known) because they throw some light on the nature and cause of this cruel disease. The opinion that the epidemics which since 1793 have nearly every year afflicted North America differ essentially from those which for centuries have prevailed at Vera Cruz, and that the yellow fever was imported from the coast of Africa into Grenada, and from thence into Philadelphia, is equally destitute of foundation with the hypothesis formerly very generally believed—that a squadron from Siam introduced the *vomito* into America.(o)

"In all climates men appear to find some consolation in the idea that a disease considered pestilential is of foreign origin. As malignant fevers easily originate in a numerous crew cooped up in dirty vessels, the beginning of an epidemic may be frequently traced to the period of the arrival of a squadron; and then, instead of attributing the disease to the vitiated air contained in vessels deprived of ventilation, or to the effects of an ardent and unhealthy climate on sailors newly landed, they affirm that it was imported from a neighbouring port, where a squadron or convoy touched at during its navigation from Europe to America. Thus we frequently hear in Mexico that the ship-of-war which brought such-or-such a viceroy to Vera Cruz has introduced the yellow fever, which for several years had not prevailed there: and in this manner during the season of greatest heat the Havana, Vera Cruz, and the ports of the United States mutually accuse one another of communicating the germ of the contagion. It is with the yellow fever as with the mortal typhus known by the name of 'Oriental pest,' which the inhabitants of Egypt attribute to the arrival of Greek vessels, while in Greece and Constantinople the same pest is considered as coming from Rosetta or Alexandria."(p)—("Political Essay on the Kingdom of New Spain," vol. iv., pp. 135-143.)

The preceding facts show the fallacy of attempting to decide the date of the origin of yellow fever from the statements of the writers of any one locality; and they also show the im-

(a) "Storia di Messico," t. i., p. 117.
(b) "New Spain," vol. ii., p. 253.
(c) Letter of Alzate in the "Voyage de Chappe."
(d) "Arejuta de la Fièbre Amarilla de Cadiz," t. i., p. 143.
(e) Nombre de Dios, situated to the east of Porto Bello, was abandoned in 1584.

(f) Pedro de Cieca, c. ii., p. 5.
(g) *See* "Respecting an Affection of the Larynx which prevails epidemically at Otaheite since the arrival of a Spanish vessel *Vancouver*," t. i., p. 175.
(h) "Frattado da Constituicam Pestilencial de Pernambuco," par Joam Ferreyra da Rosa, em Lisboa, 1694.
(i) "Voyage," t. i., pp. 41 and 149.
(k) "Luzuriaga de la Calentura Biliosa," t. i., p. 7.
(l) In 1741, 1747, 1763.
(m) At Cadiz in 1731, 1733, 1734, 1874, 1746, and 1764, and at Malaga in 1741.
(n) In 1744, 1749 ("Tommasini Febbre de Livorno del 1804," p. 65).
(o) Lobat's "Voyage aux Isles," t. i., p. 73. Respecting the plague of Bouillam in Africa, see Chisholm "On Pestilential Fever," p. 61; Miller, "Histoire de la Fièvre de New York," p. 61; and Volney, "Tableau do Sol de l'Amérique," t. ii., p. 334.
(p) Pugnet, "Sur les Fièvres du Levant et des Antilles," pp. 97 and 331.

propriety of confounding the period at which a disease has been first described, on account of its having committed ravages at some particular locality or time, with the period of its first appearance.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

CASE OF CHRONIC PYLORIC OBSTRUCTION, WITH DILATATION OF THE STOMACH.

(Under the care of Dr. SILVER.)

Mrs. M., aged 40, was admitted into Charing-cross Hospital on April 30, 1873, complaining of severe vomiting and great debility. The patient gave the following account of herself:—She enjoyed good health until eleven years ago, when she had a sudden and severe vomiting of blood. This seems to have been a true hæmatemesis; she fainted, brought up a large quantity of blood, and had no relapse. There were no gastric or other symptoms before, and only debility after. About a month afterwards she began to suffer from occasional sickness, bringing up a dark liquid like what she is at present vomiting, and which will be afterwards described. Such vomiting, however, did not happen more than once a month. She cannot say distinctly when she recovered completely. For the next six years she continued well: there were no gastric symptoms whatever, and she had frequent and easy confinements. Two or three months after her last child was born—*i.e.*, five years ago—she began to suffer from the symptoms of which she has never been clear up to the present time. Without any previous symptoms of indigestion or a delicate stomach, she was taken with sickness and vomiting, abdominal pain, and swelling of the belly. She is confident that these symptoms appeared rather suddenly at first, but quite as sure that there was no evident cause for them. She did not over-exert herself, over-eat herself, nor receive any injury. The symptoms began with a feeling of fulness and abdominal distension, which have never disappeared: pain occurred at intervals of months or weeks at first, but now much more frequently; sickness was rare at first, but lately was more frequent, and now it is seldom absent for many days at a time. For the last three years these symptoms have been more frequent and severe; during this time the patient has been almost unfit to do her household work. For the last three months she has been sick almost every second or third day; the character of the vomited matter has been various. For the last six months or so (she cannot be quite precise) it has been brownish, as it is now. She has all along been subject to very sudden vomitings of quite clear fluid, in large quantities, preceded by very sudden feelings of sickness, and followed by a sense of relief. She has had no hæmatemesis again. She has not been able to eat freely these last five years; any indulgence in this respect brought on pain, swelling, and sickness. Her bowels have always been confined; they have never been too loose. Her tongue has never been sore. She has never had jaundice. For the first two or three years of this illness she lost flesh after the attacks of pain and sickness, but for the last few months she has never regained her strength—*i.e.*, she has been steadily getting weaker. For the last nine months she has menstruated regularly; the preceding nine months she had amenorrhœa. On admission, a very pale, thin, somewhat anxious-looking woman, confined to bed, but anxious to rise for a short time daily. She complains of fulness in the belly, pain in the stomach and back, and vomiting, with debility. The abdomen is distended and irregularly tympanitic; there are no signs of ascites. In the line between the ensiform cartilage and the umbilicus is a well-defined tumour as large as a pear, its inferior border touching the latter point. It is firm and somewhat tender, and is dull on percussion. Frequent movements are observed on the abdominal surface. The region around the umbilicus and tumour and the left hypochondrium are tympanitic on percussion. Dull percussion-sound is irregular, both in distribution and intensity, over the rest of the abdomen. Complete anorexia. Tongue dry, rather brownish in the centre, with a slight general fur; constipation. The hepatic dulness in the right vertical nipple-line extends from the lower border of the fifth rib to the inferior margin of the thorax. No jaundice; no distinct splenic dulness. Cardiac dulness small; signs not otherwise abnormal. General resonance of the lungs. Pulse frequent, very small, and very weak. No œdema of any part of the body. Spirits rather depressed. To take two tablespoonfuls of sulphate of iron and magnesia mixture three times a day.

May 8.—To-day profuse vomiting of what is called by the nurse "a coffee-ground substance," with great feeling of sickness. Cantharides plaster to the epigastrium.

13th.—About eighty ounces of a similar coffee-ground material vomited to-day. The belly is more tympanitic; the physical signs otherwise are as on admission, except that the tympanitic percussion-area is somewhat differently distributed. The blister to be repeated and the surface sprinkled with morphia. An enema administered.

14th.—A spontaneous and natural-looking stool.

16.—Patient vomited last night thirty-six ounces of a dirty thin liquid, with a brown frothy scum, a greyish-brown granular sediment, and a sour smell. Microscopically the sediment consists of particles of food, abundant torulæ, and a few doubtful sarcinæ. Over the belly there is very loud succussion sound. The patient feels better since the vomiting. To take ext. opii liq. ℥v., spt. chlor. ʒ ss., ex mist. bismuth.

17th.—Last night thirty ounces of a similar fluid were rejected after extreme feeling of distension and sickness, which were relieved by the vomiting. The physical signs are much as before. Constipation.

19th.—Sixteen ounces vomited; severe gastric and dorsal pain.

21st.—Ninety-six ounces of fluid vomited last evening. Debility is so extreme that the patient is almost unconscious.

22nd.—Condition improved, but the patient is still excessively weak and as pale as death. Pulse 160. Considerable abdominal pain and distension.

23rd.—Better; no sickness since the 21st. The tumour in the epigastrium is very distinct to the eye and hand.

26th.—The patient is better than she has been since admission; no sickness; an abundant loose brown stool. To have a hypodermic injection of morphia every night. There is no feeling of sickness, abdominal pain, or distension. Appetite fair. Pulse 120, weak.

June 3.—The patient says she has not felt so long well for some years.

6th.—Sickness returned yesterday; several ounces of the usual vomit have been rejected. The debility has not increased. A blister to the epigastrium.

9th.—The patient is very much worse; she has vomited frequently since the last note. Within the past twenty-four hours 160 ounces of the same fluid as before have been ejected. Complete prostration. Pulse 144. The voice is nearly inaudible; great paleness and emaciation of the face.

10th.—Patient vomited sixty ounces of fluid after the above note was taken yesterday. Weakness gradually increased, and she died after being slightly delirious for several hours.

A post-mortem examination was not granted.

As to the nature of this case there could be no reasonable doubt, though no post-mortem examination was made. The patient undoubtedly suffered from cancer of the pylorus obstructing the passage of food, and so gradually giving rise to dilatation of the stomach. One notable peculiarity was the pain she suffered, which was sometimes excessively severe. The mode taken to relieve this, though not fully brought out in the above notes, is worth bearing in mind; it consisted in the removal of the cuticle by a blister, and sprinkling the raw surface with morphia, half a grain being so applied. Such procedure never fails to give relief in the worst cases—even more than the hypodermic injection of the drug gives. To use it efficiently the part should be painted with blistering fluid, and a warm poultice applied. This will very soon raise the cuticle by a copious formation of serum. The blister should be snipped round the edges, and the cuticle carefully removed, after which the morphia is to be lightly dusted over the raw surface.

The Holborn Guardians have resolved to send no more children to the workhouse schools at Mitcham until the epidemic of ophthalmia, now seriously prevalent, has subsided.

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Medical Times and Gazette.

SATURDAY, DECEMBER 13, 1873.

MEDICAL REMUNERATION.

We publish this week in another column a letter from "A Provincial Doctor" on the subject of medical remuneration, which may be supposed to represent the views of a section—albeit most probably a very small section—of medical practitioners on the subject of an increase in the amount of medical charges. His views may be epitomised thus:—That a large amount of medical practice is pursued amongst the comparatively poor and struggling—the underfed respectable classes, in fact,—and that these are not capable of paying more than they are now charged by their medical attendants. That medical, like lawyers', charges are disagreeable, and there being but little to show for the expenditure, it cannot be a matter of surprise that people should grudge their amount, and avoid liquidating them as long as they possibly can. That medical men are laid under a kind of conventional black-mail by their relatives and acquaintances, who expect them to give them the benefit of their skill, besides their time, without remuneration. That the so-called medical charities injure medical practitioners; that the trouble given by individual cases varies greatly; lastly, that the medical practitioner who does not hasten to attend anyone who may send for him is open to the charge of inhumanity; and our correspondent concludes by expressing his belief that an increase in the amount of medical fees would only benefit the leading practitioners, and would leave the rank and file to the harsh words and small pay which he thinks are to be the lot of doctors as long as doctors may be required on this planet.

The letter of our correspondent suggests that it is written either before success in the profession has been achieved or at an age when success is no longer to be expected. We may take it for granted that the former is the case, and that "A Provincial Doctor" is now undertaking the uphill and toilsome task of making a practice. To him and to others in a like position we may say—"It is not to you that the profession look to teach the public the lesson that medical fees have not increased in proportion to the depreciation of the value of money and the augmentation of expenses of living." The lesson must be taught and the example set by the leaders in London and elsewhere, and its influence, together with causes already in action—such as the improvement in medical education, and a consequently greater difficulty in entering the ranks of the profession,—cannot fail to raise the professional status and remuneration throughout the country. This may be laid down as a general principle. But, admitting it, there is much in our correspondent's letter which seems to suggest comment and correction. First, with regard to the struggling respectable classes—how are they to pay the doctor more than they do? We say, by teaching them to pay a regular and fixed sum yearly to a medical practitioner, who shall thereupon undertake to attend them whenever necessary. Take, for instance, a lawyer's clerk, who earns perhaps £150 a year for the maintenance of himself, his wife, and two or three children. It is quite true that if this man has a doctor's bill of £20 to pay in any one year it will greatly cripple him. But medical attendance will be quite as necessary to him as grocery and beer; and there is no reason why the doctor should be paid less regularly than, and after, the grocer and the brewer. Let persons in this class, then, be taught to pay their medical attendants a certain sum monthly or quarterly, whether they are ill or well, which payment shall give them the right to professional assistance in all emergencies. Where the income of a family is under £300 a year a very moderate percentage paid regularly would be found practically to remunerate the medical practitioner far better than the present haphazard system, and would be felt as a burden far less by the class of persons of whom "A Provincial Doctor" writes.

With regard to the artisan classes, the same principle applies, and is already in action in the system of the sick club and the provident dispensary. But here clearly there is great room for improvement. Considering the present rates of wages, the payment of 5s. or even 7s. a head to the club doctor per annum is far too small. If the profession would but be true to themselves, the payment for sick clubs throughout the kingdom might be at once doubled or trebled. The provident-dispensary system is looked on with suspicion in many quarters; and rightly so, for it is too often made the means of unfairly excluding professional men from the general practice of the neighbourhood. But we cannot see why either each practitioner should not take the artisans amongst his patients on a fairly remunerative provident scale of payment, or at least why the provident dispensary in a town should not be the joint property of all the properly qualified practitioners in the neighbourhood. With regard to the argument that persons do not like to pay medical men because their services are not pleasant, and there is often but little to show for them: this is at least equally true of law, and we are not aware that lawyers are in the habit of waiving their claims.

Our correspondent then touches on the immense amount of gratuitous prescribing which the medical profession is expected to do. With regard to this, we can only say that we think the medical profession is greatly to blame for doing so much as it does. Far be it from us to advise the setting up of any hindrance or barrier in the stream of professional charity. But it is no charity to prescribe gratis for a man, who can well afford to pay a fee, because he happens to be an acquaintance or even a relative. It is no charity to the man himself, and the prescriber injures either himself or some other practitioner. With regard to rendering our services to professional people gratuitously, we think that the line should be drawn somewhere, and should probably include only the unbeneficed clergy not having private means, daily governesses, and medical men and those of their families dependent on them.

In previous articles we have directed attention especially to the urgent necessity which exists for the increase of the fees of the consulting practitioner, and we have proved beyond question that medical remuneration is proportionately, in the

consulting rank, at least two-thirds less than it was in the early part of the eighteenth century. We believe that the example of increase of required remuneration must be set in these ranks, and that, it being there established, it will rapidly permeate all classes of the profession. At present the leaders, both in surgical and medical practice, are underpaid, and are consequently falling in position below the most successful of the banking and commercial classes. An increase in their fees would probably diminish their number of patients, but it would husband their physical and mental resources and increase their incomes. Many persons who consult them upon comparatively trivial ailments would apply to other physicians and surgeons, who would be proportionately benefited, and we should hear far less than we do of two interviews granted for one guinea fee. A check would be given to a practice which we know is gaining ground in the higher walks of practice—we mean that of obtaining the services of the best talent in the profession for ordinary ailments without the intervention of the general practitioner, the fee given being the usual guinea. Lastly, the general practitioner would by degrees be raised to a status and position more befitting his education and power of benefiting society. We believe, moreover, that a general movement throughout the profession for an increased remuneration for their services would before long certainly extend to the public medical services, especially to that of the Poor-law; and thus one of the blots on our system, which has often prevented the poor from having the advantage of the best local medical skill, would be removed. These benefits we believe to be fairly within grasp, and, obtained, they would once more give the practitioners of medicine their proper place in fact, and not merely in name, amongst the professors of the arts which benefit mankind.

THE EDINBURGH SCHOOL OF MEDICINE.

The success of an institution, like the success of an individual, awakens a certain amount of laudable curiosity regarding the circumstances of its origin and early progress. In the case of the individual this curiosity is associated with the group of ideas embodied in the aphorism that "the child is father of the man"; and in the case of the institution it arises from an analogous understanding that the conditions of its origin and the provisions for its early development determine to a considerable extent the character of its maturity. It would be difficult to find a better illustration of this principle than that afforded by the history of the Medical Faculty of Edinburgh University. For many years the fortunes of this Faculty have been on the ascendant. Under circumstances which might have justified the anticipation that the number of Edinburgh medical students would undergo a temporary diminution, the yearly returns have shown a steady and considerable increase. During the present winter session the total number of students at Edinburgh University is 1738. Of these 683 are medical, and 214 first-year medical students. Last winter the medical students numbered 648; in 1871-72 the number was 615, and in the previous year 563. A comparison involving still earlier dates shows that for some time back the Edinburgh Medical School has enjoyed increasing prosperity. And that this prosperity results to no inconsiderable extent from the nature of its early constitution, will, we think, be evident on a cursory consideration of its inauguration and early history.

The constitution of the Edinburgh University was completely altered by the passing of the University Act of 1858. Previously to the adoption of that measure it differed from other Scottish universities, inasmuch as in Glasgow, Aberdeen, and St. Andrews the whole administration of affairs was conducted by the Senatus Academicus, while in Edinburgh the management of the University was in the hands of the municipal corporation. A recollection of this fact is necessary to an understanding of the influence exercised by the Edinburgh Town Council in the establishment of the Edinburgh School of Medicine.

During the latter half of the seventeenth century an impression existed amongst the influential members of Edinburgh society that that city was capable of educating her own physicians. Scotchmen, after distinguishing themselves at Continental schools, had returned to their native country and established such professional reputations as commanded universal attention. About 1670 Sir Robert Sibbald, having spent several years of observation and study at Leyden, Angers, and Paris, endeavoured, on his return to Edinburgh, to establish some means of promoting the study of natural science, with a view to the advancement of the medical art. He established the elements of a botanical garden, founded the College of Physicians, and was the first to lecture as a professor of medicine in connexion with the University of Edinburgh; but the preliminary steps towards the inauguration of an Edinburgh medical school were embarrassed by several impediments. Some of these were evident to the promoters, while others arose directly from their own line of conduct. As a first obstruction, there existed the active prejudices and mercenary jealousy of an incorporate body of "Chirurgeon-Apothecaries." In the second place, the recognition of a new branch of university study depended upon the approval and support of laymen embodied in the Town Council. Another serious drawback was the non-existence of a hospital; and, above all, the prospects of a successful issue to the scheme were blasted by the want of any means of prosecuting the study and teaching of human anatomy. These were the adverse circumstances depending upon social conditions, but, at the same time, the promoters of a scheme of medical education fostered in themselves an adverse influence by their adherence to a foreign university system inconsistent with the conditions by which they were surrounded. They procured the establishment of professorships in connexion with the University, but, instead of these professorships being associated with teaching in the University, they were analogous to foreign and English appointments. They attached to the title of University Professor the privilege to lecture "in private colleges." Under existing circumstances, this arrangement could only lead to the establishment of intermittent private lectureships, and in most cases resulted in no teaching being performed at all; so that the early professorial appointments in medicine were analogous, not to present university professorships, but to extra-academical qualifications to teach medicine.

But to counterbalance these disadvantages there existed certain elements of success. In the existing University there was a well-established and celebrated school of learning; there were physicians of marked distinction in their profession available as teachers; there was a growing demand for home medical education, and a Town Council which at all times appears to have been willing to grant the reasonable requests of their learned petitioners. Under these circumstances it is interesting to watch the gradual early development of the Edinburgh Medical School up to the time when Provost Drummond and Professor Monro, properly estimating the conditions of success, wrought harmoniously in their different capacities towards the successful establishment of a vigorous Medical School.

In 1670, Sir Robert Sibbald, acting in co-operation with a few friends, had obtained from the Abbey gardener "ane enclosure of forty feet each way" for purposes included under the name of a "medicine garden." There is no historical doubt that from this humble origin the Edinburgh Medical School arose. The Corporation of Chirurgeon-Apothecaries

were sagacious enough to anticipate such a result, and dreaded an inundation of home-made physicians.

They accordingly opposed the scheme, but fortunately the influence of Dr. Balfour, a colleague of Sibbald, was sufficient to convert their opposition into an active co-operation. The result of this combination was that the ground belonging and adjacent to Trinity Hospital was granted on a nineteen years' lease by the Town Council for the promotion of natural science. This neighbourhood, now adjoining the Edinburgh North Bridge, is still well known as the Physic Gardens. Modern improvements, however, have necessitated the removal of the Botanic Gardens—first, we believe to Leith-walk, and subsequently to Inverleith-row, where they now are.

In 1681, Sibbald and his friends, in order to withstand the opposition of the Chirurgeon-Apothecaries to the interests of the Physicians, obtained a charter for the College of Physicians; and the Fellows of this College, both individually and as a corporation, exercised a potent influence in the development of the Medical Faculty of the University. In the department of natural science, Sibbald procured the co-operation of Sutherland, who is regarded as the first professor of botany, and who by virtue of his original abilities and powers of observation had advanced himself from the condition of a common gardener. Sutherland published the "Hortus Medicus Edinburgensis," with special reference to medical botany, and instituted that collection of dried plants which constitutes one of the distinctions of the Edinburgh gardens.

Sibbald was appointed first Professor of Medicine to the University. He seems to have delivered Latin lectures at his own house. In the same year (1685), Drs. Halket and Pitcairne were also appointed to be Professors of Medicine, but it does not appear that either of them ever instituted a course of lectures. In the significant language of the Town Council, these early nominees were appointed professors "to the college and the city." Charles Preston succeeded Sutherland, and advertised lessons in botany in May, June, July, and August, in the Physic Gardens. George Preston succeeded Charles with a salary of £10 sterling. In 1713 James Crawford was appointed Professor of Chemistry, and in lieu of salary obtained the use of two rooms in the University. He did not deliver a regular course of lectures.

It is evident, however, that medical teaching, as far as it had as yet been established, even if it had assumed the form of permanent lectureships, would not have provided the education necessary for the production of Scotch physicians. There was no anatomy to provide the basis, and no hospital instruction to supply the materials of a knowledge of practical medicine. At that time Pitcairne was the most famous of European physicians, and, through a surgeon named Monteith, he employed the force of his local influence to provide for anatomical instruction and investigation.

In 1694, the Town Council, in answer to an appeal from Monteith, agreed that in exchange for his services in attendance upon the "town's poor," he should receive for anatomical purposes the bodies of all those who, having been sent to the correction-house for proven gross immoralities, had died during their term of imprisonment, and also all foundlings dying on the breast. A sanitary condition was attached to this grant requiring that all the "gross intestines" should be buried within forty-eight hours, and the whole body within ten labouring days. In a few days the Town Council made a more liberal grant to the Corporation of Surgeons, and attached the condition that the petitioners were to build an anatomical theatre within three years, and conduct dissections only in winter. From this time till five years after the appointment of the first Monro, such public dissections and demonstrations as were conducted in Edinburgh were carried on in the Surgeon's Hall. In 1705, Robert Elliot, who had been elected dissector to the Corporation of Surgeons under their new grant, applied to the Town Council for a ratification of his appointment. The result was that he was appointed first Professor of Anatomy. On condition of his protecting the "varieties" of the College, he was granted the salary of £15 per annum. The fact stated in the first Monro's manuscript "Life"—that Elliot dissected a body once in two or three years—shows that his public labours at least were not of an arduous nature. On the other hand, there is some reason to believe that privately dissection was carried on with energy. Monro's early knowledge was to some extent acquired by his being allowed to assist at the anatomical dissections which occurred in the private practice of Edinburgh physicians. Where the subjects came from for these private dissections may be partly inferred from the statement that very shortly after the anatomical grant of the Town Council the burial-ground of Greyfriars was desecrated. This was the first of several occasions on which the devotees of anatomical science in Edinburgh have sacrificed the sanctity of sepulture to the interests of scientific discovery. As Professor of Anatomy—nominally of the University, but attached to Surgeons' Hall,—Drummond succeeded Elliot, and had M'Gill as a colleague.

From 1720 onwards a new spirit seems to have been inspired into the promoters of the Edinburgh Medical Faculty. Both Provost Drummond and Professor Monro *primus* had commenced to use their influence in behalf of the University. In 1724 the Town Council resolved upon the advisability of establishing a complete system of medical teaching such as would enable the sons of citizens and others to procure such an education as would prepare them for graduation as Doctors of Medicine. Porterfield was appointed Professor of the Institutes and Practice of Medicine on the condition that he was to deliver a regular course of lectures. It is doubtful, however, whether he ever fulfilled that condition.

In the meantime, Preston, Professor of Botany, had allowed the Physic Gardens to come to grief; and St. Clair, Rutherford, Plummer, and Innes having previously purchased a chemical laboratory in the neighbourhood, applied to the Town Council to permit them to take into their own hands the custody of the Physic Gardens for the promotion of medical science. This was granted in 1724. During the succeeding two years the four physicians had been so successful in the prosecution of their schemes, that in 1726 the Town Council recognised that it would be of great advantage to have the teaching of medicine incorporated with the duties of the University. They accordingly appointed Rutherford and St. Clair to act as Professors of Practice of Physic, while Innes was elected Professor of the Institutes of Medicine, and Plummer Professor of Chemistry. At the same time the Faculty of Medicine was absolutely recognised by the arrangement that two out of these four professors should during alternate years assist in the deliberations of the Senatus Academicus. It was a further advantage that the University, by having a certain number of physicians connected with its own corporation, could grant medical degrees independently of the recommendation of physicians unconnected with it.

But though the physicians of Edinburgh and the Town Council of the city had for some time been drifting fortuitously to the establishment of an Edinburgh medical school, and accumulating elements for its construction, the honour of erecting from the available materials a vigorous and harmoniously constructed whole fell to the lot of two able men, who took advantage of an almost absolute influence in the communities with which they were respectively connected not only to lay the foundation, but almost to complete the superstructure of an admirable school of medicine.

In itself the University could take no action. The Town Council was the administrative body of its affairs; so that, on

the one hand, the Council was at the mercy of the learned classes for suggestions regarding the profitable management of their trust, and the University was at the mercy of the Council for the power and means of promoting its interests. Thus it is evident that a fault on either side would be fraught with evil consequences to the University. Fortunately, however, it happened that at this critical period in its history the University and the Town Council were each subject to the control of a man pre-eminently qualified to project and consummate extensive measures, which at one and the same time promoted the welfare of the general community and secured for the city of Edinburgh a medical school worthy to rank amongst its foremost institutions. On the one hand, George Drummond, one of the ablest and most honourable of civic rulers, was Lord Provost of Edinburgh; on the other, Alexander Monro *primus*, equally able and respected, acted for the University. Three things were absolutely necessary to secure the satisfactory establishment of a medical school—(1) regular courses of lectures, (2) the construction of an hospital, and (3) the means of conducting constant anatomical work. Monro had been appointed Professor of Anatomy in 1720, and at once commenced to deliver a regular course of lectures. He enrolled fifty-seven students—a number which filled himself and his supporters with pleasant astonishment. In 1732 the number had reached 111, and in 1746 a maximum of 182. At the outset of his career as a teacher it no doubt became painfully evident to Monro that, unless provision could be made for the complete instruction in medicine of so large a number of students, their studies would require to be completed at other schools. In 1721 (the second year of his appointment) we find him agitating for the erection of a hospital. In 1725 the want of subjects was so great that the community were again thrown into a state of intense excitement by the practice of nefarious exhumation. Monro's class-room at the Surgeons' Hall was besieged, and in the ensuing riot the preparations which he had already accumulated were within an ace of being sacrificed to the popular fury. Influenced by the consideration that a repetition of the riot might involve the destruction of Monro's "varieties," the Town Council resolved that in future the Professor of Anatomy should have a theatre within the walls of the University. This in itself was a further step towards the consolidation of the Faculty. Actuated, no doubt, by the scarcity of subjects and the general requirements of the faculty, Monro continued to agitate for the construction of a hospital till (in 1729) he, with the co-operation of Drummond, rented a small house for the reception of patients. Previously to this the town had provided pecuniary and medical relief for the poor who were "free of the city." Others were attended gratuitously by medical men. Monro and Drummond's scheme flourished: funds increased, and in 1736 the Charter of the Royal Infirmary was obtained. In 1738 the foundation-stone was laid, and the building progressed in the most gratifying manner. It speaks volumes for the sagacity of the Edinburgh community that the populace who, ten or twelve years before, had entertained feelings of intense animosity to Monro and his craft, now came to his assistance in a manner which, for cordiality and self-sacrifice, is perhaps unequalled in the annals of charity. The funds were soon exhausted, but the workmen continued to build. Many gave their services gratuitously, and many more deferred their claims for wages to promote the progress of erection. Those who could not subscribe money brought materials, and, under the personal superintendence of Monro and Drummond, the work proceeded surely to a successful issue. With a breadth of view in advance of the times, the managers of the infirmary threw it open not only to those who were "free of the city" and to inhabitants who were not so privileged, but to the poor and afflicted of all nations. By this decisive measure a step was taken not only greatly in advance of the position hitherto held by the elementary medical school, but in advance of other similar institutions. In 1746-47 the hospital was first opened to students for a fee, and in the same year another step was taken which still further secured the superiority of the new school, and which, as an indication of penetration on the part of its promoters, will remain as a permanent honour to the Edinburgh Faculty of Medicine. It was resolved that clinical lectures should be regularly delivered in the Hospital. The resolution was at once carried into effect in a manner essentially the same as that practised at the present day. Professor Rutherford conducted the clinical course. An inspection of his lectures, of which Professor Laycock, of Edinburgh University, possesses two volumes in manuscript, shows that his course must have been highly instructive and calculated to promote the practical study of medicine. Thus it may be seen that in the short space of twenty years, and principally under the admirable administration of Monro, there was developed in Edinburgh a model school of medicine. In 1720 Monro inaugurated the system of giving regular courses of lectures. In 1726 the Senatus Academicus recognised and minuted the existence of a Medical Faculty. In 1746-47 a hospital based on universal principles was opened for the purposes of clinical study; and in the same year Dr. Rutherford commenced, by virtue of a resolution to that effect, the system of clinical instruction which was subsequently sustained by Monro *primus*, Cullen, and Whytt, and which since then has been nobly maintained as one of the greatest ornaments of the Edinburgh School. It is impossible not to admire the energy and administrative ability which, from crude materials little in advance of the original element of "ane enclosure forty feet each way," evolved a compact and comprehensive school of medicine. At the same time we must conclude that the great success which of late has fallen to the lot of the Edinburgh Medical Faculty is to no small extent traceable to the fact not only that their school has secured the services of many teachers of merited distinction, but that from its very origin the constitution of the school has been sound, liberal, and comprehensive.

THE PHYSIOLOGY OF VISION.

V.—The Retina.

If the lens be the most important organ in the eyeball considered optically, undoubtedly the retina is of most importance from a physiological point of view. Its structures are arranged in certain definite layers, but we shall confine our attention mainly to its nervous elements—that is to say, the special structures which respond to the stimulus of the waves of light, and serve to propagate this stimulus in the ordinary fashion to the brain.

Diverse as they may outwardly seem, the organs of sense have a curious family likeness when examined more minutely. Whether we investigate the structure of the taste-corpuscles on the outer surface of the circumvallate papillæ, the olfactory region of the nose, or the nerve-structures of the ampullæ of the ear, we find the same broad outline. A nerve pierces a membrane of greater or less density, in which it loses its medullary sheath—provided it has any; on the surface of this it forms a plexus of exceedingly fine fibres, which send off branches towards the free surface. These branches bear nucleated enlargements, and terminate in fine hair-like processes, projecting more or less distinctly beyond the free surface, and are supported by epithelial cells of the cylindrical kind, between which these hairs protrude. But the retina and the organ of Corti in the cochlea are much more highly specialised, and, though we can trace the same general outline, the details are different. The optic nerve penetrates the eyeball to the inner side of its axis, not by a distinct opening, but by a series of minute orifices constituting a cribriform

plate. Arrived in the interior of the eye, the nerve-fibres tend to ramify in every direction; but the spot where they enter is marked by an elevation composed of the connective tissue which has entered into the composition of their sheaths and the sclerotic; and in the centre of this, which is the optic papilla, there are seen to emerge two vessels—the arteria and vena centralis retinæ—which are distributed to the interior of the eyeball. Two branches of these vessels are always notable; they both pass outwards, one arching upwards, one downwards, so as to enclose a space in which no vessel is seen. In this space is the macula lutea, the central spot of the retina—a spot of the utmost physiological importance.

Ramifying immediately beneath the membrana limitans interna, the fibres of the optic nerve form frequent unclear masses, and from these masses of nerve-matter are sent outwards branches not very easily traced, but forming a double series of enlargements, also nuclear in character, before they reach the thin membrana limitans externa. Through this apparently, too, they pass, and abruptly terminate in the homologues of the sensitive hairs already spoken of, but which in the eye assume the well-known characters of rods and cones. Beyond these we come to the absorbing material—sometimes spoken of as the pigment layer of the choroid, sometimes as the uvea,—by which all light is arrested. In the retina we find no supporting epithelium, but in its place abundance of that fine and soft connective tissue, also found in the brain, called neuroglia. Thus it will be seen that certain nervous and other structures, including bloodvessels, are made to interpose between the more transparent parts of the eye and the sensitive rods and cones. This is not, however, the case in every part of the retina. In that portion already described as the yellow spot or central point, which has no vessels directed to it, and which corresponds to the optical axis of the eyeball, the textures are thinner. Here a certain thinning of the retinal structures takes place so as to give it a cup-like form, and this thinning is at the expense of the structures which ordinarily intervene between the vitreous and the layer of rods and cones. Here, however, the rods are almost superseded by the cones, which, moreover, are here more readily reached by the rays of light; and these rays are precisely those which have been least deflected in passing through the various optical media, seeing that they correspond to the optical axis of the eyeball. Knowing all this, we might almost conclude *à priori* that here the sense of vision would be keenest,—and so it is; just as at the spot where the optic nerve enters, and where the elements we call rods and cones are deficient, there is in every eye, however strange it may seem, absolute blindness.

THE WEEK.

TOPICS OF THE DAY.

Amongst the Knight Commanders of the Bath who were invested with the insignia of the second class of the Order at the investiture held by her Majesty at Windsor on Monday last was Surgeon-General William Mure Muir, M.D.

The reception given to Sir Samuel Baker and his wife in the theatre of the London University on Monday last by the Prince of Wales and the Royal Geographical Society is certainly the scientific event of the week. Sir Samuel Baker gave the geographers a glimpse of the hitherto *terra incognita* of Central Africa, and a history of the heroic achievements of his expedition, which were of unsurpassed interest. There can be now no doubt that inside the malarial districts of the coast a large portion of Central Africa is a magnificent country, capable of supporting vast populations and of supplying all the needs of civilisation. If, as certain philosophers of the present day affirm, man is only a delicately constructed machine, deriving all his energy from the sun, some of the negroes with whom Sir Samuel Baker came in contact are very peculiarly made, and the sun must have a good deal to answer for. Here is his description of the working of a human machine—the king of a place called Masindi:—

"This young man had distinguished himself by murdering his whole family under these circumstances:—When a king dies his body is placed upon a sort of huge gridiron, and is then toasted by a fire kindled beneath. The body then lies in state unburied and is the signal for civil discord. The sons fight until one of them is victorious and he sticks his spear into the body of his parent as a symbol of victory. Then the funeral rites take place, corresponding with those recorded of the ancient Scythians. A large pit is dug, in which some of the deceased king's wives are put, and the corpse is lowered down till it rests on their knees. Then there is a raid on some neighbouring villages, and the people captured are brought to the brink of the pit, where their arms and legs are broken, and in this mutilated condition they are thrown down to the corpse beneath. Then the earth is piled upon them, the people stamp it down upon this mass of writhing humanity, and the horrid rites are complete. Such had been the ceremony observed at Masindi, and the son who had succeeded to the throne then invited his relations to dinner and caused them all to be massacred."

It appears that the amount of typhoid fever in the colleges at Cambridge has been made the subject of exaggerated reports. A full investigation of the cause of the outbreak has been set on foot under the superintendence of the Regius Professor of Physic. There have been a few cases at Caius College, and one has terminated fatally; but it is not true that the College has been entirely deserted, although many of the students have left. As yet the source of the fever does not seem to have been satisfactorily made out; it has been supposed to have been derived from infected milk, but there is no evidence to bear out this theory.

YELLOW FEVER AND THE GOLD COAST EXPEDITION.

The arrival of the African Mail Company's steamer *Ambriz* from the West Coast has confirmed the unwelcome rumours of an outbreak of yellow fever in that locality, thirteen deaths having occurred on board this vessel from the malady since the date of her leaving St. Paul de Loanda on October 27 last. Amongst the foregoing were three of her stewards, five seamen, one fireman, and three coal-trimmers. The *Ambriz* was immediately put in quarantine off Cape Coast Castle, and her mails transferred to the *Biafra*, but the latter vessel is reported to have lost six or seven men by the same disease since she started for this country.

The foregoing information is of greater importance to us at the present moment from the fact of our troops intended for the Coomassie expedition being almost due on the Coast; and it is to be hoped that the prompt action of the authorities in placing the *Ambriz* in quarantine at Cape Coast Castle may have averted all danger of a visitation of yellow fever at that station.

It is possibly from this cause, and from information which it may have received on the subject, that the Medical Department has considered it necessary to place a further contingent of army medical officers under orders for immediate embarkation for the Gold Coast.

Special instructions were issued to those on board, before the *Victor Emmanuel* sailed, having reference to such a contingency as an outbreak of yellow fever or other epidemic amongst the British troops on the Coast, and suggestions were prepared calling attention to the importance of isolating all the earlier cases which might occur, and for carrying out a perfect system of disinfecting clothes, bedding, etc.; or, in the event of any sickness spreading with so much rapidity as to elude all efforts for checking it, it was recommended that no fresh cases should be taken on board, but that the hospital-ship should be con-

sidered to be in quarantine, and should even, if deemed necessary, be removed from the Coast to another latitude.

We may therefore fairly assume that all due precautions will be taken to prevent, if possible, the appearance of this disease, and to check to the uttermost its spread, should it unfortunately break out, amongst the troops and others employed at the seat of the war.

It is very much to be hoped that Sir Garnet Wolseley has by this time recovered from the slight attack of fever from which he was reported to be suffering about the middle of last month. As he has organised the whole of the arrangements for the forthcoming operations it is evident that no one else would have so great a chance of success, or be so likely to bring to a satisfactory termination a campaign embracing all the peculiar features of the present, as the originator of the plans to be adopted during the march into the interior. If everything has gone well, the *Tamar* and *Himalaya*, with the Rifle Brigade and 23rd Regiment on board, will by the time these lines are published have arrived at Cape Coast Castle, and before our next edition appears it is probable that the great march upon Coomassie will have begun.

The only other item of intelligence which will be of interest to our readers is the confirmed report of the improvement in health of Commodore Commerell, who appears to be slowly recovering from the severe wounds which he received at the outbreak of the present hostilities.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

At a meeting of this Society, on Tuesday last, after a paper by Dr. George Harley, "On Some of the Therapeutical Effects of Conium," an important communication, "On the Cure of Aneurism by Position," was made by Mr. Joliffe Tufnell, who had come over from Dublin on purpose to be present. The subject-matter of the paper consisted of a description of three cases, with remarks on the treatment generally. The first case referred to was one of aneurism of the abdominal aorta, cured in thirty-seven days. The patient was a male, aged 31 years, a shipwright by trade. The patient died from albuminuria five months after consolidation of the contents of the sac. The second case was also one of aneurism of the abdominal aorta, cured in twenty-one days. This patient was also a male, aged 78 years, a pensioner from the army. He died three years subsequent to recovery, from old age and general decay. The third case was one of aneurism of the popliteal artery, cured in twelve days. This patient, too, was a male, 37 years of age, a trooper in the Royal Dragoons. He is still serving in that regiment. After the reading of the paper several well-known surgeons took part in the discussion, which was prolonged and interesting, the details of which will in due time appear in our reports. It may be taken for granted that a communication from Mr. Joliffe Tufnell on any subject connected with aneurism, followed by remarks by Messrs. Holmes, Callender, Savory, Durham, and Gant, and Drs. Sibson and Andrew, secured for the Society a successful and instructive evening. Surgery is, indeed, greatly indebted to the Dublin surgeons for their researches and treatment of aneurism; and the paper of Tuesday evening was provided by one of the ablest of their number.

KILLED BY THE FOG.

Not killed *in* the fog; for, sensational though the heading may seem, it is only too true of a certain number of the members of our community. Dwellers in London are familiar enough with fogs, and, to a certain extent, also with the raw cold of an east wind, but we seldom have fog and cold combined to such an extent as at the present season. Now, the fact that the fall of the thermometer below a given degree means death to many an aged individual, and is the sure precursor of a list of centenarians in the columns of the daily papers, has been thoroughly brought home to us by the reports of the Registrar-General. But the influence of a fog is not so apparent to those of the outer world. When, however, the two are combined—a low temperature, a low barometric pressure, and the air filled with irritating particles of smoke,—the condition is eminently unfavourable to many poor sufferers the subjects of heart and lung disease. Easy breathing means a comfortable change both of the air and blood of the lung. But to an irritated lung the combination of cold and smoky air is particularly unbearable. Violent coughing ensues; and whilst the patient coughs he cannot breathe, and cough materially interferes, moreover, with circulation. The extreme discomfort we have seen in some cases during the last few days has been distressing to witness, and has in some instances ended in death; but an easy death is almost preferable to the sufferings of some who yet remain, but whose condition is hopeless. Not long ago we were advised on high authority—strictly non-medical, of course—that to keep our health we were to clothe ourselves warmly, and throw all our doors and windows open—that, in short, ventilation was everything. But it is just as well that people should know that there are certain poor creatures to whom this means death; for whom there is no safety save in closing door and window and trusting to a good fire for ventilation—that, in short, there are conditions under which warmth must, even on scientific grounds, be preferred to ventilation. A clear, bright, frosty day, to one well filled and well clad, may bring joy and exhilaration from active exercise; but for the poor who are suffering in our panper infirmaries and hospitals it means something quite different.

DEFECTIVE REGISTRATION IN DUBLIN.

The Registrar-General for Ireland, Mr. Donnelly, C.B., has placed himself in communication with the Boards of Guardians of the North and South Dublin Unions as to the very defective state of the registration of births, deaths, and marriages in these union districts. He recommends that the registration sub-districts should be divided, a dispensary medical officer to act in each of the resulting areas. When the suggestion was laid before the Guardians of the North Dublin Union, a resolution was unanimously adopted to the effect that "the proposed alteration was needless, and would lead to confusion." The clerk also stated that he had by him the returns for the past six or seven years, and there seemed to him to be no irregularity. This may be quite true of his own union, but it most certainly is not so of the South Dublin Union. Under date November 10, 1873, the Registrar-General wrote "*No deaths have been returned as having occurred in the South Dublin Union Workhouse for the last two weeks.*" A week later, forty-five deaths were returned *in globo* from this institution, and the death-rate of Dublin was artificially raised from 22 to 35 per 1000. Exactly the same thing has recurred in the past three weeks, the Registrar-General writing on December 1, 1873, "*No deaths have been returned as having occurred in the South Dublin Union Workhouse for the last two weeks*"! But the assertion as to *defective* registration is remarkably borne out in the following curious way:—The deaths *registered* in the Dublin District in the seven years ending 1871 numbered 57,343. In the same time the burials in the three large city cemeteries amounted to 60,429—in other words, *more than* 3000 *persons were buried who had never died!* As a matter of fact, too, comparatively few persons dying in the Kingstown, Blackrock, and Donnybrook sub-districts, which are included in the Dublin registration area, and which have a population numbering 47,401 souls, are interred in the cemeteries referred to. We believe that in some sub-districts in Dublin it has been found that 25 per cent. of the deaths have not been registered. Truly a pretty state of things! The birth-rate of Dublin also is

so remarkably low, when compared with that of London, Glasgow, and Edinburgh, that the inference of defective registration is irresistible. In eight years ending 1872 the birth-rate per 1000 was—in Dublin, 27·38; in London, 35·25; in Glasgow, 41·12; and in Edinburgh, 36·00. We are inclined to agree with the Registrar-General that there is a "screw loose somewhere." The stationary condition of the population of Dublin, also, can scarcely be explained by mere emigration, which is comparatively slight. It is more likely that the published death-rate is considerably below the actual death-rate.

LARYNGEAL PHTHISIS.

Most of us are aware of the difference of opinion which exists amongst pathologists in respect to the relation of chronic disease of the larynx to phthisis of the lungs, some describing the one, and some the other as the primary affection. The question has lately been subjected to experiment by Sommerbrodt, who gives a description of the results he obtained, and the conclusions at which he has arrived, in the *Archiv. f. Experiment. Pathol. u. Pharmac.*, 1873, vol. i., page 264, and *Centralblatt*, 1873, September 27, No. 44. Sommerbrodt experimented on rabbits by inserting a glowing wire in the larynx and upper part of the trachea and there leaving it, where it acted as a chronic irritant, causing death in from four to ten weeks. On examination at various periods, the following was discovered to be the sequence of events:—Some eight days after the operation, small cheesy centres were found in the subcutaneous tissue near the wound. The mucous membrane of the trachea at the same spot was ulcerated, and the cartilage laid bare. The inflammation thereupon spread more or less rapidly along the air-passages to the finest bronchi, thence to the peribronchial tissue, and finally into the pulmonary alveoli. It was easy to trace with the microscope the inflammatory process advancing from the neighbourhood of the bronchi into the alveolar septa, by the thickening of the latter, and their infiltration with lymphoid cells. At the same time there was found combined a desquamation of the intra-alveolar epithelium (Buhl's *peribronchitis purulenta* and *desquamative pneumonia* without purulent softening of the tissue). The experimenter concludes that chronic inflammatory irritation of the trachea leads to purulent peribronchitis, and thence to phthisis. Sommerbrodt was able to show by crucial experiments that the pulmonary disease was not secondary to the infectious centres, or cheesy masses described as occurring subcutaneously at the seat of wound. The lung disease which is secondary to these or other cheesy masses in rabbits, is of the nature of a caseous lobar pneumonia, without the characters of bronchial affection above noticed. It is worthy of remark that dogs similarly operated on never gave the same result—never died of phthisis. Their "constitution" is, therefore, entirely different from that of rabbits.

CORROBORATIVE EVIDENCE.

At a meeting of the Shoreditch Vestry, on Tuesday, the report of a special committee appointed to investigate certain charges made by a Mr. Butler, baker, at Hoxton, against Dr. Stevenson, the analyst of the parish, was considered. It appeared that in the bread which had been analysed by Dr. Stevenson the alum was imperfectly and irregularly mixed in the bread. The Committee submitted the sealed sample, at the suggestion of Dr. Stevenson, to Dr. Dupré, of the Westminster Hospital, and analyst for St. James's, Westminster, care being taken not to let him know from whom it came. Dr. Dupré made the following report:—"I have carefully examined the sample of bread, and find it adulterated with a considerable portion of alum. The bread, part of a small loaf, was very dry, and somewhat mouldy. It consisted of dry matter 85 per cent., moisture 15 per cent., and contained 0·507 per cent. of alum. Now, assuming that the bread had originally contained 44 per cent. of moisture (the usual average), the above proportion would be equivalent to 46·76 grs. of alum in the 2-lb. loaf. No other kind of adulteration was detected." In a letter to the Vestry, Dr. Stevenson stated that Dr. Dupré's report confirmed his statement that the alum was imperfectly and irregularly mixed in the bread. No chemist was at all times infallible. He expressed a hope that what occurred would not shake their confidence in his analytical skill. It was suggested in future that the analyst, on giving his certificate on any sample, should state the result of his examination in a quantitative form. The report was adopted without discussion. We do not see upon what grounds the Vestry should lose their confidence in the analytical skill of Dr. Stevenson. On the contrary, as Dr. Dupré's analysis confirmed that of Dr. Stevenson, the confidence of the Vestry in this gentleman should be strengthened.

SCRIVENERS' PALSY (WRITERS' CRAMP).

It is a question whether a fictitious unity of origin and an excessive pathological importance have not been given to the symptoms commonly designated under this heading. It is still doubtful whether there be any one disease which owes its origin merely to long and continuous writing. Were it so the affection would probably be more common; but there are many local conditions and certain symptoms due to faulty positions of desk, pen, paper, or writer which may induce cramps or even paralysis of the various sets of muscles concerned in scribbling. We are glad to have the testimony of Dr. F. Runge to the existence of local conditions in some of these cases (*Berliner Klinische Wochenschrift*, 1873, No. 21, and *Wiener Medizinische Wochenschrift*, No. 32). In one case Runge found a chronic periostitis (in other words, a node) on the external condyle of the humerus. This node was extremely sensitive to pressure, and this pressure evoked spasmodic contractions of the extensor muscles originating there of precisely the same character as those suffered from when the patient persisted in writing. The actual cautery was applied over the inflamed spot, and this, with six weeks' entire rest, cured the patient, who was still well twelve months afterwards. In the second case an in-growing nail (of the right thumb of the patient) was the original cause of the cramps, for it compelled the patient to alter the mechanism—in other words, the position—of his hand in writing. When this was healed, and the matrix of the nail no longer tender, the cramps all ceased, and the patient was well. Runge, therefore, strongly advises that these local conditions should be carefully looked for, and treated when discovered, in all cases of writers' cramp. He mentions one case which supervened after an apoplectic seizure, and resisted all treatment. In a fourth case he diagnosed a neuritis ascendens of the musculo-spiral nerve, and directed the use of galvanism (ascending current), which gave considerable relief after five weeks; the case afterwards made still further progress, so that at the time of writing he considered it cured. In some cases there is no doubt that the mere abstraction of heat by means of the metallic portion of the penholder is a potent cause of cramp, just as cramp in other muscles is more common in old persons and in cold weather. Apart, however, from local conditions such as those named above, there can be but little doubt that faulty positions in the act of writing are the chief predisposing causes.

WOMEN DOCTORS.

A deputation from the Obstetrical Association of Accoucheuses waited upon Mr. Stansfeld on Monday, at the office of the Local Government Board, to present a memorial setting forth the existing disabilities under which women of a

higher education laboured when they desired to practice midwifery. They stated that the College of Surgeons would not allow them to undergo an examination unless they had been at a "recognised" medical school for four years, but no such school existed where women were admitted. The deputation urged that the Government should establish another board for the proper examination of midwives. They charged the Obstetrical Society of London with being their avowed enemies. He stated that he saw no reason why females should not be afforded facilities to fit themselves for all such functions, and thought the College of Surgeons ought to consider whether it was a just claim on the part of women to be educated and trained for the higher duties of the midwife. The question was a medical one, and therefore not in his hands, but as he was interested in the subject through his connexion with the Poor-law Board, it should have his attention. We have been always in favour of the efficient education of women for the fulfilment of the duties of midwives, whilst we are as much opposed to their pretensions to act as physicians and surgeons, for which office they are wholly unfit.

SUCCESSFUL OPPOSITION TO THE VACCINATION ACTS.

Our contemporary, the *Morning Post*, in a recent article on vaccination, says, considering how recently the country has been visited with an epidemic of small-pox, it is rather startling to learn that the Compulsory Vaccination Act is now a dead letter in several parts of England. They (the *Post*) have no means of knowing whether the change in the law which has produced this singularly unfortunate result was due to a mere blunder, or whether it was inspired by a misplaced confidence in the wisdom of local authorities. But what seems tolerably certain is that part of the machinery which was constructed with so much care, in order to make vaccination universal, has now come to a standstill, for the simple reason that boards of guardians have been left to work it or not to work it at their discretion, and that in several unions they have chosen not to work it. It is the same old story, which has recently been repeated in so many forms, of an original Act that has been made nugatory by an ill-judged amendment. The framers of the amending Acts of 1871 might have seen reason to doubt whether, in spite of the weight of the committee's report in favour of compulsory vaccination, it would be quite safe to leave the enforcement of the law at the discretion of a body like the guardians. Guardians are compelled to appoint an officer to issue warning notices to parents who omit to secure the vaccination of their children; they are no longer compelled to back up these notices by the adoption of legal proceedings. It appears (adds the *Post*, from a local paper which was before them) that the Guardians of Cheltenham, Dewsbury, Ulverstone, and Gainsborough have all resolved not to enforce vaccination in their unions, and it will not be wonderful if many other guardians, with these examples before them, decide to adopt a course which not only effects a considerable saving in the sums paid to the union surgeons, but concedes something to the noisy agitation which a few honest but mistaken people and a good many quacks have for some time been carrying on against vaccination. The question is a serious one. It is plain that the law must be amended without delay. A speaker at the meeting of the local authority at Gainsborough "congratulated himself on being able to inform the guardians that in the next session of Parliament a member of the Government would bring in a Bill to repeal the Vaccination Acts." We (says the *Post*) have no fear that Government will do anything so foolish. But it must no longer be left to what is pleasantly called the discretion of boards of guardians to determine whether small-pox is to be invited or to be stamped out. Half-and-half legislation on so vital a question is a serious mistake. It gives rise not only to the progress of a loathsome disease, but stimulates the energies of ignorant, though they may be "honest," agitators. It moreover raises a doubt in the minds of many reasonable people of the confidence of the Government itself in the protective powers of vaccination. The alteration of the Act in 1871 was a great blunder. It is absurd to suppose that, if the Legislature had made the Act more stringent, eventually it would not have silenced opponents and made the Act effective.

THE TEMPERATURE IN TYPHOID FEVER.

Wunderlich states ("Das Verhalten der Eigenwärme in Krankheiten," second edition, p. 279) "that abdominal typhus is not present when, even on the first day, or on the second morning of the disease, the temperature rises to 40° Cent. (equal to 104° Fahr.)." As a general rule, there can be but little doubt that this great thermometric observer is right. There are, however, occasional exceptions to this canon, and it is well from time to time to note such exceptions. If we translate such exceptional cases into common language, we should say that occasionally enteric fever assumes the usual features of typhus in the thundering manner of its invasion and its rapid march. Some cases quoted at the monthly meeting of the South Australian Medical Association appear to have been of this kind. It is not, however, quite clear from the report in the *Australian Medical Journal* for June, 1873, page 184, that the speakers referred to morning temperatures. That we may not appear to distort their meaning, we extract the report *verbatim*:—

"Mr. Jay then read a paper 'On the Use of the Thermometer in Disease.'

"Afterwards a discussion ensued, during which Mr. Ellison referred to two cases of peculiarity in temperature, which had been met with lately in the hospital. One was that of the cook of the hospital, a remarkably robust man, who was seized suddenly on a Saturday with shivering. On the Sunday he was drowsy and feverish, and his temperature was 104·6°. He had one of the most malignant attacks of enteric fever that we have seen lately, with head symptoms, and died in ten days. There were large patches of ulceration in the ileum.

"The other case was that of a boy who was suffering from idiopathic erysipelas. In this case the morning temperature was invariably higher than the evening throughout the course of the disease.

"Dr. Whittell stated that he had seen several cases of enteric fever like that mentioned by Mr. Ellison, where the temperature was above 104° on the second day. They were generally severe cases, and, in fact, as a rule the patients died.

"In this colony, therefore, the rule is not absolute that when the temperature rises above 104° on the second day it is not one of enteric fever."

DR. REDWOOD'S APPOINTMENT.

The Local Government Board have approved of Dr. Redwood being appointed analyst for the portion of the county of Middlesex beyond the limits of the metropolis—the grounds assigned by the Clerkenwell Vestry to the Board for withholding their sanction to such appointment being in the opinion of the Board insufficient. Certainly no more efficient analyst could be found than Dr. Redwood. Upon this ground, then, the objections of the Vestry are more than overbalanced.

UNHEALTHY EMPLOYMENT OF WOMEN.

In a recent report by Mr. Fitton, factory sub-inspector, he refers to the employment of women in salt-works. He had heard that women were employed all night at certain works in Droitwich. He accordingly went to the works, and states he can swear—and it is not denied—that he saw women stripped and ready for work at night, who all ran off and hid themselves as soon as he entered the shed. One of them had a salt-box in her hand. He should be glad, he adds, if the employment of women at salt-works was altogether prohibited,

as—although he by no means desires to see the employment of female labour in factories generally put an end to—he believes that the semi-nude working at salt factories is in every way bad for women, and it is especially injurious to nursing mothers, and their infants, who are brought into the steaming sheds to be suckled. Mr. Fitton's recommendation is fortified by humanity and common sense. We trust it will be carried out by the proper authorities.

SMALL-POX IN MONTREAL.

The Fifty-first Annual Report of the Montreal General Hospital states *inter alia* that "the most noticeable feature in the medical history of the institution during the year was the persistence of small-pox during the earlier months, the severe epidemic of that disease, which began the year before, not having ceased, although the ratio of mortality had considerably declined. The number of persons admitted into the Small-pox Hospital in 1871-72 was 114, of whom 33 died, a ratio of 1 in 3·45. In 1872-73, 118 cases of that disease were treated, of whom 19 died, or 1 in 6·21." The *Canada Medical Record*, from which we take the foregoing particulars, does not state how many cases in the above were vaccinated efficiently or inefficiently. This is an omission which is to be regretted.

CHOLERA HOSPITAL AT HOWTH, NEAR DUBLIN.

At the usual weekly meeting of the Guardians of the North Dublin Union, held on Wednesday, the 3rd inst., a resolution was adopted authorising the Master of the Workhouse of the Union to have a suitable wooden hospital erected at the north-east point of the hill, capable of accommodating twenty patients, and providing rooms for medicine, nurses, and a doctor—the expenses not to exceed £100.

FROM ABROAD.—THE MEDICAL FACULTY OF LEIPZIG—THE PRUSSIAN UNIVERSITIES.

Dr. D'Espine, of Geneva, in a communication to the *Gazette Hebdomadaire* of December 5, gives an interesting account of "A Recent Visit to the Medical Faculty of Leipzig." Leipzig, he observes, is at the present time the great German university, Berlin only occupying the second rank as to the number of its students, and a far lower rank still with regard to its hospitals and laboratories. One of the principal causes of this pre-eminence, and a principal source of the greatness of the University of Leipzig, is the immense funded property which it possesses, and the intelligent disposal of its revenues, which has enabled it to construct palaces of science, and to employ as professors men of the highest merit. The Faculty of Medicine has especially benefited by this exceptional good fortune, its building constituting almost a district at the gates of the city, where we meet with physiological and chemical laboratories, a pathological institute, and an immense shed-hospital. Descriptive anatomy is alone taught amidst the other faculties at the Augusteum in the centre of the town; but for this also a huge edifice is being constructed near the physiological laboratory, which will be completed by the winter. There are two professors of normal anatomy, one of whom (Professor Braune) has special charge of regional anatomy, and the other (Professor His, from Basel) teaches descriptive anatomy and embryogeny. His labours in embryogeny have created an epoch in that science, and his lectures on development are much frequented. Sections, attached to portable microscopes, are circulated during the lecture, the Professor then demonstrating on a beautiful series of wax models, made after his own indications, the various phases of development. These models have their importance in the study of the subject, for Professor His states that it was not until after the construction of these wax figures that he was enabled to seize certain details which were quite incomprehensible from mere sections.

Among the new academical buildings that line the Hospital-Strasse, the most celebrated and the earliest in date is the Physiological Institute, constructed on the plans furnished by Professor Ludwig, and inaugurated by him, and having attached to it buildings for physical apparatus, chemical investigations, and microscopical observations. All are under the general direction of Professor Ludwig, as are the specialists engaged in the various departments. And it may be well believed that the secret of the amount and importance of the physiological work done in Germany a good deal depends upon this unity of direction on the one hand, and on the other upon the association in the same institution of men engaged in special labours, and capable of rendering each other mutual assistance. The Professor devotes the largest share of his time to instruction, and, while himself directing all the experiments and generally proposing the subjects of study, he causes most of the work to be executed by his students. This labour in common does not, as might be supposed, interfere with the originality of the disciple; for what is wanting most to young investigators is not always so much ideas as the means of execution. The technical procedures constitute the stumbling-block to many young experimenters. Moreover, the personal influence of the teacher is one of the great moving powers of medical instruction in Germany; and surely we cannot say that originality of investigation has sustained much harm from this. The biography of Louis also strikingly shows us that in France, too, among celebrated men those only create schools who give themselves up to their pupils, and daily pass over again with them the paths which they had so painfully toiled up alone. Many of Ludwig's pupils fill chairs in Germany and Russia, and several among them have produced important works.

The Pathological Institute is quite new, and is an agreeable building of one storey, situated at the extremity of the enclosure of the hospital. The autopsy-room, Dr. D'Espine says, is the finest that he has ever seen, and is furnished with the only luxuries permissible in such a locality—plentiful supplies of light and water. Caoutchouc tubes convey water to every dissection-table, and allow of the effectual washing of the organs as they are removed far better than the traditional watering-pot. Every autopsy is made and dictated to a pupil by the professor of pathological anatomy or one of his assistants, as at all the German universities. Alongside are also rooms for microscopical examination and putting up preparations. The museum, which is placed on the floor above, although recent, is already of considerable size. For practical purposes this museum is usefully divided into two parts. The museum, properly so called, containing the rare preparations, is under lock and key; while the museum for study, intended for the use of the students, consists of many specimens of the most ordinary lesions. The Professor of Pathological Anatomy, Dr. Wagner, is well known to us all by his works. He has also charge of a polyclinic or dispensary, and is one of the consulting physicians of the King of Saxony; so that the separation between science and practice would not seem to be so distinct at Leipzig as in other German universities.

The hospital, which has been rebuilt during the last two or three years, consists of fourteen large sheds (if such a name can be given to what are really elegant pavilions), connected together by a covered gallery, and looking on to the garden. Each wooden shed rests on a stone support of about a metre in height, this facilitating ventilation. Warm air also is generated by a calorifer, which heats the sheds far better than the large Leipzig stoves, which in winter do not give sufficient warmth. Ventilation also takes place by the roof, which is open at the sides, windows protecting from the cold during a portion of the day in winter. Each shed contains from twenty to twenty-four

beds, a separate chamber, baths, a small kitchen, and the closets, which are in the ward itself—any ill effect which might arise from this last arrangement being effectually prevented by the employment of earth-closets, of which the medical officers speak in high terms. Water is laid on to each shed, and in the centre of the ward is a large lavabo, with cocks for cold and warm water. The ward communicates through an ante-chamber with the gallery, except in the case of two or three of the sheds, which are isolated for contagious diseases. The central portion of the hospital is of stone, being, in fact, the old building, now exclusively devoted to paying patients, who have each their separate room. The sheds constitute the clinic, under the direction of Professor Thiersch for surgery and of Professor Wunderlich for medicine. The Maternity is in the town, no lying-in women being admitted into the hospital. During the twelve months August 1872-73, Professor Thiresch has performed 266 serious bloody operations, and has not lost a case from pyæmia; while, prior to the construction of the shed-hospitals, he lost from forty to fifty amputations from this cause annually. Whether such a splendid result will be maintained, or whether these wooden hospitals themselves will not become infected, remains to be seen; at all events, the resource of burning them at the end of a certain number of years remains. Professor Thiersch adopted Lister's mode of dressing in 1867 with all the enthusiasm of a believer, employing it rigorously and exclusively; but the results were far less favourable than those which he now obtains. This year he has tried, concurrently with Lister's procedure, that of Rose of Zurich, of dressing in free air; and although the stumps produced by Lister's method are very much better, yet the ultimate results obtained from Rose's procedure are more favourable. In a healthy locality like that of the Leipzig Hospital he now discontinues Lister's dressing about the third or fourth day, the plastic barrier having by this time formed, and the surface being more easily watched for secondary hæmorrhage; while cicatrisation, which is impeded by that application, advances much more rapidly. Professor Wunderlich delivers his clinical lectures at the bedside; and it need not be stated that the thermometer and temperature-curves play a very considerable part in his service, prognosis and diagnosis being regulated by the position of the mercurial column. This also decides whether the typhus patient shall have his cold bath, this being in general given whenever the thermometer exceeds 39·8° C. Pulmonary complications, including pneumonia, are no contra-indication; and certainly cold water in the treatment of febrile thoracic affections is not attended with the danger that might be feared. The two absolute contra-indications admitted by Wunderlich are intestinal hæmorrhage and albuminous nephritis. The baths are easily rolled to the bedside, from four to five being generally given to typhus patients daily; but sometimes as many as eight are given at a temperature of 20° C.

In conclusion, the Obstetrical and Gynæcological Clinic is under the direction of Professor Credé, whose procedure of delivery of the placenta by expression has throughout Germany replaced that of traction by the cord. The maternities are not the portions of the German hospitals which make most figure, and that of Leipzig is no exception in this particular.

We may append to the above an enumeration of the Prussian universities, contained in the *Union Médicale* of December 6. The nine Prussian universities, the Academy of Münster, and the Lyceum of Braunsberg, together, counted during the summer semester of 1873, 434 professors, 177 extraordinary or supplementary professors, 216 privat-docenten—total, 827; of which number, 79 taught evangelical theology, 29 Catholic theology, 85 jurisprudence, 229 medicine, and 405 philosophy. Berlin had 178 professors, Bonn 100, Breslau 98, Göttingen 85, Greifswald 54, Halle 82, Kiel 54, Königsberg 68, Marburg 62, Münster 27, and Braunsberg 9. The total number of matriculated students was 7199, 966 of these not being Prussians; and these are divided among the faculties as follow:—Evangelical theology, 798; Catholic theology, 406; jurisprudence, 1722; medicine, 1587; and philosophy, 2686. To these are to be added 1685 persons who are authorised to attend courses of lectures without matriculation, making a total of 8884 individuals attending the lectures in the Prussian universities. Of this number, Berlin claimed 3051, Bonn 834, Breslau 1022, Göttingen 879, Greifswald 531, Halle 961, Kiel 174, Königsberg 581, Marburg 392, Münster 339, and Braunsberg 20.

LETTERS FROM MADRAS.

No. V.

(*Concluded from page* 643.)

THE LEPROSY OF MOSES—VARIETIES OF SKIN DISEASE IN LEPERS.

Now for a few words on the leprosy of Moses. What was it?

Here we are met with the fact that when the Old Testament was translated into Greek by the seventy elders of Alexandria, about 250 (?) years before Christ, they took the word *lepra* to signify the *tsorath* of Moses. Moreover, the term λέπρα was adopted in the New Testament, in the Vulgate Latin Bible, and by the Arabian physicians as the name of the tubercular disease, and so has come to us. So that here a double question arises. Was the *tsorath* or Mosaic leprosy a merely trivial scaly disease, like the λέπρα of Hippocrates, or had the sense of the word *lepra* become enlarged amongst the Greek-speaking Jews of the East and the Arabian physicians, so as to include the worst skin diseases? The latter supposition is not impossible, as is shown by the use of our word "scurvy," to denote diseases that have no scurf. Moreover, it might be difficult to distinguish the skin frightfully swollen with chronic eczema, or psoriasis, or with the common elephantiasis covered with crusts and ulcers, from a skin whose initial lesion was true leprosy; and so the name of one (lepra) might have been popularly applied to all three.

Now, in endeavouring to form for oneself an answer to this enigma, there are three things to be done: first, to extract the naked facts as they are described in the Bible; secondly, to estimate the value of the terms employed; and thirdly, to come to such conclusion as may be reached by the aid of collateral evidence. The advange of getting at the exact meaning of the word employed was suggested by Dr. Oppert, the Sanskrit Professor in the University of Madras, who is well known for the acuteness with which he has solved more than one enigma in archæology and ethnology—to wit, the identification of the "Three Kings of Cologne" and of the mysterious "Prester John."(a)

The cases of leprosy described as affecting individuals are five—first, that of Moses, whose hand became "white as snow" (Exodus iv., 6); secondly, the case of Miriam, who became "white as snow," and who is described also as like a dead person—like an abortion thrust untimely from the mother's womb, with half the flesh eaten up (Numbers xii., 12); the third case is of Naaman, whose flesh is described as being quite the opposite to that of a healthy child; the fourth is that of Gehazi (2 Kings v., 14, 27), also described as being "white as snow." From these cases we get the fact of whiteness of the surface, and of a state of withering, or other bad condition, like that of an abortion.

Next, as to the value of the terms employed. The word *tsorath*, constantly translated "lepra" in the Greek LXX. and Vulgate, and "leprosy" in the English Bible really signifies, according to Dr. Oppert, a stripe, blow, smite, or infection. It is frequently used with another word—*nega*,—which also signifies a blow, striking, mark, or wheal. *Nega tsorath* is rendered in the Latin Vulgate Bible as *plaga lepræ*, whence our "plague of leprosy"; for the word "plague," like the Latin *plaga*, and the Greek πλήγη, means a blow, stripe, or wheal. The Septuagint makes it ἁφὴ λέπρας, or touch of leprosy. Thus, in the cases of Moses, Miriam, and Gehazi, the passages might be simply rendered, "He was smitten white as snow."

So, also, in the fifth case, that of King Uzziah, the whole

(a) See the *Journal of the Ethnological Society*, 1870.

passage refers to smiting. "The Lord had smitten him" because he attempted to do a priestly act; the word "smitten" being that which is elsewhere translated *plaga* or *plague* (*Sensisset plagam Domini*, ἤλεγξεν αὐτον κύριος, say the Vulgate and LXX.). It is important to notice that the name of the disease implies "*the* stroke"—the stroke of God (2 Chronicles xxvi., 20).(b)

So far, all, though vague, is simple. For vagueness and complexity we must plunge into the precepts of Moses respecting leprosy in Levitieus (chapters xiii. and xiv.), which were to guide the priest in the distinction of leprosy from less important diseases. The importance of this distinction is clear when we consider that, if leprosy were detected, the patient was not merely "unclean" in a ceremonial sense, but was driven from the camp or city, forced to dwell apart, with ragged clothes and bare head, and a covering over his upper lip (perhaps to prevent contamination by his breath).

The morbid conditions enumerated are called "risings" or swellings (*sahat*), scabs (*sappahat*), bright white spots (*behereth*), "boils" or cicatrices of ulcers (*sheehen*), and scales; and the key to the whole subject seems to be found at the end of chapter xiv., where it is said that the object of the "law for all manner of leprosy and scale," and for risings, scabs, and spots, was to teach when they were "cleau" and when "unclean." Of the so-called leprosy of garments and houses we can only conjecture that they were some kind of mould or mildew.

The first distinct morbid appearance described is *sappahat* "scab" in the English; "scabies" in the Vulgate; rendered "pustula" and "impetigo" in later Latin versions from the Syriac, etc., in Walton's Polyglot (Lev. xiii., 1-8).

The second, *sahat lebaneh*, is very obscure. It is some white condition, which might cover the patient from head to foot with ulceration. This was undoubtedly to be pronounced unclean at once, without the need of shutting up the patient to watch the course of the disease (Lev. xiii., 9-11). With this is conjoined another state of whiteness (morphœa, leucoderma?) which might cover a patient from head to foot without rendering him unclean, provided there were no ulceration (*ib.*, verses 12-17).

The third is a scar after a boil or ulcer (18-23).

The fourth, a scar or ulcer from a burn (24-28).

The fifth, a dry scall on the head or beard (*nethek*, Heb.; *Grind*, German; scab, scurf, etc.; θραῦσμα, LXX.; *pustula* and *porrigo* in sundry Latin versions (29-37).

The sixth is a white bright spot (*behereth*, verse 38); and the seventh is baldness (verse 40).

Now, with regard to what some of these seven names mean, there may be some uncertainty. For instance, the *sahat* is rendered—a rising, tumour, diversus color, cicatrix, nævus, φύλη σημασίας ἤτηλαυγής ("conspicuous scar of a mark"), in divers versions. But nothing can be clearer than the following five physical facts pointed out, according to which they were mere scab, scall, baldness, etc., or something worse.

Thus, if any one of them were spreading (Lev. xiii., 7, 8); if excavated below the level of the skin (verses 3, 20, 26, etc.); or if it showed a raw ulcer on an old scar (verse 14); or if the hair in it became white or yellow and downy (verses 3, 10, 25, 30); or if there were ulceration on a bald head (verse 42), they subjected the patient to the necessity of being shut up a week or two for quarantine and future examination (although there was no need of preliminary shutting up if the patient were "perspicuæ immunditiæ" (verse 11); and if still spreading, they made him "leprous and unclean."

On the other hand, with the selfsame diseases, if the "spot" did not spread; if there were no downy, thin, decoloured hairs on it ("subtilis pilus," Vulg.); if it were "fading," which seems the sense of "somewhat dark," and "darkish white" (verses 6, 39, etc.); if there were no elevation of the edges (for this would cause the centre of a sore to seem sunken to the sight), no ulceration on a bald head, then the patient was "clean." "It is but a scab, he shall be clean" (verse 6); "it is but a boil" (23); it is but a "burn"; it is but a *behek* (or freckle?) (39). All these lesions *per se* might be of little consequence, but if a scab spread (verse 8), or if one of the certain other four signs were added, it was a "leprosy," and unclean.

We must now come to the question, Was this or was it not the true tubercular leprosy? or rather, was the tubercular leprosy one of the chief forms of *tsorath?*

It may be maintained, on the one hand, that the LXX. translators would never have used the word λέπρα for *tsorath* if it had been Ἐλεφας, and if it were not the *lepra* of Hippocrates. Now, λέπρα is described by Hippocrates as a disease attended with itching of the skin (*epidem*), as one of the maladies of spring (Aph. III., 20), and he ranks it with itching, psora, lichen, alphos, and alopecia, as blemishes rather than diseases. So also does Celsus. The LXX. translators knew the words of Hippocrates, and they use his term ἄλφος for the *behek*, the trivial white glistening spots or freckles of Lev. xiii., 39. Therefore, it may be argued, the *tsorath* was a trivial scaly disease, and the patient only made unclean for ceremonial reasons. (*See* Hayman, in Smith's "Dictionary of the Bible.")

But here steps in collateral evidence, which renders inevitable the conclusion that the *tsorath* included the genuine tubercular leprosy, or elephas of the Greeks. This is a disease which can be traced. It was mentioned by Lucretius (B.C. 100) as common in Egypt, and by Celsus, Aretæus, etc. The Jews were always in closest social and political alliance with Egypt. The "boil of Egypt" (Deut. xxviii., 27, 35), is commonly considered to be elephantiasis. The regulations in the Old Testament for persons unclean with *tsorath* are the same as described in the New Testament for lepra. They are given by Paulus Ægineta for elephas, and are identical with those handed down to our forefathers, who took the name leprosy from their Vulgate version of the Bible, which followed the Septuagint, in which it was first assigned to the disease. It would be unintelligible if lesser skin diseases were treated by absolute exclusion, and the true leprosy not so. So then, although admitting that what we consider the distinctive marks of true leprosy were omitted by Moses, and that his descriptions, side by side with the use of *lepra* for *tsorath* in the Greek Bible, admit of the interpretation that they refer to skin disease alone, yet the continuity of custom, the treatment of tubercular leprosy down almost to our own time after the manner prescribed by Moses for *tsorath*, and the difficulty of believing that a scattered and wandering race like the Jews could be exempt from an Egyptian disease, make me believe that the *tsorath* was "leprosy."

The general drift and spirit of the Mosaic regulations were very strongly impressed upon my mind by the information I gained from Dr. Van Someren, in one of my visits to his clinique, when he paraded forty or fifty lepers (including half a dozen coolies just landed from Isle de Bourbon) in the garden for inspection. Now, all the signs of leprosy given by Moses are those of visible skin disease; and although, as a matter of science, we may dwell upon the inner affections of the nerves, which Moses says nothing about, yet we must not forget that all leprosy as a rule is attended with skin disease. As Moses showed, lepers have skin disease, but it is neither the scab, nor spot, nor scurf *per se* that constitutes leprosy. Amongst the skin affections of the lepers pointed out to me were—first, irregular accumulations of black pigment in spots and streaks (it is singular, by-the-bye, that in malarious disease the distribution of the pigment is disturbed on the backs of the fingers); secondly, diminution of pigment in large patches of light-coloured skin, generally anæsthetic; thirdly, *morphœa*, patches of glistening white skin thickened as if infiltrated with waxy deposit; fourthly, leucoderma, patches of skin of natural thickness, simply deprived of its pigment, the hairs in it also as white as snow; fifthly, psoriasis, which Dr. Van Someren showed me in all varieties, from psoriasis guttata (petty scaly spots peppered all over the body) to large patches of psoriasis, or the Hippocratic lepra, in its usual seat about the elbows and knees, and besides this a general indescribably unhealthy state of portions of skin (thickened, wrinkled, scaly, glistening or dusky, and greasy-looking); lastly, leprous ulcers (sordid, indolent excavations, surrounded by the thickened and apparently worm-eaten layers of cuticle). I was in the General Hospital one morning, when Dr. Paul, looking at an ulcer on a man's heel, said "That looks leprous." My uninstructed eyes could only see such an ulcer as I have just described; but Dr. Paul's diagnosis was verified by further examination: for one little finger was found atrophied to a stump, with a patch of leucoderma in the hand; and all the skin about the ankle unhealthy. But each and all of the skin affections just reckoned up may occur to persons who are not leprous. "It is but *behereth* or *behek*," says Moses; he is "clean."

What was the feature in leprosy which made it white as snow—the leucoderma, or the white scaly psoriasis? I should

(b) On this principle, the phrase "stricken (*nagua*), smitten of God" (Isaiah liii., 4), is explained by Delitzsch by a reference to leprosy as a type of sin.

think the latter; for mere whiteness of patches of skin (though it may attend lepra and secondary syphilis) is *per se* a mere atrophy, like baldness or grey hair.

The "white leprosy" is a common designation in Sanskrit, where, as Dr. Oppert and Mr. Ramachendra Row tell me, it signifies a new and not an old leprosy. In the Sanskrit, say my informants, there are eighteen terms for varieties of leprosy, seven severe, eleven less severe. The generic term for it is *Ku-sthā* = Anpatz = the "wasting state." Then there are *Svita kushtham*, or white leprosy, *Rakta kushtham*, or coloured leprosy, and *Kristna kushtha*, black leprosy. Other significant terms are the "great disease," *Mahāroga; Vyādhi*, "*the* disease" *par excellence*, or *Mahāvyadhi*, the great disease. Other terms signify "skin disease," "skin contamination," spots, etc. Haughton's translation of the "Institutes" of Manu gives "elephantiasis" as a translation of *Kushthi*, and it seems as if reckoned as one kind of leprosy. In the Tamil and other Dravidian languages of Southern Indian, leprosy is called the "great disease." Lepers are looked upon with abhorrence for their frightful appearance and loathsome breath and ulcers, and are put away or shut out by the natives whenever possible.

The "Institutes" of Manu(c)—the great lawgiver who is the Moses of the Hindoos—warn young men against marrying into ten kinds of families: the irreligious, that which has produced no male children, that in which the Veda has not been read, that which has thick hair on the body, and those subject to hæmorrhoids, to phthisis, dyspepsia, epilepsy, leprosy, or elephantiasis. As the Brahmans consider all present misfortune as a penance for sin committed in the present or in some past state of existence, so they ascribe leprosy as the penalty for one who steals clothes. There is a vestige of the idea that wearing another person's clothes might be contagious, as well as in the history of Gehazi; for, according to their system, "wherein ever a man sin, in the same is he punished" —a pickpocket with whitlows, a slanderer with stinking breath, a stealer of food with sickness, a horse-stealer with lameness, and so on. Anyhow, like the Jews, they regard leprosy as a special scourge of God.

THE STATISTICAL REPORT ON THE HEALTH OF THE NAVY FOR THE YEAR 1871.

The Statistical Report on the Health of the Navy for the year 1871 has just been issued. From this it appears that the mean force on the home station, corrected for time, was 22,100, and the total number of cases of disease and injury entered on the sick-list 20,886, giving a ratio of 945 per 1000. This shows an increase compared with the preceding twelve months equal to 11 per 1000. Of these 612 were invalided, and 148 proved fatal, the former being in the ratio of 27·6, and the latter of 6·6 per 1000. Compared with the preceding twelve months there was a decrease in the invaliding rate to the extent of 1·4 per 1000, and in the death-rate of 22·7 per 1000. The high ratio of mortality, however, in 1870 was altogether exceptional, being occasioned by the melancholy loss of the *Captain*.

Small-pox did not prevail very extensively in any of the ships; the necessity for the adoption of so extensive a measure as the revaccination of every man and boy in the service being fully justified by the results of the operation. A carefully compiled table shows the total number of men vaccinated to have been 10,154, the result being in 5936 a perfect vesicle, in 2278 a modified vesicle, 1869 no result, and 91 not ascertained. This latter number were cases of men operated on and drafted from their ships before sufficient time had elapsed to enable an opinion to be formed. From this it may be assumed that of the total number revaccinated considerably more than one-half had lost all the protective influence of primary vaccination, and that in more than one-half of the remainder it was much diminished. In about one-fifth of the whole the vaccine virus failed to produce any effect.

Of measles 62 cases, 97 of scarlet fever, 1 of typhus fever, 28 of enteric fever, 191 of simple continued fever, one of relapsing fever, 123 of ague, 1 of remittent fever, 100 of mumps, 25 of influenza, and 41 of erysipelas, were under treatment during the year. Of rheumatism 1187 cases, or 53·7 per 1000 (precisely the same ratio as in the preceding year) were entered on the sick-list; 51 being invalided, and 2 terminating fatally. The average number of men daily ineffective from rheumatism was 61.

There were 792 cases of primary and 336 of secondary syphilis recorded during the year, showing a decrease of 2·6 per 1000 in the former, but an increase of 1·4 per 1000 in the latter, as compared with the preceding year. It is observed that although but few medical officers of the navy have stated their views with reference to the result of recent legislation as regards the Contagious Diseases Act, there is a perfect unanimity amongst them as to the advantages which have accrued to the public service from the operation of this Act even in its present limited application, and a wish is strongly expressed that it may be still further extended.

Thirteen cases of poisoning occurred during the year—viz., 2 by oxalic acid, 1 by perchloride of mercury, 1 by tobacco, and 9 by alcohol. Of this number 2—1 from perchloride of mercury and 1 from tobacco—proved fatal. There were 20 cases of delirium tremens, and 2 deaths from pyæmia, not specially appearing on the tables, but probably entered under the head of some other diseases of which they proved the sequelæ.

There were 3986 cases of wounds and injuries, 188 of burns and scalds, 22 of submersion and drowning, 1 of suicidal hanging, and 2 of asphxia placed on the sick-list during the year; and of these 36 of wounds and injuries, and 1 of burn and scald were invalided; and 11 of wounds and injuries, 18 of drowning, and the case of suicidal hanging proved fatal.

Further, there are statistical reports from eight stations of the Royal Navy abroad, giving full particulars of the different diseases treated, and details of invaliding and mortality at each; and an appendix of over two hundred pages, containing medical and surgical reports for the year 1871, of the different Royal Marine Divisions in this country, and of the dockyards, naval hospitals, etc., concluding with some notes and statistics relating to the recruiting and training of boys for the Royal Navy in 1872, by Staff-Surgeon Seaton Wade, R.N., and some observations on the Dietaries of British and Foreign Navies, by Staff-Surgeon (second class) John M. Hunter, M.D., R.N.

The medical and statistical returns for the total force of the Royal Navy employed at home and abroad during the year 1871 close the volume proper; to these, for the first time, an age table is appended. The results show that 50·04 per cent. were between the ages of 15 and 25; 35·61 between 25 and 35; 11·66 between 35 and 45; 2·50 between 45 and 55; and ·16 between 55 and 65. In time it is believed that this information will become exceedingly valuable in showing the proclivity of certain diseases to certain periods of life, and the resisting power of certain periods of life to certain forms of disease, thus possibly affording some basis for selection for special duties, or for service in special localities.

When it is considered that the ratio of invaliding for the whole force during the year 1871 was 32 per 1000 (being a decrease of 3·2 per 1000 on the previous year), and the death ratio 8·5 per 1000, it will be readily admitted that the present report is a very satisfactory one, evidencing a careful supervision on the part of the administrative, and a thorough and enlightened attention to their duties on the part of the executive medical officers attached to the Royal Navy.

REVIEWS.

Diseases and Injuries of the Eye: their Medical and Surgical Treatment. By George Lawson, F.R.C.S., Honorary Fellow of King's College, London; Surgeon to the Royal London Ophthalmic Hospital, Moorfields; and Surgeon to the Middlesex Hospital. Second edition, with eighty-eight wood engravings. London: Henry Renshaw, Strand. Pp. 400. 1874.

The best test of the merits of a work designed to satisfy an acknowledged want is that it attains its object. Before Mr. Lawson first published his manual on Modern Ophthalmic Medicine and Surgery, in 1869, there was no work on the subject which was at once a text-book for students and a clear, concise, and practical guide for the practitioner. How admirably Mr. Lawson succeeded in supplying this deficiency in surgical literature is very evident from the fact that the first edition has long been out of print and a second has been required within four years.

(c) Translated by Haughton. Third edition, 1863. Parts of this work probably date from 800 B.C.; some parts may be much later.

In this new edition the information imparted is brought well up to the standard of knowledge of the day. Many articles which the advances of the last few years had rendered incomplete or obsolete have been rewritten or expunged, and much new material has been added. The book is divided, as in the first edition, into eleven chapters, the subject-matter of each of which is arranged and grouped as before. At the end of the volume is a formulary, containing all the various applications and medicines used in ophthalmic prescriptions; and this is supplemented by a very valuable formulary for children, which will give confidence to the young practitioner in dealing with the diseases of infant eyes.

There is no need for us to specify the deletions and additions in the several parts of the work—our readers may take it for granted, and those who are familiar with Mr. Lawson's writings will know, that these have been done with a master hand by a surgeon of very considerable reputation, and by a teacher of knowledge and experience who has a right to speak with authority.

In the corrections and improvements, as in the original text, conciseness has been studied, but not at the cost of completeness; and while the author's object plainly is to equip his readers with a full and efficient knowledge, he has sought to do this by clearness and simplicity of statement. The success with which, in this manner, Mr. Lawson has described the "Anomalies of Refraction and Diseases of Accommodation" in chapter vi., and the "Diseases of the Orbit" (including aneurism and tumour of the orbit) in chapter xi., is very marked. His mode of handling these subjects alone will gain him the gratitude of his readers and secure for his excellently finished little book a continuance of that favour and appreciation with which it was in the first place received and greeted.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

December 8.

PROPOSED WATER BILL FOR LIVERPOOL—EPIDEMIC OF SCARLET FEVER IN WEST DERBY—CASES AT THE LIVERPOOL MEDICAL INSTITUTION.

THE Water Committee of the Liverpool Corporation have given notice of a Bill which will be introduced at the ensuing session of Parliament, some of the provisions of which are intended to guard against waste and contamination of the water. No adequate powers at present exist for dealing effectively with the serious evil of infiltration of impurities into some of the wells still employed as sources of public supply. Clause 10, therefore, of the proposed Bill will give power to inspect wells, streams, drains, etc., which communicate with the waterworks; while, by Clause 11, the Corporation is to have power to contribute to the cost of abating cesspools, etc., where contamination is apprehended rather than actually ascertained.

An epidemic of scarlet fever, of a very virulent type, has prevailed for some weeks in the district of West Derby, near, or part of, Liverpool. Many of those attacked died within the first few days, some in forty-eight hours. In more than one instance the disease was communicated by means of infection conveyed in clothes returned from the laundry. This fact points to the advisability of careful inquiry into the health of the households of those who wash and mangle clothes. During one week the linen from three laundries (in two cases in very large quantities) had to be removed to the disinfecting ovens of the Local Board, in consequence of deaths from infectious diseases having occurred. Two of these deaths were from scarlet and one from typhus fever. And in one of the scarlet fever cases the linen that had been sent for the purpose of being washed was found being freely used about the dead body of a young woman who had died of the disease, and on the table of the room in which she was lying. The risks *of* washerwomen are no doubt great, but these facts show that the risks *from* washerwomen are equally so; for, if the Medical Officer of Health had not been made acquainted in time with the circumstance that disease was present, there is no doubt that the disease would have been widely disseminated by the clothes, and much injury in all probability done. Indeed, as it was, three cases were clearly traced to clothes sent from one of the houses, before it became known to the authorities that scarlatina was present in it. These three cases all occurred in one family—the only one, happily, for whom the laundress washed. The epidemic is now on the decline, there having been no fatal case during the week ending Saturday, the 6th inst. During the previous week there were seven deaths.

The Liverpool Medical Institution never was in so flourishing a state as at present. The first of its ordinary meetings was held on Thursday, October 23. Among the pathological specimens exhibited were an ovarian tumour which had been successfully removed from a woman, who gave her age as 60, by Dr. Graham, Surgeon to the Northern Hospital; an aneurism of the aortic arch, by Dr. Alexander; and a large cancerous tumour of the liver, by Dr. Glynn, Physician to the Royal Infirmary. The tumour removed by Dr. Graham was a very large one, and had caused an immense amount of inconvenience to the patient from its size and weight. Some few adhesions had to be broken down before it could be removed from the abdomen, but the woman made a rapid and complete recovery. The case exhibited by Dr. Alexander illustrated a fact which does not seem to be generally recognised, although it has been established by a series of very interesting cases by Dr. Axel Key, translated by the late Dr. D. W. Moore, of Dublin, and published a few years since in the *Medical Times and Gazette*—viz., that aortic aneurisms, however large, and however near to the heart they may be, do not cause enlargement of that organ so long as the semilunar valves are competent. Although in the case in question the aneurism was a large one and near to the heart—occupying a portion of the ascending and transverse parts of the arch—that viscus appeared to be smaller than usual, although its tissue was healthy. The points of interest in Dr. Glynn's case were—that the tumour, although undoubtedly malignant, was single, occupying almost the whole of the left lobe, which was greatly enlarged; that the increase in size was entirely upwards and posteriorly, the edge of the liver never having descended below the margin of the thorax; that a large thrombus had been formed in, and completely blocked up, the portal vein, causing extensive ascites during life; and that almost up to the period of death there had been an absence of any very severe symptoms. With reference to the last point, the President (Dr. Cameron) remarked on the frequency with which, in extensive cancerous disease of the liver, there was a similar absence of symptoms; and Dr. Carter mentioned that at the first meeting of the Society in the previous year he had exhibited a liver universally infiltrated with cancerous nodules, and weighing nearly eleven pounds, which he had removed from the body of a patient who had died after a few days' illness in the Royal Northern Hospital, and who, almost up to the time of his admission, had been working as a labourer on the hospital building—as he himself said, without any inconvenience or consciousness of ill-health.

GENERAL CORRESPONDENCE.

PRESCRIBERS' NAMES ON PRESCRIPTIONS.

LETTER FROM MR. BALMANNO SQUIRE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Since writing to you on the subject of the prescriber appending his address to his prescription, I have been told that the British Pharmaceutical Conference recently held at Bradford "respectfully urges upon medical men the importance of the prescriber's full name and address being written on *all* prescriptions, to facilitate communication between the prescriber and dispenser." I feel consequently rather ashamed of having presented the appearance of a proposer, when in truth I am only a seconder of what I believe to be a useful suggestion. It will not be impertinent for me to say that I think the quarter from which the suggestion has originated gives it all the more value, since we have recently given dispensers the right to legislate in the regulation of prescriptions, by admitting representatives of the Pharmaceutical Society into the editing committee of the British Pharmacopœia, and since the disadvantage which I pointed out is one that comes more immediately under the cognizance of the dispenser than under that of the prescriber. The "Conference" I have quoted, furthermore suggests that "the bracketed initials of the prescriber's signature should be written immediately after any unusual dose." This also, I think, is a sensible proposition. I am, &c., BALMANNO SQUIRE.

9, Weymouth-street, Portland-place, W., December 4.

PROFESSIONAL REMUNERATION.

[To the Editor of the Medical Times and Gazette.]

Sir,—No one would be less disposed than I to assert that medical men are properly paid; and yet there are two or three matters in connexion with this subject which have not been touched upon by the writers of the admirable articles and letters which have recently appeared in the medical papers.

Medical attendance bears no relation to the income and position of a family, though the demand for the luxuries and most of the necessaries of life does. It often happens that men with large families and small incomes most need the doctor. These same people, if unable to afford meat every day, are content to have it only three or four times a week; but the doctor's visits may be needed every day, sorely against their will.

Even in such a town as this the number of persons to whom a few pounds more or less are nothing is small, and the doctor is frequently compelled to cut down his charges, and often fails to receive any remuneration at all.

Again, no person likes to pay either doctor or lawyer, and few people entertain very much affection for the occasions on which they have had to consult their medical and legal advisers. Perhaps this feeling is natural, but it acts as a serious difficulty in the way of obtaining payment, and many a man grudges his doctor two guineas who willingly pays his tailor fifty.

There is yet a third consideration, and one of great importance. The ease of medical attendance varies in every town and village, and with every patient.

No one, it is perfectly true, except a rogue, would dream of going to a grocer, and asking him for a pound of sugar for which he had no intention of paying; but many people feel no compunction in evading payment of a bill for medical attendance, often because the expense exceeds what they expected, sometimes because they cannot afford to pay what the doctor charges, and always because there is nothing pleasant in and nothing to show for the doctor's visits.

These things, combined with the indiscriminate relief offered by the medical charities of this and every other town, and the difficulty in which a medical man is placed who attempts to recover by legal means for attendance, are enough to account in a great measure for the loud outcry the doctors raise.

But these things do not exhaust the causes which reduce the fees: there is the peculiar relation in which the doctor stands to very many of his clients—that of a friend,—a relation which, in my case at any rate, causes me to write half a dozen prescriptions a week for acquaintances from whom I never can demand a fee; and there is the impression, strong in the mind of the public, that a doctor is bound in common humanity to hasten to the assistance of any person who is or who fancies himself ill, and in consequence it is almost impossible to avoid doing a large amount of work for nothing, and no abstract resolutions of medico-ethical societies can ever alter this state of things, and the doctor will have to go whenever called out, and those who need him oftenest and most will frequently be those who are least able to pay.

For my part, I am convinced that even in this wealthy suburb a general rise in the fees would only benefit a dozen men of distinction; and most certainly a large increase in the fees of the leading men, though their patients might be willing and able to pay, would not affect the condition of dozens of the club doctors of the town. I may be wrong, but it seems to me that the doctors will always have to be content with harsh words and small pay; and I think that the failure of the many efforts that have been made to increase their fees is the best proof that the difficulties are at present practically insurmountable. I am, &c., A Provincial Doctor.

December 4.

DEPRESSED STATE OF THE BAROMETER AS A CAUSE FOR FRONTAL HEADACHE.

Letter from Dr. F. I. De Lisle.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have lately been reminded of a fact that I have observed in different parts of the world—viz., that some relation exists between a depressed state of the barometer and the prevalence of frontal headache; and although this fact has doubtless been observed by others, I believe that it is not generally known, and that its communication may prove interesting to some of your readers.

During the first five days of this month the barometer was exceedingly low, ranging from 29° to 29·30° or 29·40°, and three members of my household and several of my acquaintances suffered from frontal headache of a more or less intense kind, and, in addition to the headache, a sense of general languor and a slightly bruised sensation of the lower extremities. The headache was somewhat alleviated by the exhibition of guarana powder. This is the only instance in which I have observed the two phenomena concurrent in our latitudes.

When an east wind blows at Gibraltar the same symptoms make themselves very generally felt; and a resident at the Rock can always tell if the wind is east on awaking in the morning, before he leaves his bed. During the sirocco wind in Syria and the hot winds in Australia the same is experienced; and from the description that I have had from those who have felt the pamperos of South America, I am in a position to state that the identical unpleasant and depressing effects manifest themselves.

Except the sirocco and the hot winds of Australia, these several winds have nothing in common save the depressed state of the barometer; and the rapidity and extent of its fall on the approach of these winds, and its equally rapid return to the former height on their departure, has been a subject of much marvel and comment. The east wind of Gibraltar is cold and damp; the sirocco and hot winds of Australia are warm and almost entirely devoid of moisture; while the pampero is cold and dry.

I beg to leave the explanation of this phenomenon to abler men, and content myself with stating the fact.

I am, &c., Frederick Irving De Lisle, L.R.C.P.,
Physician to the Hospital of St. Peter Port, Guernsey.

TUMOUR IN THE VESICO-VAGINAL SEPTUM.

Letter from Mr. A. Leslie Mease.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send a short account of a case of tumour in the vesico-vaginal septum, which may prove interesting to some of your readers:—

Mrs. H., aged 39, was admitted into the Co. Cavan Infirmary, March 30, 1872, complaining of retention of urine. Bowels confined. Ordered calomel gr. v., pulv. Doveri gr. iij., to be followed in two hours by ol. ricini ℥j. As it was receiving day at the Hospital, I could make no particular examination of her case till evening. At this time (8 p.m.) her condition was as follows:—Pulse feeble, 120; cramps down thighs; pain in back and over pubes; bearing-down pains at intervals; slight nausea; tender on pressure over the bladder. Has missed two menstrual periods, and believes herself to be pregnant. Has had eight children and two miscarriages. Bowels had acted once. Urine dribbling away and wetting the bed, but the bladder not distended. Has been ill twelve days, during two of which she says she was "astray in her mind." Illness began with inability to pass water at night, which gradually became complete. She had received a fright, and was suffering from great mental anxiety about money matters. To have liq. opii (Battley), spt. chloroform āā ℥ss. in water at once.

March 31.—Had not slept; bearing-down pains less; pulse 120, feeble; bladder distended; catheter introduced, and over a quart of clear urine removed. 8 p.m.: Over a pint of clear urine removed with the catheter; bearing-down pains ceased. A round, firm tumour can be felt with the finger between the anterior wall of the vagina and the bladder. ℞. Hyd. chloral. gr. xx,, syrup. zingib. ℥j., aq. ad ℥j., to be taken at night. Her bowels had acted five times during the day, and her pulse was 100, but feeble.

April 1.—Had slept; no bearing-down pains; less pain over pubes and in bladder. Removed half a pint of clear urine. Pain in bladder always very severe after removal of urine. ℞. Pil. hydrarg., ext. conii āā gr. iij., bis die. ℞. Nitrat. potass. gr. x., spt. eth. nitric ♏xx., tinct. digitalis ♏x., aq. ad ℥j., ter die. 8 p.m.: Pulse 120; pain very severe over pubes, and great tenderness on pressure in left hypochondrium. Drew off one pint of clear urine. To have chloral draught as before.

2nd.—Slept; spasms about the heart; no other pain; drew off half a pint of acid urine. Same remedies. Beef-tea. 9 p.m.: Easy all day; pulse 150. Drew off eight ounces of urine. Chloral draught as before.

3rd.—Slept badly; catheter not required; pulse feeble, 140.

Cease present mixture, and substitute bicarb. potass., acetat. potass. āā gr. viij., tinct. calumb., tinct. buchu āā ʒ ss., in water, ter die. Continue pills.

4th.—Had good night; catheter required; pulse very weak, 120. Tumour diminishing. Port wine two ounces, beef-tea.

5th.—6 a.m.: Had severe labour-pains all night, and great pain in back and thighs. Pulse 120, scarcely perceptible. Urine had dribbled through the night, although catheter had been used at 9 p.m. Drew off a quart of pale urine, slightly cloudy; tongue moist and brown; a tendency to rigors. Ordered a draught of Battley's liquor and spt. chloroform at once, and some hot negus. 11 a.m.: Pulse 120, very weak; pain ceased; hysterical dilatation of pupils; abdomen tympanitic. Omit pills. Continue mixture, and give hyd. c. cret. gr. v., ext. conii gr. iv. each night at bedtime.

6th.—Catheter not needed; pulse 100, feeble.

7th.—Catheter not needed; pulse 90, feeble.

8th.—Had good night; retention cured; tumour disappeared; pulse 90. To sit up a little. From this time she improved steadily, and about seven months after was delivered of a healthy child.

I wish just to call attention to two points in this case. First, although the uterus was in its proper place, as was fully made out, the symptoms in many particulars resembled those of anteversion. Secondly, the hysterical aggravations of her symptoms to which she was liable. For instance, on the 4th she was better, and the primary cause of the mischief (the tumour) diminishing, and yet on the 5th I found her apparently almost moribund, pulse 150, and in dreadful pain, with hysterical tympanites and dilatation of pupils. It seemed as if the violence of the hysterical tendency had spent itself in this attack, for from this time her progress to recovery was unchecked.

I am, &c.,

Armagh, Ireland. A. Leslie Mease, M.B.

TESTIMONIALS.

[To the Editor of the Medical Times and Gazette.]

Sir,—There is hardly a man of eminence in any branch of science who has not been repeatedly applied to for a testimonial in favour of some applicant to an office of position and trust. In many cases these applications are made on the most remote pretence that the person applied to can have had any personal knowledge as to the applicant's fitness for the office. Hence arises the great scandal of men being placed in situations they have not the slightest competence to occupy. In a profession where skill is of vastly greater importance than mere personal recommendation, ability should be the test of a candidate's fitness to occupy a situation. Especially ought this to be the case in the medical profession, where the lives and comfort of hundreds depend on the skill of those who are placed in positions of importance. It may be urged that medical men have all passed some form of examination, and are supposed to be fully qualified. But what, in many instances, are these examinations? A mere cram. The candidate may possibly have never been examined in the speciality in which he is now applying for a situation. Then, again, years may have elapsed since his examination, and all the knowledge he has ever had has become rusty from want of use; or, even if he has been employing it, he may not have kept pace with the progress of the science.

We may take, for instance, the subject of mental diseases. There are men appointed to our asylums, with the care of perhaps thousands of poor lost humanity. In how many cases are they quite unfit for their work? They have had no special qualification; in fact, it often happens that an ignorant man is preferred, it being thought unadvisable to have one "who knows too much." The appointments are not made by men who can form an opinion of the applicant's fitness, but by our local justices—a race of men who, though very worthy in their way, are not remarkable for intelligence, especially in matters pertaining to a science they can know nothing of. These men must necessarily form their opinion of the ability of the candidate from the number and character of his testimonials. Hence it is to a great extent mere chance if he is fitted for the post, for the testimonials cannot always state this, or only in general terms, and there must always be a prejudice in favour of that person who can obtain the signatures of the biggest men, or whose recommendations speak most highly of his personal character. Men can only judge by what they understand: a gentleman can understand the qualifications of a gentleman; but it requires, in addition, the knowledge of a specialist to estimate a man's true worth for asylum work.

This mode of obtaining situations is most unfair to the applicant himself. He has no standard by which he may endeavour to qualify himself. He may see himself superseded by men whom he knows are infinitely his inferiors. The most trivial circumstance may turn the scale against him—a blot on his testimonials, a pimple on the tip of his nose, some physical blemish, the cut of his coat, his provincial accent, and numerous other peculiarities are sufficient.

Not long ago a rejected candidate for an appointment was applied to by the successful applicant for instruction in his duties. The man who had got the place went to the one who lost it for information as to what he had to do, and paid him for imparting the knowledge by a series of lessons. Only fancy the rejected one's feelings! What encouragement had he in perfecting himself in a subject for which he received such thankless returns?

Then, again, consider the mean subterfuges, the toadying to great little men, the degradation of personal canvassing, that candidates have to perform. A man of honour and high intelligence would scorn to stoop so low, and consequently fail in his application.

Now, the remedy for these evils is clear, and ought to be insisted on again and again till it be employed. It is simple enough, and easy of application. There should be boards of examiners formed, who should examine candidates for positions in any speciality. They should be men occupying the highest position in that particular branch of study. Thus we might have examinations in mental science, for Poor-law and special hospital appointments, medical officers of health, analysts, etc. There are the Commissioners in Lunacy already—men probably of the highest standing in mental science: their duties at present chiefly consist in examining buildings, etc. Perhaps they might be induced to extend their examinations to the men who have charge of the buildings. Surely it would not be a great tax on their time to have stated periods when men who wish to obtain a standing in their special department of the profession might present themselves, and receive, not merely certificates, but also have placed against their names in some permanent record the position they have occupied, as shown by a certain number of marks, in that examination. And it should further be established by rule that a man may present himself as often as he pleases, so as to allow him at some future time to obtain a higher position than he previously occupied. But on no account must the fee exacted, if any be needed at all, be higher than one guinea. The plan of charging exorbitant fees for medical diplomas defeats the object for which the examinations is designed; it biases the minds of examiners against rejecting a candidate.

Of course, it is not pretended that this plan of having an examining board for each speciality will introduce perfect men into our asylums and other offices, but it will tend to raise the standard of a man's qualifications; he must at any rate study the subject before he applies. And a man who knows that there is some power qualified to give honour where honour is due will strive to make himself master of the subject, and raise himself intellectually above his fellows. Then shall we have in these places of trust men who are capable of doing good work, and many a poor lunatic or weak-minded individual, or pauper, or householder, or tradesman, will be glad of having placed above them a man intellectually as well as morally fitted for his duties. Then may we hope to see the subjects these men handle day by day improving with the fresh light, even the light of knowledge, that is being shed on it.

As a well-known philosopher observes—"To cease to strive is to begin to die physically, morally, and intellectually." So when a man as an asylum medical officer has no higher motive for exertion than the mere getting money and credit by pampering to the Commissioners and Committee, he begins to die intellectually as far as his medical knowledge is concerned; for, having no special object to strive for, he ceases to perfect himself in the study of mental disease.

I am, &c., An Asylum Medical Officer.

UMBILICAL HERNIA IN INFANTS.

[To the Editor of the Medical Times and Gazette.]

Sir,—Speediness in the cure of the above, combined with simplicity in the means employed, is, I hold, the great desideratum. What more simple than strips of plaster applied

erosswise, or—as I have done during the last ten years—to apply a small pad of lint and one broad strip of adhesive plaster? No case has failed; no soreness have I ever seen, "so far as my memory serves me." The information I should like is as to the time it takes to effect a cure under these several methods. I am, &c., COUNTRY DOCTOR.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

FRIDAY, NOVEMBER 28.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

DR. GEORGE JOHNSON read a paper "On Cases of Temporary Albuminuria the Result of Cold Bathing." The first case was that of a medical student, aged 22, who, about noon on June 19, after bathing for a quarter of an hour in the Marylebone Bath, had a sense of fatigue and headache. Four hours after the bath, the urine was tested, and found albuminous. In the evening there was still a trace of albumen. The next day the urine was normal, and continued so until June 28, when he again bathed. The bath was again followed by headache, and in the course of the day the urine was found albuminous. From that date until July 17 every specimen of urine passed was tested, and albumen was present at some period of the day on all but five days. Since July 17 the urine has remained normal. The subject of these observations is in good health, and has never been seriously ill. The second case was that of a medical student, aged 25, who one day in July bathed in the Lambeth Bath for an hour. He felt no inconvenience. The urine passed an hour after the bath contained a sixth of albumen. The urine was not tested again for three or four days, when it was found normal. The experiment has not been repeated. The third case was that of a medical student, aged 23, who on three occasions found his urine normal before bathing in the sea in August and September; and on each occasion, after remaining in the water from a quarter to half an hour, found a moderate quantity of albumen in the urine. In a few hours this had disappeared. He felt no inconvenience from the bathing. Four other students, after bathing from half an hour to an hour, and on one occasion for an hour and a half, found no albumen in the urine. The fourth case was that of a boy, aged 16, looking pale and feeling languid, who was found to have albumen in the urine to the extent of one-eighth on June 28. It was of pale colour, and contained no casts. On September 23, when next seen, only a trace of albumen remained. On October 23 the urine was quite normal. Until within a few days of the time when the albuminuria was first discovered, he had been bathing almost daily in the sea from half to three-quarters of an hour at a time. He had felt fatigued and chilled, and on one occasion had vomited, after coming out of the water. The only previous illness had been diphtheria ten years before. The transient albuminuria is believed to have been caused by the repeated and prolonged immersion in cold water; and it is suggested that, as acute Bright's disease is not unfrequently excited by exposure to cold and wet, there is danger lest the frequent recurrence of temporary albuminuria the result of prolonged cold bathing, and the consequent repression of the cutaneous secretion, may lead to permanent mischief and to structural degeneration of the kidney.

Dr. SOUTHEY said such examples of albuminuria from cold were common, but he had not known they might be so temporary. All swimmers must have felt headache, heaviness, and depression after a prolonged bath; but if these, together with the albuminuria, persisted, he would hardly think the kidneys had previously been sound. Often acute cases arose where there was some previous lesion of the kidney. Swimming by itself could hardly be a potent cause of albuminuria.

Dr. POWELL thought it would be interesting to know if there were any other signs of kidney lesion besides the albuminuria, as casts, etc. Swimmers in active exercise and entirely immersed would be less likely to suffer than ordinary bathers.

Dr. GREEN remarked that it had not been stated whether the albuminuria was considered due to any inflammatory change in the kidney or to a mere mechanical congestion. Inasmuch, however, as the albumen continued some time after, the latter supposition seemed least tenable. If truly inflammatory, that would lead to tissue changes.

Dr. H. WEBER had seven or eight years ago seen a gentleman suffering from hæmaturia, who, after traversing a high mountain pass and being greatly fatigued, fell into a river. He was carried to the hotel, and waited for a meal before going to bed. When seen again in London there was no blood, but still albuminuria, which continued for five or six weeks. The specific gravity was, however, normal, and the urine contained casts both epithelial and hyaline. In three months this was quite gone. He had seen several patients with albuminuria after coming from abroad and being exposed to cold and wet; they soon recovered. Formerly, such cases were apt to occur in water-cure establishments, but not nowadays. In these there was no element of fatigue.

Dr. GREENHOW considered the facts interesting as bearing on intermittent hæmaturia. He had seen two or three cases apparently similar in character, but without colouring matter. These were also brought on by exposure to cold. He thought they contained a nervous element.

Dr. G. JOHNSON only saw one of the subjects—viz., the boy. The urine here was pale, and contained no casts. He had no doubt they could induce acute Bright's disease by cold and wet, without any previous lesion. He did not speculate as to the exact cause, but thought it would be the action of the cold on the skin. He alluded to the existence of albumen in the urine of famished rabbits.

Mr. ARNOTT narrated a case of Excision of the Knee-joint, in which he had employed Professor Esmarch's so-called "Bloodless Method," early in August of the present year. It happened to be probably the first operation of any magnitude in which this ingenious suggestion of Professor Esmarch was employed in England, although Mr. MacCormac had already used it in some cases of removal of necrosed bone, and the author therefore brought forward the case as a peg on which to hang a discussion on the merits of the proceeding by the hospital surgeons present. The case was an ordinary example of old disease of the knee, in which it was determined, on exploring the joint under chloroform, to excise it at once, the patient having refused to submit to amputation. The limb was tightly bandaged with elastic webbing from the toes to the thigh, and, before the removal of the bandage, a stout elastic cord was twisted firmly round the limb above the bandage and fastened with hooks. The compression was kept up for more than thirty minutes, with the effect of rendering the operation absolutely bloodless until the elastic tourniquet was removed. Convalescence was slow, but presented nothing unusual which could be attributed to the pressure employed during the operation. The points dwelt upon by the author in commenting on the case had reference to (1) the possibility of sloughing following the use of the constricting band, and the length of time during which the pressure might be safely maintained; (2) the effect on the circulation of the compressed limb on the removal of the elastic cord; (3) the difficulty of using the method without chloroform; and (4) under what circumstances the method might be wisely avoided. In briefly remarking on these heads, it was suggested that much of the pain and sudden engorgement of the vessels with blood might be prevented by gradually relaxing the constricting band; and, in enumerating the cases in which the employment of the method might be attended with danger, reference was made to instances of septic abscess, the clot-occluded veins about a compound fracture, and limbs already gangrenous. It was also suggested that a possible risk of apoplexy was incurred by suddenly overfilling the circulatory system of aged people, with brittle arteries; and that, although generally beneficial in town practice, the visceral congestions caused by the subsequent plethora in cases of large amputations in robust subjects might seriously interfere with recovery.

Mr. EASTES said he was responsible for the statement that in five out of seven amputations at Guy's by this method sloughing had taken place, but probably he ought to mention that carbolic acid spray had been also used.

Mr. HEATH said the process was not so new as supposed; something of the kind had long been employed in Scotland. An ordinary tourniquet sufficed quite as well as elastic bands and ligatures. The limb was raised whilst chloroform was being given, and the finger run along the vessels in a backward direction; the broad band of the tourniquet was then quite enough. Usually there was free bleeding when the elastic ligature was relaxed, but that could be done gradually with the tourniquet. The results of the whole system were as yet uncertain.

Mr. CLOVER had used a band in some amputations some

years ago. The operations were not quite bloodless, but very nearly so. It was objected that the internal congestion might be injurious: another objection was that the indiarubber band might break suddenly, especially if used more than once. He thought that an ordinary band tourniquet might suffice, but that something more than merely raising the limb was required to empty it of blood.

Mr. MacCormac said that nothing novel was contended for in Esmarch's method, but it was very simple and perfect. He was hardly prepared for the complete bloodlessness of the parts; even the bones were dry. The principle had been adopted even by Sartorius. Heretofore it had not been generally adopted, but Esmarch's plan spread like wildfire. No great amount of compressing force was required, but the return of the blood to the parts was sometimes very painful. It should only be permitted gradually, and the elastic band should be left on a minute or two before the ligature was applied.

Mr. Barwell thought Esmarch's plan better than Lister's. In an operation so performed no blood escaped during its performance, but oozing went on for twenty-four hours after. Ultimately it did well.

M. Koch had seen the operation done by Esmarch for necrosed bone. The parts were quite dry. Esmarch accounted for this dryness by the veins of the soft parts drawing the blood out of the bones as they expanded after compression. No sloughing followed, and he had seen no sloughing here.

Mr. Willett thought nothing so good had been introduced since chloroform, as far as the surgeon was concerned; for the patient, that remained to be seen. The bone was not always quite bloodless. In one case of his there was slight oozing, which formed a clot. Sloughing followed in one amputation, the subject being an old and debilitated woman. He thought the elastic band better than the tourniquet.

Mr. Morris also thought Esmarch's plan better than that mentioned by Mr. Heath. Mr. Hilton used to bandage before applying the tourniquet, but the results with the elastic band were better. He had seen quite as severe hæmorrhage after removal of the band as if it had not been used. He thought it would be well to use an elastic band with a tourniquet to relax gradually. Sloughing in many instances had followed the plan. At Guy's they had used the carbolic acid spray at the time. In one old man there had been no attempt at union, and he thought it of questionable value in old people. He thought it should not be used over suppurating cavities.

Mr. Arnott said they had often used carbolic acid spray, but no sloughing had followed. The fact that the cord might prove brittle was important. A tube was better than a solid cord.

THE PATHOLOGICAL SOCIETY.

Tuesday, December 2.

Sir William Jenner, Bart., President, in the Chair.

Dr. G. Harley and Dr. Powell reported on Dr. Dowse's specimen of Foreign Body in the Crico-Thyroid Pouch. It consisted of necrosed bone, and seemed to be a portion of the ossified cricoid cartilage.

Mr. Tay exhibited a child between four and five years of age whose Lower Jaw had become Necrosed, and had been nearly entirely removed. At first the child was supposed to be injured, but of this there were no definite signs. Three weeks after the gums ulcerated, and in a few days were partly bare. The teeth were loose, so that the child picked some of them out; but the rough edges of the alveoli seemed to stand in good stead in their place. In about five months new bone had begun to form, and the old was removed in three divisions. The child did very well. The necrosis was too complete and rapid for phosphorus-poisoning; possibly it might have occurred after typhoid.

Mr. Maunder said that three years ago he removed a portion of the jaw for a myeloid growth, saving the periosteum. The patient soon recovered, but little or no new bone was formed. He had had a similar experience in another case.

Mr. Nunn showed a specimen consisting of a very large Pectoral Tumour, removed from the body of a female patient. She had been a patient at University College Hospital, but afterwards came to the Middlesex. There was a large cystic mass, whence fluid was drawn by aspiration. It looked colloid. She died from difficulty in breathing. The mamma was not involved. The mass consisted of a softened enchondroma. (Referred to Morbid Growth Committee.)

Mr. Beck said he had seen the patient at University College Hospital some months ago. He had removed some of the fluid by aspiration. From the characters of this the tumour was diagnosed as a softening enchondroma.

Dr. Cayley said no part was like cartilage, but was rather like colloid.

Mr. Andrew Clark next showed a specimen of Lymph-adenoma of the Trachea from a female, aged 75. She had been healthy up to nine months before death, when she was seen complaining of pain and swelling in the neck, with occasional attacks of dyspnœa. He found a growth in the middle line, which seemed to be part of the thyroid. This diminished under treatment, but after a time she had an attack of violent dyspnœa, which was relieved by heat; but other and more severe attacks came on, and tracheotomy had to be performed. She did well; the tumour disappeared, and she went out. Later she returned with bronchitis, and tracheotomy had again to be performed, but the patient died. A tumour was found behind and to either side of the trachea, the mucous surface of which was covered with small growths, which, together with the larger masses, were lymphomatous in character.

Dr. Payne showed certain Pouches in the Peritoneum which had contained Herniæ. The subject, a female, died of some other disease; but on post-mortem examination there were found two pouches between the ascending colon and the abdominal wall. The lower was formed by the mesocolon, and lay partly behind the cæcum. There was no strangulation in this case, but there often was from this cause. He considered that there were three kinds of these pouches—one duodenal, at the site of the inferior mesenteric artery; a second sub-cæcal, as here; and a third sub-sigmoid. There was a good example of the first kind in St. Thomas's Hospital, prepared by Sir Astley Cooper.

Dr. Payne next proceeded to show another specimen, consisting of Thickening of the Pulmonary Artery, from a female who died of metritis. The deceased suffered from pneumonia, and the base of the right lobe was solidified, but not as in acute pneumonia. The whole of the division of the pulmonary artery going to this part of the lung was found greatly thickened, especially its outer coat, which was greenish, semi-transparent, and fibroid-looking. The same kind of material was not found elsewhere. The structure was something like that of a syphilitic gumma, but there was no history of syphilis. The new growth was partly nucleated, partly granular, and partly fibro-nucleated. There were also signs of catarrhal pneumonia.

Dr. Pye-Smith said that a description had recently been given by Lancereaux of a condition resembling this, which he attributed to congenital syphilis in infants.

Dr. Green asked if there was any thickening of the pleura or alveolar walls. It seemed as if the whole base was tough from chronic pneumonia. In all cases of fibroid change that began round the artery.

Dr. Powell remarked that the pulmonary was blocked. Was this secondary to the other changes? The bronchi were usually thickened in such cases.

Dr. Payne said there was a good deal of induration, even near the surface; but the bronchi and pleura were not thickened. There were no signs of degeneration in the clot; it seemed to be post-mortem.

Dr. Lockhart Clarke showed certain specimens illustrative of Sclerosis of the Posterior Columns of the Spinal Cord. The condition had been repeatedly described by himself and others. In it the connective tissue became greatly increased, and fatty globules or compound granule corpuscles could be made out. The present case was one of subacute inflammation. The blood-vessels were destroyed. In reply to Dr. Dowse, the symptoms were described as gradual paralysis, with contraction. There was no cerebral sclerosis.

Dr. Dowse said he had made a post-mortem examination of a man who had died of phthisis, having exhibited no signs of cerebral or spinal sclerosis. Yet he found the grey matter of the convolutions greatly hardened, so that it could be peeled off from the white tissue beneath.

Dr. Payne said the signs were sometimes few and ambiguous. A female, who had been greatly neglected, died of bed-sores. She had, however, been going about no long time before. Yet after death he found large masses of new material in the grey substance of the cord, though of this there had been no sign during life. There was something like it in the brain.

Dr. King showed specimens from a woman, aged 53, who

up to last Christmas had shown no sign of illness. About ten days before admission she began to complain of pain and tenderness over the liver and in the epigastrium, and the liver was enlarged. After admission she began to shiver, and her temperature rose. The pain also increased, and she died collapsed. The right lobe of the liver was found enlarged, and its shape altered. It contained a quantity of green pus filling a large cavity. No distinct origin could be traced, but there was no ulceration of the intestines.

Mr. Arnott exhibited a specimen of Sarcoma of the Omentum from a boy aged 4. His mother had noticed some hardness and fulness on the morning he saw the child, and there had been some loss of appetite. On examination, he found a mass the size of an orange, without pain or tenderness, near the navel. There was, however, a small nodule in the skin, and from these general characters he diagnosed a sarcoma of the omentum. In a week, both nodule and mass were larger, though the child seemed well up to two days before his death. The nodule had by this time grown to the internal mass. The child was suddenly collapsed, and died of peritonitis. A large tumour was found involving the omentum and invading the colon, and masses of the same kind were found in the liver, kidneys, and epididymis. In structure it was a lymphoma, and probably originated in the submucous tissue of the colon.

Mr. Morrant Baker showed a very Rare Form of Calculus. It consisted of pure and crystalline oxalate of lime. It was removed by lithotomy from a child who had suffered from stone for years. It had been sounded for stone without result. This was probably due to the existence of a kind of pouch near the opening of the ureters.

Mr. Coupland showed some nodular growths in the liver of a man who suffered from ascites. He had had a cough for eight months, but was not very ill. He was tapped, and the fluid coagulated spontaneously. It reaccumulated, and he was again tapped, but soon sank. The peritoneum was thickened. The size of the liver was normal, but it contained nodules, small-celled on the surface, granular in the interior. The mesenteric glands were enlarged, and the lungs contained old tubercle. The nodules were either tubercular or syphilitic.

OBITUARY.

THOMAS HARPER WHITAKER, M.R.C.S., J.P.,

Died at his residence, Kirkby Lonsdale, on November 14, aged 61 years. The following paragraph, taken from a local newspaper, will show the great esteem and love felt for him by all classes, poor as well as rich:—"The town and neighbourhood of Kirkby Lonsdale received a severe shock on Friday week by the announcement of the death of Mr. Whitaker, after a short illness of two days. Indeed, many never heard of his illness until the fatal termination was made known. For upwards of thirty years Mr. Whitaker was engaged in active professional duty, and no man was more deservedly respected and beloved in the large circle where his sterling good sense, his cheery countenance, and kindly manner made him always welcome as friend and physician. Valued for his medical skill and thoroughly unselfish nature, he was almost a part of every family, where his long career had won him high esteem, and his name was familiar as a household word. His almost sudden removal, in the fulness of bodily and mental vigour, is to all who knew him a deep sorrow, to many an irreparable loss. The funeral took place on Tuesday last, and was attended by the whole town: every shop was closed. The volunteer corps, of which he was a member, preceded the coffin, and in the long train of mourners were members of every family, both gentry and clergy, from the wide district over which his professional practice extended. Wreaths of exquisite white flowers were placed on the coffin by the Earl of Bective and the Marquis of Headfort, and the grand office for the burial of the dead closed amidst tears of sorrow from many of those who stood around the grave. A few months since Mr. Whitaker was appointed a magistrate for the County of Westmoreland, and qualified at the last Quarter Sessions at Kendal only a few weeks ago."

JAMES McTERNAN, R.N., Deputy Inspector-General of Hospitals and Fleets,

Died at Blackheath a few days since, in his eighty-third year. He became an Assistant-Surgeon in the Royal Navy in 1809, and served in the *Northumberland* at the destruction of two French frigates and a brig off L'Orient in 1812, and in the following year was promoted to be Surgeon of the *Cleopatra*. Served also in the *Dragon*, in all the operations in the *Chesapeake*, and on the coast of America, including the capture of Bangor, Hampden, etc. In January, 1844, he was appointed Surgeon of Greenwich Hospital, and in July, 1855, became retired Deputy Inspector-General of Hospitals and Fleets. We are not aware that he contributed anything to the literature of the profession.

LEGAL INTELLIGENCE.

UNQUALIFIED PRACTITIONERS: IMPORTANT CASE AFFECTING MEDICAL MEN.

On Tuesday last, at the Halifax County Court, before Mr. Sergeant H. Tindal Atkinson, the case of "The Apothecaries' Company of London *v.* Richardson" was set down for hearing. Mr. Godfrey Rhodes appeared for the plaintiffs, and Mr. England for the defendant. It appeared from the opening of Mr. Rhodes that the defendant (Mr. James Richardson) had for some time past carried on the practice of a surgeon and an apothecary at Elland, near Halifax, he not being duly qualified; and that the proceedings had been instituted by the plaintiffs to recover the sum of £20, being the amount of the penalty which the defendant had rendered himself liable to pay by reason of such practices. The defendant carried on an extensive practice, and the leading practitioners in the parish of Halifax signed a memorial to the Apothecaries' Company requesting that these proceedings should be taken with a view to prevent the defendant from continuing his practice and from invading their privileges with impunity. The defendant had visited patients and dispensed medicines, and had made the usual professional charges for attendances. He had, however, thought fit to pay the penalty, and the matter now came before the Court as to the question of costs. Mr. Rhodes stated that the money was not paid five clear days before the Court-day, and submitted that he was entitled to costs. His Honour made an order for payment of costs.

NEW INVENTIONS.

LYNCH'S IMPROVED FEEDING BOTTLE.

The Infant's Feeding Bottle patented by Messrs. Lynch and Co. is fitted with a wooden or earthenware cap which is fastened on the principle of the bayonet catch: that is, there are grooves in the cap which correspond with projections on the neck of the glass bottle. When the cap is applied, the grooves receive the projections, a half turn is then given to the cap so that the projections no longer correspond to the groove, and the cap is then securely fastened. By this simple arrangement safety in fastening, freedom from leakage, cleanliness, and easy removal of the cap are obtained. To remove the cap it is of course only necessary to reverse the half-turn so that the projections again correspond to the grooves, and the cap can be directly withdrawn. The improved feeding bottle is likely to be a very useful and popular nursery appliance.

MEDICAL NEWS.

University Intelligence.—University of London.—The following are lists of candidates who have passed the recent examinations:—

M.D. EXAMINATION.

Anderson, Tempest, B.Sc., B.S., University College; Aveling, Charles Taylor, M.S., St. Thomas's Hospital; Barnes, Edgar George, St. George's Hospital; Burn, William Barnett, B.Sc., St. Bartholomew's Hospital; Cane, Leonard, B.S., University College; Carr, William Ward, B.S., University College(a); Dalton, Benjamin Neale, Guy's Hospital; Humphreys, John Henry, University College and Middlesex Hospital; Langmore, John Wreford, B.S., University College and Middlesex Hospital; Oliver, George, (Gold Medal), University College; Roberts, Richard Lawton, University College; Sawyer, James, Queen's College, Birmingham; Shewen, Alfred, University College; Smith, Richard Thomas, University College; Wall, Alfred John, B.S., St. Mary's Hospital; Warner, Francis, King's College; Wyman, John Sanderson, St. Bartholomew's Hospital.

LOGIC AND MORAL PHILOSOPHY ONLY.

Ingoldby, Joseph Theodore, Guy's Hospital; Price, William, University College; Spencer, George Owthwaite, University College.

(a) Obtained the number of marks qualifying for the Medal.

SECOND M.B. EXAMINATION.

EXAMINATION FOR HONOURS.

MEDICINE.

First Class.—Addy, Boughtou, (Gold Medal), St. Thomas's Hospital, and Skerritt, Edward Markham, B.A., (Gold Medal), University College (equal); Dodson, Andrew, Birmingham and Guy's Hospital; Cockburn, John Alexander, King's College; Barlow, Thomas, B.Sc., University College, and Benham, Henry James, University College (equal).

Second Class.—Coupland, Sidney, University College and Middlesex Hospital; Rayne, Charles Alfred, University College.

Third Class.—Dyson, William, B.A., University College; Pope, Harry Campbell, Liverpool Royal Infirmary aud University College.

OBSTETRIC MEDICINE.

First Class.—Addy, Boughton, (Scholarship and Gold Medal), St. Thomas's Hospital; Skerritt, Edward Markham, (Gold Medal), University College(b); Dodson, Andrew, Birmingham and Guy's Hospital(c); Benham, Henry James, University College, and Bomford, Gerald, King's College (equal); Colgate, Henry, University College.

Second Class.—Petch, Richard, King's College; Bird, Cuthbert Hilton Golding, B.A., Guy's Hospital; Barlow, Thomas, University College; Cockburn, John Alexander, King's College; Dyson, William, University College.

Third Class.—Rayne, Charles Alfred, University College; Pope, Harry Campbell, Liverpool Royal Infirmary and University College; Firth, Charles, St. Bartholomew's Hospital; Railton, Thomas Carleton, Manchester and St. Bartholomew's Hospital; Coupland, Sidney, University College and Middlesex Hospital.

FORENSIC MEDICINE.

First Class.—Colgate, Henry, (Scholarship and Gold Medal), University College; Bird, Cuthbert Hilton Golding, (Gold Medal), Guy's Hospital; Benham, Henry James, University College; Barlow, Thomas, University College; Cockburn, John Alexander, King's College; Coupland, Sidney, University College and Middlesex Hospital.

M.S. EXAMINATION.

Godlee, Rickman John, B.A., (Gold Medal), University College.

B.S. EXAMINATION.

First Division.—Barlow, Thomas, B.Sc., University College; Colgate, Henry, University College; Lucas, Richard Clement, Guy's Hospital; Rayne, Charles Alfred, University College; Skerritt, Edward Markham, B.A., University College.

SECOND B.A. AND SECOND B.Sc. EXAMINATIONS.

EXAMINATIONS FOR HONOURS.

(B.A and B.Sc. conjointly.)

LOCAL AND MORAL PHILOSOPHY.

First Class.—Gotch, Francis, B.A., (Scholarship), University College; Leverson, Benjamin James, B.A., University College.

Second Class.—Chuckerbutty, Henry Scott Ryan Goodeve, B.A., University College; Lovett, Richard, B.A., Cheshunt College, and Witton, James Cecil, B.Sc., Royal School of Mines (equal); Hollings, Edmund Raven, B.A., private study, and Simmons, Lawrence Mark, B.A., City of London School and private tuition (equal).

Third Class.—Savile, Alfred George, B.A., private study, and Thompson, Joseph William, B.A., University College (equal); Foxwell, William Arthur, B.A., Wesleyan College, Taunton, and Norburn, Henry, B.A., private study (equal).

(B.A. only.)

CLASSICS.

First Class.—Shaw, James, (disqualified by age for the Scholarship), Queen's College, Belfast; Bamford, William, St. Cuthbert's College, Ushaw; Hughes, Walter, Owens College.

ANIMAL PHYSIOLOGY.

First Class.—Mare, Henry, (disqualified by age for the Prize), private study; Norburn, Henry, private study.

Second Class.—Waugh, Henry Dunn, University College; Tyrer, Richard, private study; Wood, John Edwin, Wesley College.

(B.Sc. only.)

CHEMISTRY.

First Class.—Napier, Arthur Samson, Owens College, and Witton, James Cecil, Royal School of Mines (equal).

Third Class.—Hullard, Jean Arthur, University College, and Lyell, Leonard, private study (equal).

GEOLOGY AND PALÆONTOLOGY.

Second Class.—Roberton, Henry Shoveller, Old Trafford School and Owens College; Vines, Sydney Howard, Christ's College, Cambridge, and Guy's Hospital; Lyell, Leonard, private study; Fuller, Arthur Walton, Owens College and Emmanuel College, Cambridge.

Third Class.—Worthington, William Barton, Owens College; Napier, Arthur Samson, Owens College.

ZOOLOGY.

First Class.—Marshall, Arthur Milnes, (Scholarship), St. John's College, Cambridge.

Second Class.—Vines, Sydney Howard, Christ's College, Cambridge, and Guy's Hospital; Lyell, Leonard, private study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, December 4:—

Arthur, Walter, Oakley-street, Chelsea.
Barnes, Arthur Richard, Faversham.
Charnley, William, Lancaster.
Mason, Samuel Butler, Denham, Uxbridge.

The following gentlemen also on the same day passed their primary professional examination:—

Armstrong, Henry George, of St. Thomas's Hospital.
Bernays, Herbert Leopold, of St. Thomas's Hospital.
Evans, David Thomas, of Guy's Hospital.
Higgs, Augustus William, of St. Mary's Hospital.
Rees, Charles, of Guy's Hospital.
Smith, Sydney Lloyd, of St. Thomas's Hospital.

(b) Obtained the number of marks qualifying for the Scholarship.
(c) Obtained the number of marks qualifying for a Gold Medal.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BETHUNE, DAVID, L.R.C.P. Edin., L.F.P.&S. Glasg.—Medical Officer for the Workhouse and Medical Officer for the Ponteland District of Castle Ward Union, Northumberland.

FLETCHER, THOMAS BELL ELCOCK, M.D., B.L., F.R.C.P. Lond., M.R.C.S. Eng.—Consulting Physician to the Birmingham and Midland Counties Orthopædic Hospital.

KITTSON, EDWARD JOHN, L.K.&Q.C.P.I., L.R.C.S.I., L.M.—Surgeon to the Tipperary County Gaol, Nenagh.

MAGRATH, J., M.D.—Physician to the Metropolitan Dispensary, Fore-street, E.C.

SYMES, WILLIAM SANDHAM, L.R.C.S.I., L.K.&Q.C.P.I., L.M.—Medical Officer and Public Vaccinator for the Maryborough Dispensary District of the Mount Mellick Union, Queen's County.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Dr. George B. Beale, Staff-Surgeon, second class, to the *Fantome*.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major John Copeland Knipe has been placed upon temporary half-pay; Staff Surgeon Daniel O'Donovan, M.D., from half-pay, to be Surgeon-Major, *vice* James Edward Scott, M.D., who retires upon half-pay; Surgeon Edmund Hoile, M.D., to be Surgeon-Major, *vice* Robert Henry Beale, deceased; Surgeon George Herbert Clifton, M.D., resigns his commission; Surgeon Mark Anthony Kilroy retires upon temporary half-pay; Surgeon-Major William Henry Pollard retires upon temporary half-pay; Surgeon William Henry Garde, from half-pay, to be Surgeon, *vice* Wilton Everet, promoted.

BIRTHS.

DICKSON.—On December 6, at Fairfield, Upper Norwood, the wife of Walter Dickson, M.D., R.N., of a daughter.

INCE.—On November 9, at Rawalpindi, Punjaub, the wife of Surgeon-Major John Ince, M.D., Civil Surgeon, of a son.

MUMFORD.—On December 5, the wife of William Lugar Mumford, M.D., of a daughter, stillborn.

RHODES.—On December 6, at 5, Royal-terrace, Weymouth, the wife of Charles Rhodes, M.D., of a son.

SEXTON.—On September 15, at Rajkote, Bombay Presidency, the wife of E. Sexton, M.D., Surgeon-Major H.M.'s 18th Regiment N.I., of a daughter.

WALKER.—On December 2, at Grosvenor-street, W., the wife of Joseph Walker, M.D., of a son, surviving his birth only a few minutes.

MARRIAGES.

HILL—GOODY.—On December 4, at St. Peter's, Regent-square, London, John Daniel Hill, F.R.C.S., to Annie Elizabeth, youngest daughter of the late James Goody, Esq.

NOBLE—BRISTOW.—On December 2, at St. John the Evangelist's, Penge, the Rev. William Noble, vicar of Newbottle-cum-Chalton, Northampton, to Anna Clara, daughter of the late John Charles Bristow, Esq., of Ensmere-hill, Westmoreland, and stepdaughter of William Henry Tayler, M.D., of Anerley, Surrey.

RUNDLE—BOSWELL.—On November 19, at Cobourg, Ontario, Canada, George Edward Rundle, surgeon, only surviving son of the late Wm. John Rundle, M.D., of Audrey House, Gosport, Hants, to Emma Catherine, second daughter of the late W. N. Boswell, Esq., barrister-at-law, and granddaughter of the late Hon. Captain Walter Boswell, R.N., of Beech Grove, near Cobourg, Ontario.

THORNTON—PATERSON.—On December 2, at St. Stephen's, Kensington, John Knowsley Thornton, M.B., C.M., son of the Rev. John Thornton, vicar of Aston Abbots, Bucks, to Eleanor Philippa, daughter of the late Capt. George Dacres Paterson, 98th Regiment, and stepdaughter of Vice-Admiral Hornby, of Knowsley.

WHITEFOORD—COLE.—On December 4, at Stapenhill Church, Burton-on-Trent, Adam John Whitefoord, L.R.C.P. Edin., M.R.C.S. Eng., second son of Charles Whitefoord, Esq., of St. John's-wood, London, to Ellen Mary, only daughter of the late Henry Cole, Esq.

DEATHS.

EDMONDSON, JAMES, M.R.C.S., L.S.A., at 260, Wandsworth-road, on November 29.

GODBY, EDWARD ARCHIBALD, fifth surviving son of the late Augustus Hardy Godby, M.D., of Newport, Salop, at Hertford, on December 4, aged 8.

LAMB, ROBERT, L.R.C.P., M.R.C.S. Eng., L.S.A., at his residence, 56, Richmond-road, Barnsbury, of rheumatic fever, on December 2, aged 38.

MILLER, PENELOPE GARDEN CAMPBELL GORDON, widow of the late James Miller, F.R.C.S. Edin., Professor of Surgery in the University of Edinburgh, at 29, Charlotte-square, Edinburgh, on December 5, aged 60.

WYATT, MARY JANE, widow of the late George Nevile Wyatt, M.D., late H.E.I.C.S., at her residence, Lampton Lodge, Spring Grove, Isleworth, W., on December 1, in her 88th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Medical Committee, Temple-row, Birmingham, on or before December 20.

BRISTOL ROYAL INFIRMARY.—Assistant House-Surgeon. Candidates must be F. or M.R.C.S., or M.S., and also possess medical qualifications.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Candidates must be qualified and registered. Applications, with testimonials, to the Secretary.

GENERAL HOSPITAL, NOTTINGHAM.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before March 10, 1874.

GERMAN HOSPITAL, DALSTON.—Honorary Medical Officer to the Eastern Dispensary. Candidates must be natives of Germany and be duly qualified. Applications, with testimonials, to Dr. Walbaum, Hon. Secretary, on or before December 29.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Assistant-Surgeons. Applications, with testimonials, to P. Goldschmidt, Esq., 100, Albert-square, Manchester.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, of whom particulars may be obtained.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before December 29.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to Dr. J. C. Hall, Hon. Sec., on or before December 24.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

TEWKESBURY UNION, FORTHAMPTON DISTRICT.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to George Budham, Clerk to the Guardians, on or before December 16.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Applications, with testimonials, to the Honorary Secretary, Exe Villa, Tiverton, Devon.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Each candidate must attend (with his testimonials) the House Committee on February 10, 1874.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

VACANCY.

Barnet Union.—The Third District is vacant; area 5470; salary £60 10s. per annum.

APPOINTMENTS.

Dursley Union.—Benjamin Simmons, M.R.C.S. Eng., L.S.A., to the Second District.

Portsea Island Union.—Thomas Diver, M.D., M.R.C.S. Eng., L.S.A., to the Railway District.

SUPERANNUATION ALLOWANCE.

Mr. J. Blackshaw, after thirty years' service as Medical Officer for the Stockport District and the Workhouse of the Stockport Union, has been awarded a retiring allowance of £100 per annum.

DIPHTHERIA is terribly prevalent in Melbourne.

A NOTICE has been issued by the Home Secretary, disapproving of the employment of police officers as inspectors of nuisances, and requiring that such duty be discontinued from the 31st inst.

THERE were registered in London last week 1484 deaths, showing 230 below the average. The fatal cases of measles, which in the two previous weeks had been 130 and 121, were last week 118.

ON Friday, December 5, the third meeting of the session of the West Kent Medico-Chirurgical Society was held (Dr. F. Moon, President, in the chair), when J. C. Thorowgood, M.D., read a paper on "Asthma, its Nature and Treatment."

THE report of the Registrar-General recently presented to the Council of Ceylon on the census of the island states that the taking of the census of Ceylon in 1871 was the first attempt of the kind in the island. Of the entire population, 1 in 723 is insane, 1 in 860 is deaf and dumb, and 1 in 357 is blind.

MARIAN F. PFYFFER, a young nurse at the Boston City Hospital, died on the 19th ult. Her death was, we are sorry to say, immediately followed by the suicide of Mr. Arthur Foster, a medical novice and house officer of the institution. Mr. Foster was called in the night to prescribe for Miss Pfyffer, and mistook her symptoms for those of hysteria; and upon her death he was so chagrined at his failure to recognise the indications of opium, that he went to a bath-room and killed himself by opening the femoral artery. He was greatly esteemed.

THE annual report of the General Committee of the Walsall Cottage Hospital has recently been issued. It gives a satisfactory account of the management and success of the Hospital. In the course of the year there had been 208 cases treated in the in-patient department; of these 167 were cured, 11 relieved, 5 were removed for various causes, and 17 died.

A SENSITIVE EXECUTIONER.—Le Roi, called to a patient in all haste, and in whom he found venesection urgent, engaged a bystander to hold the basin. The blood had hardly begun to flow, when the assistant fainted away. Next day Le Roi was not a little surprised to learn that this impressionable person was the public executioner of Versailles; and his wife stated that the sight of blood always produced this effect upon her husband.—*Union Méd.*, December 2.

ACADÉMIE DE MÉDECINE.—At the last meeting, M. Laboulbène was elected into the Section of Pathological Anatomy. At the first *scrutin* he obtained forty-one votes against the thirty-five of M. Empis; but as forty-two constituted the majority of the voters present, another trial had to be made, which ended in his obtaining forty-nine to M. Empis' thirty votes. The Committee had placed him second on the list of candidates. That this list was not very fairly drawn up is seen from the fact of so eminent a pathologist as M. Lancereaux only occupying the fourth place.

AUGUSTE DE LA RIVE.—At the meeting of the Académie des Sciences, December 1, M. Dumas, in announcing the death of this philosopher, characterised, in the happy manner of which he is the most eminent of masters, some of the features of his scientific career. All physicists, he observed, knew how well that life had been passed, especially those conversant with the progress of electrical science, the portion of physics to which De la Rive almost exclusively devoted his attention. Among his principal labours were those which at a later period led manufacturers to the electrical application of gold and silver over the baser metals. He also referred to the ingenious experiments on which he founded his theory of the aurora borealis, showing the striking analogy existing between the auroral phenomena and electricity in vacuo and in rarefied media. M. Dumas had been in intimate relation with De la Rive since 1816, and therefore felt himself better able than most persons to know and state the noble uses which he made of his large fortune in always placing it at the service of science for the pursuit of his own investigations and those of other persons. His house at Geneva, also, became a centre of hospitality; and all those who, under any title whatever, could be called cultivators of science, were always certain of a sympathetic reception, and, if necessary, of generous aid. At first a correspondent of the Academy, De la Rive was in 1864 elected one of the eight foreign associates in the place of Plana.—*L'Institut*, December 3.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN NOVEMBER, 1873.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	17·73	0·051	0·129	0 002	14·0	3·3
West Middlesex .	17·63	0·038	0·164	0·001	14·0	3·3
Southwark & Vauxhall . . .	19·84	0·074	0·126	0·002	15·0	3·8
Chelsea . . .	17·53	0·098	0·107	0·002	14·0	3·3
Lambeth . . .	19·81	0·086	0·128	0·002	15·0	3·8
Other Companies.						
Kent	28·31	0·006	0·216	0·000	21·8	5·6
New River . .	19·17	0·010	0·010	0·001	14·8	3·3
East London . .	19·13	0·029	0·116	0·002	14·5	4·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was more or less turbid—namely, in those of the Grand Junction, the Southwark and Vauxhall, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 115,326,807 gallons; and the number of houses supplied was 505,595. This is at the rate of 34·4 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 24·9 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

MORTALITY IN MELBOURNE.—The Registrar-General's Report of the vital statistics of Melbourne and suburbs during August last states that the deaths for the month were 339, out of an estimated population of 225,203, or 1·55 per 1000. Nine of the deceased were aged from seventy-five to eighty-four. Of the whole number 81, or 24 per cent., occurred in public institutions. Of children under five years, 101 died, or 34 per cent. of the whole.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

R. F. Snape, Bolton-le-Moors, Lancashire.—The degree in question is utterly worthless, and the "shop" where such were sold has been suppressed.

Melbourne.—We have read the article in the *Melbourne Age* with respect to the election of a professor to the Melbourne University. We see no grounds for the "ousting" of the late professor, who appears to have performed his duties in an exemplary manner. We are wearied with having so constantly to refer to the medical squabbles of our Australian brethren, and especially regret that the political press is occupied with these disgraceful differences. The bringing our disagreements before the general public is most inimical to the interests of our profession. It would be wiser if the medical practitioners in Melbourne were "to wash their dirty linen at home."

CHEMICAL NOMENCLATURE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—When and on whose authority was the German mode of naming chemical compounds introduced here? We used to say "nitrate of silver," "hydrate of chloral," and so on; now we hear of *silver nitrate*, *chloral hydrate*, etc. Is the new terminology sanctioned by the College of Physicians? I am too ignorant of chemistry to be critical about these terms, and am simply asking for information. I am, &c.,

December 5. QUÆRENS.

AUSTRALIAN WINES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Permit me to inform the medical profession through your columns that, by order of the Commissioners from the South Australian Government, all the wines exhibited this year at South Kensington from the colony may be sampled in my cellars at this address until Monday, the 15th inst., on presentation of a card; after which date the remainder will be handed to the hospitals. At the meeting of the Society of Arts last evening, Monday, the 8th inst., was announced in mistake as the latest date on which these wines could be tasted. I am, &c.,

50, Old Broad-street, London, E.C., December 4. P. B. BURGOYNE.

FRACTURE OF THE FEMUR AT THE AGE OF EIGHTY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Fracture of the femur at the age of eighty is not so particularly rare that it must needs be put in print; but the following case presents, in my opinion, some features of interest. It occurred to an elderly lady of eighty, who lives for the most part all alone. On a visit to her sister, she tumbles down the strange stairs, and breaks her femur—not at the hip, but in the lower portion of the lower third. Set in cardboard, or rather millboard splints, previously soaked in boiling water, with boxes and pillows to keep the position necessary for comfort, etc., it is united firmly at the end of three weeks, a great amount of callus thrown out, and its length equal to that of its fellow. The fracture, too, I believe to have been nearly, if not quite, transverse. I am, &c., COUNTRY DOCTOR.

COMMENTARIES ON MEDICAL MATTERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I was much interested in reading in the *Medical Times and Gazette* for 1872 some remarks by Mr. Prescott Hewett on "Gouty Phlebitis." I have suffered in my own person two attacks of gout—hereditary—which assumed this form in a most severe degree. The first attack (in 1871) was in the right lower extremity, the second (in 1872) in the left. The skin showed all the colours of the iris; the discoloration was especially pronounced on the sides of the knee-joint, on the calf of the leg, and on the ankle-joint. There was considerable tumefaction with hardness; and any movement caused great pain, and greater nausea, and sense of sinking. In 1872 I was confined to bed for five weeks. I suffered much fever in the first days—oppression of the respiration—and I had great fear of falling a victim to embolia. I took much bicarbonate of soda with iodide of potassium and some colchicum; afterwards, pepsine, iron, Madeira wine. Locally I employed frictions—iodine, narcotics, the grease of the tapir and of the ounce; afterwards, blisters on the most indurated points. I am of a spare habit—most abstemious as to diet—not a hard worker, as my patients are most considerate in sparing me as much as possible all avoidable fatigue. For many years I suffered frequent attacks (severe ones) of intestinal hæmorrhage, but for some time these have ceased. The more nutritive meats (as beef and mutton and kid) my intestines do not support, nor can I digest the feculent roots (as manioc, yam, sweet potato, etc.). I suffered greatly from dyspepsia in 1871-72, but since rising from my sick-bed in November, 1872, have enjoyed a degree of health to which I had long been unaccustomed. My age is now fifty-five. I had suffered for some time a papulous eruption, with elevation and redness of the skin of the face, which has also disappeared. I considered myself in danger, and neither I nor any other of the physicians of this city (who represent the practice of many countries) had ever met with a similar case. I am not ashamed to publish that I made a vow to Saint Elizabeth of Hungary, and render devout thanks to Almighty God for my recovery. As Mr. Hewett, in his address to the Clinical Society, spoke of this form of gout as rare, and the cases he adduced terminated fatally, I am induced to give an account of my case. I have now reason to modify a statement I formerly made that gout—regina dolorum—was unknown here. It is most rare, but I have seen a very few cases. An arthritic diathesis is, however, not uncommon, and anomalous symptoms substitute regular gout. The arterial system is, I think, often chronically the seat of the arthritic ravages. I now employ largely the carbonate of lithia in such cases, and have lately made use of the iodide of lithium. As an allied topic, I will mention that I have used propylamine in cases of chronic rheumatism with good results. I select the muscular form, and especially those cases in which the patient complains of a sensation of cold. In similar cases a strong infusion of sassafras (fruit or bark) in rum (a wineglassful every morning) is an excellent remedy; so also mezereon, so also velame (*Croton campestris*), also cod-liver oil. I am, &c.,

RICHARD GUMBLETON DAUNT, M.D. Edin., Brazilian Citizen.

Campinos, Brazil, September.

HEPATIC.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Victor Jacquemont, aged 28, a tall, dark-complexioned French naturalist, with good teeth, short sight, a pleasant manner, and of scientific reputation, arrived in India in 1829, where—travelling three years and a half in Thibet, Lahore, and Cashmere—he worked hard collecting every information about plants, stones, and animals. There are professional points of interest about him well worth discussing. In after-dinner language, it is a matter of regret this duty has not devolved on more able men. However, under the punkah in the darkened room, during blazing hot weather, I proceed—with the assistance of two volumes partially written by Jacquemont—to *write* out his case and proceedings.

On the voyage out he first appears on the professional scene, assisting (by tying the arteries—five in number) at an amputation of the forearm, the natural inference being that he had some medical education, which he endeavoured to improve by button-hole and brain-picking whenever he met the faculty. Also he treated his servants and friends; for instance, an officer suffering from fever, the remedies employed including purgatives, emetics, sinapisms, camphor, quinine, *secundum artem*. Also he treated himself, depending at first on temperance, abstinence, and exercise, on a little box of infallible medicines, but, above everything, on his syringe—the best in India—having (Frenchman-like) every confidence in enemata. In the course of his travels, one night, thieves breaking into the tent, mistaking pewter for silver, triumphantly carried away his sheet anchor, which was never heard of more. Jacquemont—disconsolate, desolate, in despair—eventually borrowed another from a military hospital (one of the old pattern, useless and obsolete), and from that time almost dates the commencement of ill health. It should be mentioned that although he had good letters of introduction his private means were small; thus two or three visits to grand houses would be succeeded by great discomfort, indeed privation, in a wretched tent—the bad food, bad water, miserable attendance, contrasting sadly with the luxuries enjoyed at Lord Wm. Bentinck's table. Often reckless about the sun, catching cold, bathing, over-fatigue, he fared on milk and water, brandy, *eau sucrée*, spices, sugar, sulphur, rancid butter, all kinds of abomination, including cheap fine old port picked up at a sale. All this time enduring many privations, he worked hard in the endeavour to advance the science of natural history, hoping one day to return laden with his treasures, and to settle down with an old scientific bachelor crony in a little cottage in *la belle* France. On one occasion, out alone in May, 1831, in camp, whilst suffering from hæmoptysis, he applied sixty-five leeches (caught in the river) to his chest; also had two sheep killed daily, to eat as much as possible, and thus gained strength. Occasionally, too, want of appetite, abdominal cramps, flatulence, induced great mental depression—manfully, indeed injudiciously, contended against; for instance, riding from Meerut to Delhi (forty miles) directly after breakfast.

In July, 1832, occurred a sharp attack of dysentery, treated by calomel, rhubarb, opium, magnesia, cream of tartar, castor oil, ipecacuanha, and a mild lavement of gum arabic. He improved, but on October 30, having made arrangements to return home, he was stricken with sickness at Bombay, commencing with irregular attacks of fever, debility, and disordered bowels, with a feeling of uneasiness in the præcordia. From the very beginning his will was made, affairs set in order, the beloved manuscripts, the treasured specimens packed for final destination, whilst he calmly awaited results—anticipating the worst. For thirty-one nights he did not sleep, yet the time did not appear so desperately long; and, stretched out on his back, he contrived with a pencil to write "Farewell"; also to tell relations and friends how dear they were to him at the last; and that he, dying in a distant land, was neither deserted nor unnoticed. Now to epitomise the symptoms and treatment. Dr. MacLennan found heat and pain about the sacrum; pulse 84; evacuations frequent, offensive, attended with tenesmus; foul tongue, fetid breath. *Ordered:* Sixty leeches to sacrum, warm bath, strong dose of calomel, a few grains of pulv. ipecacuanha and opium. Next day better, excepting pain about navel. *Ordered:* Sixty leeches to hypochondrium (right), warm bath, more calomel—substituting henbane for opium, followed by thirty leeches at night and castor oil next day. The stools were copious, liquid, brown, with a putrid smell, but no blood noticed. From November 1 to 6 the same treatment maintained, the strength supported by soups and wine. Ptyalism slight, symptoms more decided. Hepatic abscess now diagnosed. Laxatives were prescribed, also open-air exercise in a palanquin tried and abandoned as inducing fatigue; the pulse, skin, and tongue meanwhile satisfactory. November 15: A small swelling in the right hypochondrium was relieved by repeated blisters,—only temporarily, however, for on December 2 appeared a tumour pointing towards the edge of the ninth rib, neither fluctuating nor adherent. Nausea, fever, thirst, dyspnœa, abdominal cramp, uninfluenced by fomentations or sedatives, steadily increased; culminating at three o'clock in the morning of December 7 in acute lancinating pain round the pubes, agonising dysuria, coffee-ground vomiting, frequent syncope, and extreme prostration. All day long pitiably he lingered, perfectly sensible until six o'clock in the evening, when death mercifully put an end to suffering. At the post-mortem they found an abscess, situated in the posterior part of the liver at a short distance from the backbone, had burst its contents (100 ounces of clear fluid) into the cavity of the abdomen. No other lesions recorded. The reader will note this poor fellow was only thirty-one years of age when a bright and brilliant career became suddenly checked. In addition to typhoid and rheumatic fever, there are cases of abscess of the liver now under treatment, particularly interesting, terribly depressing; but doubtless eventually worth recording when sufficiently numerous. D.V., I hope to write many papers, but *we all* have livers, and life is *very* precarious in INDIA.

COMMUNICATIONS have been received from—

Mr. Horatio Stokes, Gibraltar; Mr. H. K. Hitchcock, Lewisham; Mr. A. Kendall, London; Dr. Louisa Atkins, Birmingham; Dr. F. A. Hartsen; Mrs. Whitaker, Kirkby Lonsdale; Messrs. Brown and Green, London; Dr. Orange, Broadmoor; A Birmingham Doctor; Mr. Balmanno Squire, London; Dr. W. S. Symes, Maryborough; Dr. Balthazar Foster, Birmingham; Quærens; Country Doctor; Mr. C. Offer, London; Dr. Sparks, London; Dr. Carter, Liverpool; Dr. W. H. Pearse, Plymouth; Mr. Christopher Heath, London; Mr. J. Chatto, London; Dr. B. W. Richardson, London; Dr. Fayrer, London; Mr. C. J. Cullingworth, Manchester; Dr. Semple, London; Mr. Poole, London; Mr. A. G. Harvey, London; Mr. G. Rhodes, Halifax.

BOOKS RECEIVED—

Waters on Diseases of the Chest, second edition—Dun's Veterinary Medicines—Winslow's Manual of Lunacy—Studies from the Physiological Laboratory in the University of Cambridge, part i.—Dwight on the Structure and Action of Striated Muscular Fibre—Rumbold's Description of New Instruments for making Examinations and Applications to the Cavities of the Nose, Throat, and Ear—Rumbold on the Function of the Eustachian Tube—Abstracts and Proceedings of the Bombay Medical and Physical Society—Curtis's Introductory Lecture on the Protoplasm Theory—Liddle's Report on the Sanitary Condition of the Whitechapel District of the Board of Works—The Value of European Life in India, by Dr. Mouat—Census of Ireland, part 2, vol. i.—Report and Tables relating to the Status of Disease—Davies on the Preparation and Mounting of Microscopic Objects—Don Carlos: a Tragedy, by Schiller, translated into blank verse by Andrew Wood, M.D., etc.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Nature—Gazette Hebdomadaire—Students' Journal and Hospital Gazette—Food, Water, and Air—Le Progrès Médical—La France Médicale—Carlisle Express—L'Union Médicale—Pharmaceutical Journal—Gazette Médicale de Paris—The Allahabad Pioneer—Gazette des Hôpitaux—New York Sanitarian—The Edinburgh Courant—Allgemeine Wiener Medizinische Zeitung—Philadelphia Medical Times—Edinburgh Daily Review—The Scotsman.

APPOINTMENTS FOR THE WEEK.

December 13. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

15. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Farquharson, "Cases of Infectious 'Tonsillitis.'" Dr. Pearson (communicated by Dr. Farquharson), "An Epidemic of Sore Throat with marked Constitutional Symptoms." Dr. Dowse, "On Cerebro-spinal Meningitis, with Clinical Records."

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

London Anthropological Society, 8 p.m. Meeting.

Pathological Society, 8 p.m. Dr. Fred. Taylor—Leucocythæmia with Lymphadenoma. Dr. Crisp—Imperforate Anus. Mr. Godlee—1. Ossifying Enchondroma; 2. Peri- and Myo-carditis from a Case of Blood-poisoning following Whitlow. Dr. Dowse—Renal Calculi. Mr. Nunn—1. Cast of an Enchondroma; 2. Pendulous Tumour from the Pubes of a Man. Mr. James Adams—Deformity of the Knee-joint. Mr. Cripps—Spleen and Lymphatic Glands from a Case of Adenoid Disease.

Statistical Society, 7¾ p.m. Meeting.

17. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

19. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

Medical Microscopical Society, 8 p.m. Meeting.

EXPECTED OPERATIONS.

Royal Free Hospital.—The following Operation will be performed on Saturday (this day) at 2 p.m.:—

By Mr. Gant—Extirpation of Eyeball.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 6.

BIRTHS.

Births of Boys, 1169; Girls, 1102; Total, 2271.
Average of 10 corresponding years 1863-72, 2030·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	728	756	1484
Average of the ten years 1863-72	785·0	773·1	1558·1
Average corrected to increased population	...	...	1714
Deaths of people aged 80 and upwards	...	...	57

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	22	1	1	2	...	2	...	3
North	751729	...	42	2	1	8	2	5	...	1
Central ...	334369	...	16	2	...	5	...	1	1	1
East	639111	...	24	11	...	10	1	8	2	2
South	967692	...	14	7	1	16	5	6	8	4
Total	3254260	...	118	23	3	41	8	22	11	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·283 in.
Mean temperature	43·3°
Highest point of thermometer	52·1°
Lowest point of thermometer	32·2°
Mean dew-point temperature	40·0°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 6, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Dec. 6.	Deaths Registered during the week ending Dec. 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2271	1484	52·1	32·2	43·3	6·28	0·00	0·00
Portsmouth ...	118280	12·4	78	47	57·0	33·2	46·8	8·22	0·11	0·28
Norwich	81677	10·9	43	29	51·0	28·0	41·4	5·22	0·00	0·00
Bristol	189648	40·4	134	76	...	...	...	...	...	...
Wolverhampton ...	70084	20·7	50	26	52·5	36·1	44·0	6·67	0·02	0·05
Birmingham ...	355540	45·4	282	175	53·4	38·0	44·8	7·11	0·33	0·84
Leicester	102694	32·0	69	44	52·0	32·0	42·8	6·00	0·00	0·00
Nottingham ...	89557	44·9	75	34	55·8	33·1	44·6	7·00	0·15	0·38
Liverpool	505274	98·9	351	227	53·3	38·1	46·5	8·05	0·04	0·10
Manchester ...	354057	78·9	259	197	53·0	33·5	44·6	7·00	0·04	0·10
Salford	130468	25·2	104	65	53·7	34·0	44·9	7·17	0·07	0·18
Oldham	85141	20·4	75	31	52·0	...	...	...	0·05	0·13
Bradford	156609	23·8	100	55	54·2	36·0	47·2	8·44	0·34	0·86
Leeds	272619	12·6	245	151	56·0	35·0	47·0	8·33	0·20	0·51
Sheffield	254352	11·1	206	132	57·0	34·7	45·6	7·55	0·05	0·13
Hull	128125	35·9	72	53	52·0	28·0	43·6	6·44	0·04	0·10
Sunderland ...	102450	31·0	62	49	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	94	83	53·0	35·0	46·5	8·05	0·20	0·51
Edinburgh	208553	47·1	140	118	54·4	34·3	45·1	7·28	0·11	0·28
Glasgow	498462	98·5	385	272	51·2	35·2	45·0	7·22	0·38	0·97
Dublin	314666	31·3	173	176	57·4	28·8	46·0	7·78	0·00	0·00
Total of 21 Towns in United Kingd'm	7507575	34·5	5268	3524	57·4	28·0	45·0	7·22	0·11	0·28

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·28 in. The highest was 30·46 in. on Thursday morning, and the lowest 29·39 in. at the beginning of the week.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON RUPTURE OF THE AORTIC VALVES FROM ACCIDENT.

DELIVERED AT THE BIRMINGHAM GENERAL HOSPITAL, NOVEMBER 17, 1873.

By BALTHAZAR FOSTER, M.D., F.R.C.P.,
Physician to the Hospital;
Professor of Medicine in Queen's College, Birmingham;
and Consulting-Physician to the West Bromwich District Hospital.

(*Concluded from page* 658.)

I WOULD now call your attention to the mode in which the valvular mischief occurred in this case. Clearly it was the result of the accident. The ruptures took place in valves till then sound, under the influence of the effort which the man made to save himself when thrown forward on the deck. In all the cases of this kind on record it is some vigorous bodily effort—made generally with the chest well filled with air, and its walls fixed—that gives rise to the injury. Under such circumstances, the tension in the aorta is at its highest, and the strain becomes too great for the delicate valvular folds. So it was in the case of M. W., who, stretching across a copper with his abdomen compressed, made a violent effort to seize one of his cooking-utensils placed on a shelf opposite; so also was it with S. (case below), who ruptured his aortic valves in endeavouring to throw an unusual weight of coal. In the present case we had two elements in the accident—the effort to save himself by grasping the side of the hatchway, and the fall on to his chest. It is impossible to say to which of these elements the accident must be referred, but it seems to me, from a study of the cases on record, that the muscular effort had more to do with it than the blow.

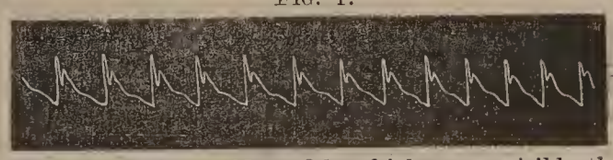
In most of the cases this accident has been followed by well-marked symptoms, but from H. we obtained no clear history of how he suffered immediately after the accident. There can be no doubt that such a rupture as he suffered from must have produced very marked symptoms. We cannot conceive a considerable imperfection of such important valves occurring suddenly without some effect on the circulation. *A priori*, we should look for a temporary disturbance of the balance between the contents of the arterial and venous systems, with engorgement of the lungs and general venous congestion, which would pass away as the heart became more a match for the altered conditions of its work. The following case, which some of you may remember, gives us a very clear illustration of the immediate effects of such accidents:—

Thomas S., aged 33, stoker, was admitted into the General Hospital on August 22, 1870, apparently dying. He was cold, pulseless, livid in the face, with his skin covered with cold sweat. The House-Physician, Dr. J. B. Welch, diagnosed great congestion of the lungs, and very properly bled him from the arm. The blood flowed with difficulty, but he rallied a little, and he was placed in bed in warm blankets, hot bottles were applied to his feet, and sinapisms to his chest and legs. As soon as he could swallow, hot brandy-and-water was administered, and afterwards fifteen minims of ozonic ether every quarter of an hour. At the end of four hours he showed decided signs of reaction, and the alarming symptoms gradually subsided. He coughed a good deal, and expectorated bloody mucus, and complained of difficulty of breathing and acute pain in the præcordial region. On the morning after his admission a double aortic murmur was detected.

On inquiry we found that his family history was good; that he had never had any serious illness, and no rheumatic fever. When about eighteen years old he enlisted, and served in the Crimea and through the Indian Mutiny and in China, where he suffered from rheumatic-like pains in the legs, but was never laid up. He stated that he had never had syphilis and had always been fairly temperate. After leaving the army he became a stoker at the gas-works, and when there he had a bronchitic attack, but was not confined to his bed. He afterwards went to the axle-works at Saltley, where he was at work when seized with his present illness. The mode of the attack was as follows:—Whilst lifting and throwing, in his capacity as stoker, an unusually great weight of coal, he felt a sudden and severe pain in the epigastrium, which stopped his breath and made him gasp for a moment or two. His head went light and everything looked dim, he fell down, and some of his fellow-workmen brought him some brandy, which revived him for a moment, but after this he remembered nothing until he began to recover in the hospital.

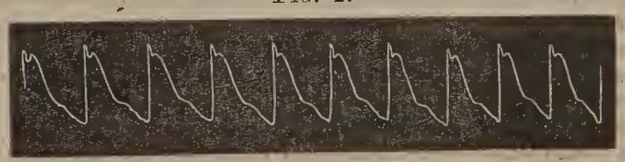
He mended day by day, but still complained of his breath and cough. About a week after the accident the following notes were made:—Lung percussion, which had daily improved posteriorly, had become at this time healthy all over his chest. The heart-sounds were normal everywhere, but were rather feebler over right lung posteriorly than over left. Heart: Apex-beat rather forcible below sixth rib, just inside nipple line. Cardiac dulness extended laterally from nipple line to right edge of sternum, and from above fourth rib to below sixth. On auscultation there were heard at base two murmurs, one systolic, the other diastolic. The systolic murmur was soft, short, blowing, and faintly flapping in its character, and was loudest at mid-sternum opposite fourth rib; it was not conducted upwards very distinctly, and was inaudible at apex. The diastolic murmur was loud, creaking almost in its character, masking second sound, and extended quite through the long pause. It was most distinct at the second right costal cartilage at its junction with the sternum, and also opposite fourth cartilage. It was loudly heard all down right edge of sternum, from manubrium sterni to ensiform cartilage. It was louder under right clavicle than under left, and could be heard in carotids replacing second sound, and was audible all down the spine posteriorly. It was not heard well at apex; there it was faint and more indistinct than midway between apex and ensiform cartilage. At this time the radial pulses were jerky, and gave the following trace with the sphygmograph:—

FIG. 1.



The pulsations of carotids and brachials were visible, though less so than three weeks later, when he requested his discharge. When discharged the cardiac dulness had decidedly increased, and extended as low as the seventh interspace, and there was also marked epigastric pulsation. The heart-sounds had not altered, except that a more purring than creaking character was noticed with the diastolic murmur, and a distinct thrill could be felt with diastole over sternum and base of heart. The impulse was heaving and diffused; the pulse, more bounding and of higher tension, yielded the following trace, which shows clear signs, when compared with the former tracing, of the increased power of the left ventricle. The liver projected

FIG. 2.



one inch and a half below the costal arch; splenic dulness was normal; urine free from albumen, but scanty and loaded. Expression of face anxious, and its colour somewhat paler and sallower than natural. He had been kept on a generous diet during the last fortnight of his stay in the hospital, and had taken—in addition to occasional purgatives—a mixture containing perchloride of iron and chloric ether. He was directed to live as well as he could, to take a fair amount of meat, and to continue his medicine.

Only two months later he was brought into the hospital moribund. His legs were greatly œdematous; his breathing laboured; both lungs congested and œdematous; heart's action tumultuous, and the beats irregular and unequal; pulse with same character—104, thrilling, and of low tension; face dusky. He was, in short, in a state of asystoly, from which he never rallied, and died eighteen hours after admission. We learned from his wife that he had tried to work after his discharge, but had been unable to do any heavy work, and had consequently maintained himself by odd jobs, and at times had been very short of proper food. He had got daily worse for two weeks before his readmission.

The post-mortem examination disclosed the following points of interest:—On opening the thorax, the right lung was found to be adherent. In the left pleura there were some

seven ounces of fluid. Both lungs were congested, and in both were spots of recent hæmorrhage. The liver was large, and weighed four pounds six ounces. Kidneys both congested, and spleen also, but not much enlarged. There were twenty ounces of fluid in the peritoneum. In the pericardium were three to four ounces of serous fluid. The heart was greatly dilated and enlarged, and weighed twenty-one ounces. All its cavities were full of blood-clot, fibrinous and black. The right cavities were dilated, but their valves were perfect. The left cavities were also dilated, especially the left ventricle, which was greatly so, while its walls were not hypertrophied to a corresponding extent. The mitral valves were thickened somewhat, and were less transparent than in health. The mitral orifice was dilated, and admitted four fingers. The aortic valves were incompetent. The incompetency was caused by the right coronary segment, which was torn from its attachments, and had its free margin thickened and retroverted towards the ventricle. At its angle of attachment to the left coronary segment it was torn down five-sixteenths of an inch; and in the angle between these segments thus formed, the chief regurgitation seemed on testing to take place. The other attachment in connexion with the left or mitral segment was torn down to an equal extent; but the mitral segment overlapped the angle thus formed, and partially prevented the regurgitation. The mitral segment was torn slightly at its right attachment to the extent of about one-twentieth of an inch, and the valve itself was softened, and undergoing rapid degeneration. The aorta was atheromatous to a moderate degree above the valves—no doubt as a consequence of the injury, as higher up and throughout its course it was healthy. The cardiac muscle (left ventricle) was undergoing fatty degeneration: this was especially the case with the papillary muscles.

This case teaches us very forcibly that the symptoms of a suddenly created imperfection of the aortic valves are what we might *à priori* expect. Here, crowded into the space of a few seconds, we had all the phenomena of obstructed intracardiac circulation, which generally take months to develope. When the rupture occurs, the immediate effect is for the blood to pour through the rent into the left ventricle. That cavity, surprised, as it were, by the novel rush of blood from the aorta, in addition to the accustomed stream from the auricle, staggers under the load, falters in its action, and hence the syncope. When the ventricular muscle rallies again to its work, it cannot for a time cope with the increased blood-charge. Whatever flows back from the aorta must keep back some of the contents of the auricle, and so distend that cavity, and soon congest the lungs. The ventricle dilates, however, under the extra blood-pressure, and thus throws at each systole into the aorta a larger quantity than the normal charge. In time this extra charge becomes large enough to allow for the regurgitation, and still keep up an approximation to the normal contents of the arterial system. For a time a healthy cardiac muscle would be competent for this increased effort; but its reserve power would not last long, and its nutrition would suffer: therefore the next change soon occurs. Not only does the cavity dilate to contain more blood, but the walls thicken, so as to propel the larger quantity with sufficient power. This hypertrophy renders the left ventricle a more equal match for the valve defect, and when the hypertrophy and dilatation are so nicely adjusted to the lesion that each ventricular systole propels into the aorta a charge of blood sufficient to allow for the reflux, without robbing the arterial system of its due, the compensation is practically perfect, and the normal balance between the arterial and venous contents is maintained. In this way the compensation was effected in both the cases before us. How comes it, then, that it was only temporary? To answer this question we must consider the mode in which the heart is nourished. Working as the cardiac muscle does constantly, with only that fitful rest which it obtains between each systole, its nutrition must be most active, in order to support the wear and tear of its constant work. This active nutrition is provided for by the position of the coronary arteries, which, arising from the first part of the aorta, are so situated that for each cardiac contraction a double wave of blood enters them. They receive some blood from the cardiac systole, but the aortic systole fills them more thoroughly, causing the blood to bound, as it were, from the tense aortic valves into the open mouths of the coronary arteries. It is no doubt this second or diastolic wave which gives the heart most of its blood-supply; for it is during this period of diastole, when, mark you, the ventricular muscles are relaxed, that the nutrient current can circulate most readily through the ventricular walls. Now, in all forms of imperfect action of the aortic valves, the rebound of the blood-column from the closed valves is weakened, and therefore the diastolic blood-wave is sent into the coronary arteries with less force. In all these cases, too, the aortic tension is lessened by the regurgitation; and the less the tension in the aorta, the less perfect the impletion of its coronary branches. These are the reasons why all cases of aortic insufficiency are sooner or later followed by failure of the cardiac muscle. The work for the ventricle to do is excessive, the nourishment it receives is defective, and the inevitable consequences are—muscular degeneration and failure of compensation. Many cases of aortic insufficiency, however, go on for years; the compensation is maintained so perfectly that scarcely any inconvenience is the result. In all such cases that I have met, the valve-lesion has been the consequence of disease, and not of rupture from accident; and I think I may also say the regurgitation must have been slight. In the cases of insufficiency from disease the valves are often increased in size and substance by inflammatory products, and the insufficiency is due to a want of perfect adaptation of the valves at their edges of junction. In cases of rupture of healthy valves, on the other hand, the lesion is generally greater, and by its position at the base or attachment of the valve allows more free regurgitation. This is, I believe, the reason why these cases of ruptured aortic valves live so short a time after the accident. In no case, as far as I can find, in which the rupture has been found after death has its occurrence been referred to a date more than four years and a half previously. In the three cases which I have brought before you, the duration of life after the accident was three months (S.), about eighteen months (H.), and about twenty-three months (M. W.). Between the longest period and the shortest there is a considerable difference, due, I have no doubt, mainly to the extent of the lesion, and partly to the conditions under which the patient has been placed after its occurrence. The seat of the rupture has, however, I am strongly inclined to believe, a considerable influence in determining the duration of life. Two of the segments have above them each a coronary artery, which is filled by the blood-column as it rebounds from their curtains. When these segments are torn down and retroverted, the regurgitant blood-current running past the mouths of the coronary vessels must to some extent diminish the amount of diastolic blood-wave which they receive, and consequently impair the heart-nutrition. When the aortic segment immediately below the coronary artery is imperfect, the filling of the artery, probably both at the time of the ventricular systole as well as at the time of the aortic systole, must be impeded. It was to this point I alluded when I said that if my explanation of the propagation of an aortic diastolic murmur to the left apex were correct, it was not a matter of mere curious diagnosis, but had a bearing on prognosis. That segment of the aortic valves, by whose incompetency we believe a murmur is specially carried to the left apex, has no coronary artery above it, and therefore, when it is affected, we should expect the coronary circulation to suffer less than when either of the other segments is imperfect. The coronary arteries, when this segment is torn, would have no regurgitant current running at right angles close to their orifices, and no thickened valve to divert the systolic wave from their mouths, and would suffer only in proportion to the general loss of tension in the aorta. As far, then, as the coronary circulation is concerned, imperfection of the mitral or non-coronary aortic segment should, *cæteris paribus*, be less serious than a similar imperfection of either of the other segments. There is, in my experience, reason to believe that this is so. Of the three cases of rupture of these valves to which I have referred to-day, that case, in which the non-coronary segment was the injured one, lived the longest time. In the other two cases in which the segments below the coronary arteries were torn, and in cases recorded by other observers in which similar injuries existed, the duration of life after the accident was less. The hypothesis I have advanced contains, I think, the elements of the explanation of the short period which these cases of ruptured valves survive, and I am sure a more minute study of the finer features and the position of valvular lesions will give us the clue to the long or short course which a case of aortic insufficiency may run. The investigation of such details will at all events improve our powers of observation, and so far make us better practitioners, even if it does not—as I think it will—lead to more far-seeing prognosis and more scientific treatment.

ORIGINAL COMMUNICATIONS.

ON THE BENEFICIAL INFLUENCE OF SEA VOYAGES IN SOME FORMS OF DISEASE.(a)

By THOMAS B. PEACOCK, M.D.,
Physician to St. Thomas's Hospital, etc.

I HAVE been asked to read a paper to the Hunterian Society, and have thrown together the following remarks on the influence of sea voyages in the restoration of health, which I hope may prove of interest to the members.

There are several different forms of indisposition about which we are frequently consulted in which we may recommend the patient to try the effects of a sea voyage.

1. The simplest and most common class of cases is that in which, in consequence of too close application to professional work or business, the general health becomes impaired. The patient suffers from dyspeptic symptoms and biliary derangement, becomes much depressed in spirits, and has great inaptitude for his ordinary pursuits, and especially for work involving mental exertion. In cases of this kind all that is required is a cessation from the ordinary occupation and a change of scene, and I know no plan which offers a better prospect of speedy and complete restoration of health than for the patient to take a short sea voyage. Persons of active habits do not generally benefit from entire rest at the seaside or at a watering-place. The want of occupation palls in a few days, and the invalid, if such he may be called, longs for his wonted engagements, and, as he can still be reached by letter or telegram, he is never entirely free from his business anxieties. To benefit by change, it is better that he should go away and have an entire change of scene, in which his mind may be occupied by new thoughts, and pleasurable excitement be maintained. This a sea voyage affords him. If a bracing climate be thought most desirable, he may cross the North Sea to the west coast of Norway or to Sweden, passing by the River Gota and the canals and lakes to Stockholm and Upsala, or he may go up the Baltic to Copenhagen, Riga, Revel, or Cronstadt; or if he be more enterprising and desires a longer relaxation, he may go to Iceland and visit Hecla and the Geysers, or cross the Atlantic to the United States or Canada. If a milder climate be considered preferable, he may go by sea to the Peninsula, entering by the north of Spain, Lisbon, Cadiz, or Gibraltar; or go down the Mediterranean, visiting Morocco, Algeria, the Italian ports, Egypt, or the Levant; or he may take a voyage to the Atlantic islands, Madeira, the Azores, the Canaries, or Cape Verde Islands. Any of these trips may be accomplished in from a month to six or eight weeks, and they afford the opportunity not only of exposure to healthy sea-breezes, but of a few days being spent in places in themselves full of interest, and which in their features present a marked contrast to home scenes. No one also who is a fairly good sailor need be deterred from undertaking such excursions by the fear of sea-sickness. Few persons suffer much in that way for more than a few days, unless the weather be exceptionally bad; and such need hardly be expected at the season of the year in which such excursions would be advised. Cases of simple anæmia, whether occurring at the commencement of adolescence or at other periods of life, are also much benefited by a sea voyage.

2. We are often consulted about cases which, while similar to those just named, are of a more threatening character—when, the first evidences of overtaxed powers having passed unheeded, the symptoms of indisposition have become more marked, and apprehensions are entertained of commencing organic disease of the digestive organs, or of the brain and nervous system. Cases of this kind may equally be benefited by any of the trips which I have mentioned; but as the indisposition has been of longer duration, and is more marked, it will be necessary that the cessation from work must also be more prolonged. The patient must stop for a longer period at the place which he visits, or he may undertake a voyage which allows him the opportunity of staying from time to time at different places on his route, so as to remain away as long as may be thought necessary.

3. A sea voyage is also often very beneficial in a different class of cases, as when a young man, perhaps always somewhat delicate, becomes seriously out of health about the period of puberty or when passing into manhood. He is pale, thin, and altogether anæmic and ill-nourished, has a feeble circulation, and his appetite and digestion are impaired. He becomes unduly susceptible to cold, and an ordinary catarrh gives rise to cough, which is not readily got rid of. On examining the chest, however, nothing seriously amiss is detected, though there may probably be a general want of clearness on percussion at the upper parts, and of full and free respiration—which are so often the first indications of pulmonary weakness. These symptoms are also to be regarded with more apprehension if similar delicacy has manifested itself in other members of the family, and especially if either parent has died of consumption. In cases of this kind the greatest benefit may result from a sea voyage, combined or not, as may be thought most desirable, with a residence for a longer or shorter time at the place visited. The voyage selected must, however, be somewhat different from those named, and preference should be shown to one which will take the patient away during winter. He should leave this country in August or September, and not return before May or June. For this purpose a trip to the Cape of Good Hope or to Natal, and a journey on the table lands of Cape Colony or the Free States, to New Zealand or Tasmania, or to different parts of the Australian Continent—Victoria, South Australia, New South Wales, or Queensland,—often answers very well, preference being generally given to the cooler climates over those which are warmer; and I think I have seen the best results from visits to South Africa. The same purpose may also be well accomplished by voyages down the Mediterranean undertaken at the same period of the year, the invalid stopping from time to time at different places so as to remain from home during the winter. Not unfrequently it is proposed to send a delicate person to the East or West Indies or to China; but these voyages are less eligible, for, however short be the stay at the destined port, there is danger of the patient suffering from the climate. I have known a young man—previously only slightly out of health—go to Demerara, and while there to take endemic fever, and return home with his health very seriously deranged, and with decided signs of pulmonary disease. I have also been asked whether, in such cases, Rio de Janeiro might not be the destination of the invalid; but to this there are great objections. Our winter—when the patient requires to be away—is the hottest and most unhealthy season in Brazil, and though within a few hours of Rio by rail and carriage there is a cool mountain climate to which visitors may go, a residence in Brazil at that season is attended with risk. Probably, however, the voyage to Rio, the River Plate, and through the Straits of Magellan to Valparaiso and the west coast of South America, might be advised with advantage. I also think it necessary when a young person is sent from home to give a caution against field sports, as fever may in this way be contracted, and seriously endanger the patient's life or even prove fatal.

If, however, in cases of this kind the destination be well selected, the best results attend the change in a large proportion of cases. The invalid during the voyage gains flesh and strength, and often returns home with his health completely established, and capable of entering upon an active career.

4. We may also often advantageously recommend a sea voyage where disease has already commenced in the lungs,—in persons who have been for some time losing flesh and strength, suffering from shortness of breath, cough and expectoration, and occasionally bringing up sputum marked with streaks or specks of blood, and in whom examination reveals some localised congestion or inflammation in some part of the lung. In cases of this kind any of the voyages which I have mentioned may be undertaken, preference being shown, in persons of relaxed habit of body, to the more bracing climates; in those of a more irritable temperament, and suffering from tendency to congestion or inflammation, to the milder climates.

Of late years the idea has gained ground that in many cases of pulmonary disease greater benefit is obtained by the endeavour to brace the patient than from the attempt to protect him from cold; and, under this impression, patients have been sent to the Engadine and various other mountain climates in Switzerland and elsewhere; and there is no doubt that advantage often results from this plan. It might appear, also, that a sea voyage to the colder countries of Europe would afford similar advantages, and this view is probably correct; but it must be borne in mind that, delightful as a voyage in

(a) Read before the Hunterian Society on Tuesday, November 13.

such climates may be when the weather is fine, the higher latitudes are less to be depended upon, and few phthisical invalids have sufficient vigour to bear with impunity a rough sea voyage, should they experience bad weather. I have, however, known a patient, suffering from symptoms very decidedly threatening pulmonary disease, leave home at the commencement of winter and go to Copenhagen, and thence up the Baltic and Gulf of Bothnia as far north as Tornea, and remain away the whole winter, during which he was exposed to very intense cold, yet return home decidedly benefited. I should add, however, that this voyage was undertaken for commercial objects, and without my sanction. The objection raised applies with less force to persons who are able to perform the voyage in a vessel entirely at their own disposal, as in that case they can generally—as on the west coast of Norway, for instance—lay by when the weather is unfavourable. As a general remark, however, it is better for a phthisical invalid rather to be sent to the more temperate climates and lower latitudes, where there is less risk of severe weather or of their suffering from cold.

I have been often asked whether the occurrence of previous attacks of hæmoptysis is to be regarded as forbidding the patient being sent to sea. The question is one requiring careful consideration. On the one hand, it has been supposed that the sedative influence of a marine climate and of the movement of the ship would lessen the tendency to hæmoptysis; on the other, that bleeding might occur from the violent retching during sea-sickness. The former opinion was, I learn from a notice in Dr. Copland's Dictionary, the idea of Dr. Gregory, and it has been concurred in by Dr. Davy and others. The latter certainly seems to me to be a danger to avoid; and partly on this account, but chiefly from knowing that a patient, if seized with blood-spitting, would on ship-board be very unfavourably placed for successful treatment, I have generally opposed the idea of a sea voyage in persons who have shown a tendency to hæmoptysis. I have heard of a vessel bursting during the retching of sea-sickness, and the patient bled to death, and have known at least two other cases in which profuse hæmorrhage occurred in phthisical patients while at sea; and of these one was landed at Rio, to die almost immediately: the other reached home, but sank shortly after. I do not, however, think that a patient having once had an attack of hæmoptysis, even though the attack may have been a severe one, should forbid his being sent to sea, if a considerable interval has elapsed since the occurrence, and all evidences of tendency to bleed have subsided. Still less, as I have before said, do I regard the existence of slight streaks or specks of blood in the sputum as interdicting the voyage.

The cases which appear to derive the most benefit from a sea voyage are those in which the disease assumes a slow or chronic form, in which it has commenced with dyspeptic, catarrhal, or laryngeal symptoms, and in which there is marked anæmia or a tendency to congestive and inflammatory affections of the lungs or pleuræ, or to disorder of the liver and bowels. The benefit to be derived is also likely to be greater in proportion to the early period at which the patient is sent away. When, as is often the case, the invalid does not return in the same ship, but remains for a longer or shorter time at the port to which he is sent, it is of course difficult, if benefit be derived, to know what share of the improvement is to be ascribed to the voyage, and what to the residence on shore; but I have often known patients say that their improved condition had rather occurred at sea than on shore.

5. There are yet other cases of consumption, in which the physician's opinion as to the desirableness of sea voyage is often asked, and in which, if it be recommended at all, it must be under peculiar circumstances, and with very decided qualifications. I allude to cases in which the disease is fully confirmed, and the patient's strength much exhausted. In some such cases a voyage undertaken in a private yacht, and in calm seas and a mild climate, may be recommended to a patient who has great desire of change, but inability to bear the fatigue of a land journey. For this purpose the Mediterranean, at a suitable period of the year, answers very well; for there are ports within two or three days' sail of each other at which the invalid, if it be thought desirable, can land, and make such stay as is agreeable to him. Such cases should, however, on no account be sent to a hot climate. In such the progress of the disease is almost sure to be hastened, and the patient will rapidly sink, exhausted by perspiration and diarrhœa. There are yet other cases in which the physician, while he cannot recommend, may yet not oppose the proposition that the invalid should be sent a sea voyage,—as when there is advanced disease, yet the patient has firmly convinced himself that a sea voyage may save him. I have known two instances of the kind in which there was no prospect of benefit, and too much reason to fear that the unavoidable fatigue might hasten the fatal event. In both of them, after telling the friends plainly the state of the patients, I left the decision in their hands; and though the result was what was to be anticipated, I believe in both the friends were fully satisfied that they had done right in acceding to the wishes of the invalids. In cases of this kind, the Mediterranean should be selected for the voyage—not only for the reasons given, but also for the opportunity it affords of the patients being reached by their friends at any time within a week or ten days.

In some of the cases which have been mentioned, there is no doubt that very great benefit is often derived from a sea voyage, provided the voyage recommended is suitable to the case, and the patient is able to bear the fatigue and willing to take proper care of himself while at sea. In some cases all the symptoms and signs of disease disappear, and the patient —who perhaps left home in a very critical state—returns in good health. In others, though there may not be an entire cure, very great relief may be gained: the general symptoms may be alleviated, the local disease become quiescent, and the strength increase. And in yet others which do not present such good results, the voyage may not be without its advantages in affording cheerful excitement of mind and retarding the progress of disease. In expressing this opinion of the beneficial influence of sea voyages in certain cases of phthisis, I may appear to be placing myself in opposition to the inferences deduced by M. Rochard, from an elaborate and able investigation of the subject in a paper published in the *Memoires de l'Académie Impériale de Médecine* for 1856. It is, however, not so. M. Rochard has shown, from a large collection of facts as to the deaths and invaliding in the French navy, and from other sources, that phthisis is of very frequent occurrence in sailors, and that its symptoms are aggravated on shipboard, and especially in hot climates. It is, however, obvious that there are sources of disease to which the crews of ships are exposed, from which the passengers are free; and in this way we may explain the very frequent occurrence of phthisis in sailors, both officers and men, as shown by M. Rochard, and of which we have evidence in London, both from private and public practice, without concluding that a sea voyage may not be advantageous to those who are placed in entirely different circumstances.

6. Patients who are unduly susceptible to cold, so that the slightest exposure is followed by bronchial irritation, and in whom there is an undue amount of dyspnœa, so that the case threatens to run into asthma, often obtain great relief from a voyage so arranged as to take the invalid into a warm climate for the winter and spring. In cases, however, of decided asthma, though a marine atmosphere may be beneficial, —for different cases of asthma are benefited by very different kinds of climate,—the most advantage is usually derived from a warm and dry air such as is obtained on the north coast of Africa or Egypt, or in South Africa or Australia.

7. We are all familiar with the benefit which is constantly derived in scrofulous cases from a residence at the seaside. This may be in some degree due to the emanations given off by marine plants on the shore, but is doubtless also partly referable to the marine atmosphere, and this must of course be obtained in all its perfection at sea. In several cases which have fallen under my notice scrofulous children have been kept at sea for several voyages, and have derived great benefit from the treatment, both the local and general symptoms being much relieved. Indeed, I have known patients derive advantage from a voyage, when it was very improbable they would have survived for any length of time if on shore.

8. The beneficial influence of a marine atmosphere has been long known and fully appreciated in cases of climatic disease, and it has often been the practice of medical men in the tropics to send their patients to sea as the most effectual means of restoring health. Indeed, patients are sent home from India and China and other parts by sea, who could not possibly bear the journey overland, and they very generally arrive at home, if not well, at least very much better than

when they left. Some years ago, when at Ascension, I was told that if a patient suffering from Coast of Africa fever lived to reach the island, where the climate must be thoroughly marine, they almost always rapidly recover. At home we see less of the advantage gained in cases of this kind; but I suppose we are all often consulted by patients labouring under the diseases of tropical climates or under pulmonary or cardiac or other symptoms superinduced upon such affections, in which we are told that the patient was put on board ship in an almost hopeless condition; yet when we see him he is generally much better, and often gets quite well after a short residence at home.

9. Closely allied to the class of cases now mentioned are those in which persons suffering from malarious affections are also the subjects of syphilis. I have seen several cases of this kind in which the patients have apparently been saved by being sent home from India by sea; and, though medical treatment may be required, they are generally much relieved while on board ship, and I have known them get quite well without any treatment at all while at sea. I have no experience of the beneficial effects of a marine climate in uncombined secondary or tertiary syphilis, but from the analogy between such cases and those named I should certainly expect great advantage to result from sending the patient so affected to sea.

10. Cases of chronic cerebral disease are also often much relieved by a voyage. The absence of all excitement, the regular habits, the sedative influence of the climate (and possibly also of the motion of the ship), and the constant exposure to fresh air, tend to quiet the nervous system and improve the general health. Cases of this kind should not, however, be sent to latitudes in which there would be likelihood of rough weather, and the cooler climates should also be selected—or at least, if it be thought desirable to send the patient a long voyage which would take him through the tropics, he should be specially cautioned to avoid exposing himself to the sun during the heat of the day.

(To be continued.)

OPERA CLINICA.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

TOOTH-EDGED CUTTING SCISSORS.

I HAVE recently had constructed for my use a pair of tooth-edged cutting scissors on the plan shown in the diagram. The scissors are of the ordinary construction in all respects except in the cutting edge. The cutting edge of each blade, instead of being even and sharp, is divided into finely-pointed teeth, each tooth being directed with a slight inclination towards the handle of the scissors. When the blades meet the teeth cross each other, and as they pierce any structure that may lie between them, they crush also, between their surfaces.

If a piece of moderately firm substance be placed between the blades—a piece of paper or of thin card, for example—the scissors perforate it in a series of perforations resembling what is seen in the postage-stamp—that is to say, they do not cut clean through the substance so as to leave it in two distinct parts at once. A little lateral or half-rotating movement of the closed blades is, however, sufficient to tear through the still connected lines of substance and to complete the separation. The same occurs if the substance placed between the blades be a portion of soft animal structure, only that more force is required in the lateral or rotating movement to cause complete separation. The parts punctured are crushed between the teeth, and are separated by the twist or torsion.

I find these scissors useful in dividing directly and quickly structures in which there are many minute bloodvessels, and which, when divided by the knife, bleed freely. These toothed scissors, as they can be made at one and the same time to pierce, crush, and twist, control bleeding remarkably.

It occurred to me at first to modify a pair of torsion forceps so as to make them cut with toothed edges at the part where they compress, and I used a forceps thus modified with success. Mr. Perkins, jun., of Baker-street, brought me one day a patient with an epulis. The gum beneath the base of the tumour was much thickened and vascular, but with my toothed forceps I cut through easily, and removed the whole mass quickly and thoroughly, effecting a good cure. But I found a want of purchase in handling the forceps, so I determined to carry out the method with scissors as above described. Mr. Perkins, who, as a dentist, is as mechanically skilful as he is energetic, earnest, and intelligent in his professional work, was good enough to make a model of my design out of a pair of ordinary surgical scissors, and from this model Messrs. Krohne and Sesemann, with their usual facility, have constructed the special instrument figured in the diagram.

I have put the scissors to a good test in a case of epulis, in a patient under the care of my friend Dr. Davson. In this instance the tumour was increasing rapidly, and three teeth were involved in it. It was very vascular, had a broad base, and might at first sight have been taken for a malignant rather than for a fibrous tumour. The three teeth being extracted, I found I could get a deep grasp of the tumour between the blades of the scissors. I carried the teeth of the scissors well through the base of the tumour, crushing some portion of bone in the way, and gently and easily twisted the mass off, and lifted it away upon the blades without the loss of any blood whatever. The healing in this case was rapid and good.

These tooth-edged scissors may, I think, be usefully modified. Made with longer handles and a little curved in the blades, they could be used for removing abnormal growths from the surfaces of internal organs—such as the uterus—by the combined processes of pierce, crush, and twist. Made with very delicately formed teeth, and altogether small, they might be used for removal of abnormal growths from the ear, the nostrils, or the eyelids. They could easily be constructed for the removal of the tonsils, and they are ready for use in cases of piles. They will probably turn out serviceable in operations for removal of portions of the tongue.

Good old Benjamin Rush, speaking an eulogy on Cullen, says, I remember, with much simple force, that "there are mites in medicine as well as in charity." From whence he draws the conclusion that no new thought or fact, however unimportant it may appear, should be allowed to pass without having attention drawn to it. In this spirit I add this mite to the "Opera Clinica."

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

COMPOUND FRACTURE OF RIGHT ARM—GANGRENE—AMPUTATION AT SHOULDER-JOINT—RECOVERY.

(Under the care of Professor JOHN WOOD, F.R.S.)

[FOR notes we are indebted to Mr. Rose, Surgical Registrar.]

E. H., aged 51, a clerk of the sewer works; temperate; admitted October 13, 1873. A week before admission the wheel of a cart passed over the right arm at the junction of the upper and middle third, causing a compound comminuted fracture of the humerus at that point, together with laceration of the brachial artery and large nerves, and considerable contusion of the soft parts in the neighbourhood. There was a small opening at the posterior and inner part where the integument had given way, through which the finger could be introduced and the fragments of bone distinctly felt. The hæmorrhage at the time of the accident, and after, was not excessive. The general practitioner who first attended the case made an effort to save the arm, and applied evaporating lotion; but on gangrene fully establishing itself, he sent the patient into the hospital.

On admission the whole of the right arm up to within six inches of the shoulder was in a state of moist gangrene. The patient states that immediately after the accident his arm became cold, devoid of sensibility, and quite powerless, and continued in the same condition until now. There is great constitutional disturbance, and a pallid and anxious expression. The pulse is weak, 116; temperature 100·4°. The tongue is moist, and covered with a white fur.

October 14.—Delirious during the night. This morning there is a distinct, though irregular, line of demarcation about five inches and a half from the shoulder. Mr. Wood therefore determined to amputate, and at 2 p.m. the patient was placed under chloroform, and amputation at the shoulder-joint was performed. The outer flap was made by transfixion. Very little blood was lost during the operation. The axillary and seven other bleeding vessels were secured by ligatures. The flaps were sponged with a solution of chloride of zinc and carbolic acid, and a drainage-tube was inserted through the lower part of the posterior and outer flap. A few doubtful-looking portions of tissue were removed, and the parts were secured by several points of suture. Carbolic dressing and a broad bandage was then applied.

The patient suffered considerably from shock after the operation, the temperature at 4 p.m. being 95·4°; pulse feeble, 134. At 9.30 p.m. he expressed himself better. The temperature rose to 102°; pulse 128. Ordered milk diet, with beef-tea, and twelve ounces of brandy.

15th.—Delirious during the night. Took thirty grains of chloral without effect. Tongue moist, white fur; temperature 101·4°; pulse 118.

16th.—Slept four hours. No pain in stump.

17th.—Dressings changed. Flaps looking well. Slight lough at lower angle of wound.

20th.—Wound looks well. Discharge healthy. The upper part of the flaps has united. Has slept well. All ligatures away except that on the main artery.

21st.—Ligature away from main artery. Granulations healthy. Ordered to take three times a day ferri sulpho-carb. gr. iv., tinct. quinæ co. ℥xx., acid. sulph. arom. ℥xx., aquæ ℥j.

26th.—Doing well. General health good. Brandy reduced to ten ounces. To have a mutton chop daily. Pulse 108; temperature ranging between 99° and 100°. Tongue clean. Drainage-tube removed. Sinuses still discharging from lower angle, and syringed out with carbolic lotion.

November 10.—Abscess opened at lower angle of flaps.

13th.—Another abscess opened and a drainage-tube re-inserted.

The temperature lately has been rather higher—102°; the pulse slightly intermittent, 108 to 116. Is now on fish diet.

December 1.—Wound closing fast. Less discharge.

15th.—Brandy reduced to six ounces. Meat diet. Lower angle of wound almost healed. Will leave the hospital in a few days.

UNIVERSITY COLLEGE HOSPITAL.

MYELOID TUMOUR OF LOWER END OF FEMUR—AMPUTATION—ANTISEPTIC DRESSING—HEALING ALMOST, IF NOT QUITE, WITHOUT SUPPURATION.

(Under the care of Mr. BERKELEY HILL.)

Joseph D., aged 18, a cutler, was admitted on June 20, 1873. A strumous-looking lad; his father died of consumption; has one sister who is very delicate; mother healthy. No history of cancer in the family; has had scarlet fever. About a month before Christmas, 1872, he caught a severe cold, which kept him in ten days. About a week after he was taken with pain in right knee; but he had not to keep his bed until the end of February, 1873. He had lotion applied to it, and a knee-cap to wear; but the knee not getting any better, he came to see Dr. Gowers in April, 1873, who blistered the knee, gave him iron internally, and called the disease of the knee "rheumatism." He had kept his bed until he came into this Hospital. The patient is pale; no marked anæmia; considerably emaciated. Several ecthymatous pustules on the right leg; the right lower limb is altogether much smaller than the left. Right thigh, ten inches above lower border of patella, eleven inches; left thigh, at a point ten inches above lower border of patella, fourteen and three-quarter inches in circumference. There is great deformity about the right knee, consisting apparently almost entirely of a large rounded swelling at the upper part of the joint. This extends downwards on both sides as far as lower border of patella, but at this level in front it exists but to a slight extent; it reaches upwards to six inches above lower border of patella, and is most marked and reaches highest on the outer side. The whole of this swelling is very soft and elastic, but at no point is the sense of fluctuation perceptible; but throughout the mass there is distinct expansile pulsation. There appears to be no thickening of the femur above the level of the swelling. The inner condyle of femur is to be felt of apparently normal size; the outer condyle cannot be felt at all. Three or four of the glands in Scarpa's triangle are distinctly enlarged, the lower of these being the largest. The skin over the joint is cool. Slight movements of flexion and extension, especially the former, are possible, and cause but little pain. There is tenderness in the position of the outer condyle, but nowhere else. The pain that he feels varies in amount, being sometimes of a dull aching character, and at others stabbing. It is generally worse at night, and he feels considerable pain in the hip and heel, generally more painful after manipulation.

June 26.—Chloroform having been administered, Mr. Hill first passed a grooved needle into the elastic and pulsating mass over the outer condyle. No fluid coming out, Mr. Hill thrust a small scalpel in near the same point, but still no fluid came out; so amputation in the lower third of thigh was, by means of lateral flaps, commenced. First of all the outer flap was formed by means of transfusion, and then the inner one in the same way. After the bone had been sawn through it was noticed to be very vascular, so another inch had to be taken off, and the bone even then seemed to be very vascular. The whole operation was done by the antiseptic method. The flaps being plentiful, a deep suture had to be put in; eight other wire sutures, which kept the edges of the flaps together. In addition to usual antiseptic dressings, there was a towel soaked in carbolic lotion (1 in 40) placed under the leg on the operating-table during the operation. As soon as the operation was over, a large piece of gauze soaked in carbolic lotion was placed over the stump, two pads of the same on either side of the flaps, and finally the usual gauze dressing over the stump. After the operation the pulse became exceedingly weak.

27th.—The leg was examined immediately after the operation. The skin was divided longitudinally over the joint, and a flap reflected on each side. The tendon of the extensors with patella were then thrown downwards, opening the joint. A soft, fluctuating tumour was thus displayed, occupying principally the outer condyle, but extending inwards just beyond the interval between the condyles. The length of the tumour was four inches; it had involved the whole thickness of the condyle. The cartilage was much expanded, and was quite thin in the part occupied by the tumour. The other structures of the joint were perfectly healthy, and the soft parts were not involved at all. Small prominences of gelatinous appearance existed in the notch behind the condyles, evidently consisting of projections of the tumour into the joint. Afterwards a section was made longitudinally through the bone, but slightly obliquely, so as to pass through the outer condyle. In this way the tissues of the shaft were seen to be more vascular than natural, the redness having, moreover, a somewhat patchy distribution. On cutting through the tumour, a dark-red clear fluid escaped from three or four cysts of small size. The substance of the tumour was extremely soft, in the greater part of a brownish-red colour, mottled with patches of a rather bright yellow; but at the anterior part there was a layer, nearly an inch thick, of a very soft brain-like material of homogeneous structure and yellowish-grey colour. In the section made there were three or four patches, where extravasation had taken place, of a very dark red, almost black, colour. The most vascular part of the shaft was that next above the tumour. The compact tissue of the bone was eaten away by the growth, which appeared to be extending chiefly on the medullary side, but also in a thin layer beneath the periosteum. A fresh scraping of the soft anterior layer showed a number of round cells with large nuclei, a few fibro-plastic cells, and a great number of clear oval nuclei, similar to those in the rounded and fibro-plastic cells; but, besides these, there were a considerable number of characteristic myeloid cells; all of these contained large fatty granules. A section of the tumour hardened in alcohol showed the characteristic appearances of myeloid growth.

August 11.—Patient went out on Saturday.

20th.—Two or three days ago patient returned with a minute abscess in the line of the incision, which, on investigation, was found to contain a silver suture uncut. In other parts the flaps were well and firmly united. The glands in the groin are decidedly smaller than on admission, and there is a distinct improvement in the development of the glutei and the muscles of the thigh. Patient in good health.

BRISTOL GENERAL HOSPITAL.

TUBERCULAR BASILAR MENINGITIS—DOUBLE OPTIC NEURITIS.

(Under the care of Dr. MARTYN.)

ROSINA L., aged 16, was admitted September 23, 1873. Patient had not been feeling well for the last four months—had been losing flesh, complained of pains in her head and a general feeling of weariness, but was able to go to school until a fortnight ago, when she had a convulsion. The convulsion was a severe one: she foamed at the mouth, and drew her legs up, and would not speak unless roused. She has remained in this semi-conscious state ever since.

Present Condition.—Lies on her side, with her thighs flexed on her belly; will not put them down when told to do so. Face slightly flushed; pupils somewhat dilated; can be roused to speak with great difficulty; puts out her tongue when told. When touched on the head, she apparently feels pain. Passes urine and fæces involuntarily. The temperature in the evening was 100°.

September 24.—Temperature in the morning, 99·4°; evening, 101·4°.

25th.—Temperature in the morning, 100°; evening, 102·4°. Lies in much the same state.

26th.—Temperature in the morning, 101·4°; evening, 102·4°. Has been screaming out at intervals during the last twenty-four hours. Lungs: dulness on percussion at bases. Respiration tubular, with some crepitant râles. Urine acid, specific gravity, 1026; albumen one-fifth of an inch.

27th.—Temperature in the morning, 100·4°; evening, 100°.

28th.—Temperature in the morning, 99·4°; evening, 97°.

29th.—Temperature in the morning, 98·4°; evening, 100°. Had two convulsions to-day. The convulsions are a clonic spasm of the right upper extremity. She moves her arm up and down, and scratches the bedclothes. There is no paralysis of the extremities. Pupils dilated. The nurse says she moans a great deal and puts her hand to her head, as if in severe pain.

30th.—Temperature in the morning, 98·4°; evening, 100·4°. Had one convulsion in the night, and two this morning. There is complete ptosis of the left eye, and paralysis of all the muscles supplied by the third and sixth nerves; the fourth is not affected, as there is some rolling of the eyeball; the pupils are widely dilated, the left more so than the right. No paralysis of the muscles of the right eyeball. There is very acute double optic neuritis.

October 1.—Temperature in the morning, 100°; remains in much the same state. Died at 3.30 p.m.

Autopsy on October 2.—Body greatly emaciated. On opening the skull, the dura mater was normal. The vessels of the pia mater were intensely injected; the membrane itself was dull, and had lost its shining appearance. There were several small pale white bodies, scattered all over the surface of the hemisphere, particularly the right. The base of the brain was covered with exudations of yellow lymph; a piece of this about the size of a cherry was pressing on the optic commissure. The velum interpositum and choroid plexuses were soft. The lateral ventricles were full of serous fluid. The brain was large, and the substance somewhat soft. Chest: Lungs congested; the bronchial glands were enlarged and cheesy in structure. Heart normal. Liver, spleen, and kidneys congested; otherwise normal. Intestines normal. Mesenteric glands were not enlarged, neither was there any tubercle in the peritoneum.

IMPURE SOAPS.—The *Grocer and Oil Trade Review*, writing on the adulteration of soap, says:—"Even the Castile soap, made from olive oil, and selected for medicinal purposes on account of its comparative purity, contains a considerable quantity of visible impurities, to which its mottling is due. This arises from the fact that it is made from the refuse of olive oil. And the most honest of commercial soaps are impure for a like reason, the manufacture of pure soap from chemically pure materials being almost an unknown, or at least unpractised, art. There is, however, one kind of commercial soap which is very nearly, if not quite, chemically pure. This is resin soap, and oddly enough it is the cheapest and coarsest of all commercial soaps."

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Medical Times and Gazette.

SATURDAY, DECEMBER 20, 1873.

THE RECENT DISCUSSIONS ON THE TREATMENT OF ANEURISM.

IT may with truth be said that now, as of old, a discussion upon any of the various points of importance connected with that hydra-headed subject, Aneurism, is always capable of awakening fresh interest. In Aristotle's time, and subsequently until the death of Rufus of Ephesus, the nature of the disease in its crudest form was not agreed upon, though often discussed, and no distinction was made between tumours of veins and tumours of arteries. In Galen's time nothing like unanimity of opinion existed as to what kind of lesion produced aneurism—whether it was due to an anastomosis, a rupture, or a dilatation of an artery. Vesalius was the first to describe an aneurism as arising from the *rupture* of a *dilated* aorta; and Lancisi, Quattani, and Morgagni opposed the doctrine advanced by others, that every aneurism was due to a dilatation of the coats of the vessel. Then came Scarpa, who opposed the view of these last named—viz., that aneurism is produced either by rupture or by dilatation of the coats of an artery, or by a combination of the two processes; for he thought that the disease always involved the rupture of the proper coats of the artery, and that the aneurismal sac was formed by the condensed cellular sheath of the vessel.

At the present time, however, while professional opinion is fairly well agreed as to the causes, the varieties, the nature, and to a great extent the mode of cure of the disease, the treatment of aneurism, and especially of internal aneurisms, is occupying, and has for some time occupied, a prominent place in the surgical mind. This is no doubt easily explained since the use of carbolised catgut, the application of compression to abdominal and iliac aneurisms, and the more extended trial of the expectant treatment have produced results which have gratified, if they have not somewhat surprised, surgeons.

Different, however, as the two methods of compression and rest seem at first sight, there is perhaps little doubt that the one has done much to advance the other. The success attending

upon compression of aneurisms of the limbs had established the truth that complete cessation of the flow of blood through the sac is not absolutely essential for a cure, so that encouragement was given, in dealing with internal aneurisms, to any general treatment by which the force, quantity, and frequency of the blood-stream through the sac is diminished. On the other hand, with such strong evidence as we now possess of the complete cure of aneurisms by simple and entire rest and restricted diet, the question forces itself as to how far the recovery of many of those cases which is attributed to prolonged and interrupted compression is in reality due only to rest in a recumbent position and a moderate, unstimulating diet.

We have within the last few days enjoyed the opportunity of hearing the merits of the treatment by rest and the treatment by compression attested to by two extra-metropolitan surgeons of eminence. On Tuesday, December 9th, Mr. Joliffe Tufnell, of Dublin, communicated a short paper to the Royal Medical and Chirurgical Society on the Cure of Aneurism by Position and Restricted Diet, and on Friday, December 12th, Mr. Wheelhouse, of Leeds, read to the Clinical Society the report of a case of "Aneurism of the External Iliac cured by Pressure with Liston's Tourniquet." The discussion which followed each was of more than usual interest and earnestness, and yet it cannot be said that anything new was contributed to our knowledge, except the records of some hitherto unpublished successful cases.

There are now a goodly number of known cases of aneurism which have been cured by the use of the abdominal tourniquet since the publication of the first case by Dr. Murray, of Newcastle. There are, too, it must be confessed, several known unsuccessful cases; and no doubt there are, besides, others unsuccessful but not generally known.

Mr. Wheelhouse has added another to the list of cures by this treatment, while Mr. Joliffe Tufnell's paper furnishes the report of two cases of aneurism of the abdominal aorta cured in thirty-seven days and twenty-one days respectively, and of one case of popliteal aneurism cured in twelve days, by rest and restricted diet.

In his paper Mr. Tufnell advocates the same views which he has very ably set forth in his pamphlet on the "Successful Treatment of Internal Aneurism," published in 1864. These views may be briefly described thus:—To consolidate a circumscribed aneurism of the abdominal or thoracic aorta (for if diffused nothing can be done but to alleviate pain), the difficulty we have to contend against is the distensile action of the heart, the flow of blood from which has the effect of thinning and destroying the sac. The circulation, therefore, must be modified; and this is to be effected by rest, regimen, and remedial agents. Valsalva's plans are radically wrong, in so far as repeated bleedings in most cases act injuriously (1) by removing the fibrine, which, too, cannot be renewed if starvation be combined with the bleeding; (2) by producing a watery state of the blood; (3) by quickening the circulation; and (4) by weakening the patient and producing anæmia. In the treatment advocated, however, the health of the patient is to be kept as good as possible; and, as the fibrine of the blood is the material of repair, the blood must be kept in a highly fibrinised state. But the heart's action in force and in frequency must be reduced, and the quantity of blood in the system must be lessened by diminishing the supply of fluid, and stimulating its excretion by the skin, kidneys, and bowels. By weakening the heart's action the aims are to prevent enlargement of the aneurism, to allow the sac to contract, and to favour the deposition of laminated fibrine from a reduced and wave-like blood-current. Fibrinisation is to be effected by (1) maintaining the quality of the blood, and (2) preserving the patient's health.

All that is sought for will be attained by the recumbent position and restricted diet. By restricted diet is meant three meals a day, served at regular intervals, and consisting in kind and amount of two ounces of white bread and butter with two ounces of cocoa or milk for breakfast; three ounces of broiled or boiled meat, with three ounces of potatoes or bread, and four ounces of water or light claret, for dinner; two ounces of bread and butter and two ounces of milk or tea for supper—making, altogether, ten ounces of solid and eight ounces of fluid food in the twenty-four hours. But the main point to be attended to is the recumbent position, for if this be not maintained for two months, or ten weeks, without, if possible, the patient sitting even once erect, all other treatment will be neutralised. Recumbence is the secret of cure. It places the same check upon the circulation in internal aneurism which is mechanically produced in external aneurism.

In one of the cases referred to in Mr. Tufnell's paper the difference in the frequency of the pulse in the upright and recumbent postures was thirty-five beats per minute, so that in twenty-four hours, if recumbence was maintained, the number of pulsations in the aneurism was reduced 50,400. So too, in a case of abdominal aneurism (Case 6 described in the pamphlet), Mr. Tufnell reckoned that the aneurismal sac was distended no less than 43,200 times less frequently in the recumbent position; or, granting that under ordinary circumstances the patient would be in bed for twelve hours out of the twenty-four, then the diminution in the number of distensions would be 21,600 per day. It is clear, the author states, that no remedial agent in the Pharmacopœia will produce such a result as this; still in most cases assistance in the treatment will be derived from anodynes, aperients, and tonics.

In the three cases described in the paper, we think, writing from memory, that Mr. Tufnell mentioned only the use of morphia and chloral hydrate; but in the pamphlet, lactucarium, with hyoscyamus or lupulin, is chiefly recommended as an anodyne; jalap powder, colocynth, and aloes as aperients; and opium as a narcotic for the relief of pain. Medicines however, are mere adjuvants in the treatment, whereas, if restricted diet and long-continued recumbence be relied on, it will be found that internal aneurism is not the hopeless affection hitherto supposed; and it may be confidently anticipated that a large number of external aneurisms will be found capable of cure by the same treatment.

Mr. Tufnell's observations are based on the results of experience. We have before us now the records by him of nine successful cases, and we believe he has succeeded in curing sixteen out of eighteen cases in which he has tried this treatment. But, in the face of these successes, it must of course be expected that recumbence and spare diet will often fail to bring about the hoped-for result. Otherwise, how is it that an aneurism occasionally develops while a person is recumbent and on low diet in the ward of a hospital? and how is it that most surgeons have seen aneurisms go on enlarging under similar conditions?

If asked what kind of case is suited for this treatment, Mr. Tufnell's answer, we surmise, would be somewhat as follows:—A circumscribed aneurism recognised in its earlier stages, and before, by pressure, the tumour has injured important structures in the neighbourhood, or the sac of the aneurism has ruptured; while the hope of cure will be greater in a patient whose heart is enlarged and (though the prospect of another aneurism forming under these circumstances is of course considerable) whose aorta is atheromatous, so as to be passively recipient of blood and not capable of transmitting it with force—so as, in fact, to favour that kind of deposit of fibrine which is sometimes seen in a dilated portion of the arch of an atheromatous aorta.

If the term "expectant" is applied to this kind of treatment, and the question be asked what is "expected" from it, Mr. Tufnell would answer more explicitly than by saying—"A cure is expected." It is not by the plugging of the

artery below the sac by the chance detachment of a piece of fibrine; nor by the compression by the tumour of the feeding artery above it; nor by blood extravasated from the ruptured sac, as in Sir A. Cooper's celebrated case; nor by inflammation of the sac and the consequent formation of a plug in the artery, that a cure is looked or waited for. It is a so-called spontaneous cure, brought about by the deposit from the blood upon the inner surface of the sac, in its passage through it, of layer after layer of fibrine, so that the cavity of the tumour is by degrees lessened and ultimately entirely filled. This is the goal towards which the "expectant" or the "rest and diet" treatment is systematically and scientifically directed, and, as we now know, has been and may be directed with satisfactory results.

But if by this simple and apparently safe course internal aneurism can be cured, the questions arise whether the compression of the abdominal aorta, with all its great risks, for aneurism of the abdomen or pelvis, is ever justifiable; and, if so, in what cases is it right to use such a dangerous and, it must be admitted, so uncertain a remedy?

Mr. Wheelhouse's case and several others already published, including Dr. Murray's, Mr. Durham's, and Dr. Greenhow's, are sufficient to prove that the use of the abdominal compress is permissible. The treatment is no doubt surrounded by danger, but the disease is a profoundly grave one, and, like other grave diseases, warrants the employment of a very grave remedy, providing means no less dangerous avail. Had it not been for Mr. Wheelhouse's case, in which there was evidently somewhat general arterial disease, we should have thought that compression of the abdominal aorta ought to be limited to patients free from arterial atheroma and heart disease; whose visceral organs are sound, and therefore better able to resist the ill effects of direct pressure from the tourniquet, or indirect pressure from arterial, capillary, or venous distension; and in whom the aneurism continues to increase or shows no sign of being cured under the treatment advocated by Mr. Tufnell.

The brilliancy of the success which has attended abdominal compression in several cases was likely, no doubt, to lead to a freer and less deliberate use of it than this success justifies. For this reason we think Mr. Holmes did great service by so forcibly pointing out in his professorial lectures at the College of Surgeons, in 1872, what and how great are the dangers of protracted and deep pressure of the aorta—dangers which some even of the successful cases have verified.

Still, for aneurism of the iliacs and the lower part of the abdominal aorta, compression is now, we believe, rightly regarded as a legitimate operation; and even for aneurism where the pressure, to be proximal, has to be made immediately below the xiphoid cartilage, it must be remembered that, in spite of *à priori* objections, success has resulted.

Whether in those cases in which proximal pressure cannot be employed (as where the aneurism is seated close to the cœliac axis), distal pressure will at any time be found at all adequate, we cannot say. At present there is only one case known in which it has been tried, and in this one, though the aneurism was cured after nine hours' compression, the patient lost his life. It would be well, however, to try, as Mr. Holmes has suggested, whether some of these cases might not be cured by gradual and partial pressure instead of complete compression.

After every consideration of the hazardous character of the treatment,—of the chances of failure, of anatomical lesions, and even of death itself,—and of the great caution, dexterity, and watchfulness required for its application, it must be said to its honour, and the honour of those who have originated and established it, that abdominal compression has marked a distinct advance and made an undoubted triumph in the surgical practice of this generation.

THE PHYSIOLOGY OF VISION.

VI.—Perfect and Defective Vision.

Perfect vision implies, among other things, these:—First, that the various optical media of the eye shall be in their usual clear and transparent condition, so as not to obstruct the rays of light; secondly, that the rays which are to constitute the picture on the retina shall be accurately brought to a focus there; and thirdly, that the sentient surface of the retina shall be in a condition fit to receive and to transmit the impulses communicated to it by the rays of light.

Now, defects in the former respect are only too well known to us, notably in two forms—opacity of the cornea, and opacity of the lens as in cataract,—which may or may not admit of remedy. Of the same kind, but of less importance, seeing that they are habitually present and habitually overlooked, are the so-called muscæ volitantes, commonly assigned as due to partially opaque bodies in the vitreous.

One of the most interesting of physiological phenomena connected with varying degrees of opacity in the media of the eye is connected with the curious structure of the lens already alluded to. When we look at a luminous point (like a fixed star), it does not seem to us a mere luminous point, but to send out rays, as it were. Hence the conventional figure of a star is not a dot, but a rayed object (*). This is due to the existence of these stellate lines on the surface of the lens.

The defects of the second order are also sufficiently well known, especially in the form of long and short sight, but there are also some defects due to spherical and chromatic aberration. In looking at a body near at hand, and the rays of light from which are more than usually divergent, it is plain that to bring them to a focus one or other of two things will be necessary. The photographer, in adjusting his camera, moves his glass plate which corresponds to the retina backwards or forwards as may be required, until an exact image of the object is depicted thereupon; but the same object may be attained by increasing or decreasing the lens-power, and this seems to be the mode of adjustment adopted in the eye. The way in which this accommodation is effected has been already indicated in dealing with the relations of the lens to the ciliary muscle. In certain abnormal conditions of the eye, it is true, we have the other kind of defect, due to the retina being too near or too far away from the lens (for undoubtedly we do have eyeballs which are too short and eyeballs which are too long), but the other kind of defect, due to imperfect accommodation, is perhaps more familiar to us. In adjusting our eyes for near vision, we are conscious of a strain on the eyeball—due, no doubt, to the action of the ciliary muscle,—and, however this muscle acts, it undoubtedly has the power of increasing the antero-posterior diameter of the lens. But as people grow older, the lens hardens and loses its elasticity, and it moreover undergoes certain changes in colour, which has lately been assigned as the true reason for the defective colouring of artists as they advance in life, as well illustrated by Turner and Mulready. This hardening and loss of elasticity is felt chiefly in this, that the ciliary muscle ceases to have the power of altering the shape of the lens and rendering it fit for near vision; whilst the eye being normally set, so to speak, for distant vision, the aptitude for observing distant objects remains unimpaired as long as the media are sufficiently transparent. Such is the condition in old people, and to it is given the term presbyopia, the term myopia being applied to the opposite condition of short sight, to whatever cause due, and whether in young or old.

Of course the more curved the surface of any lens the greater is its converging power; but it sometimes happens in the human eye that the curvature is greater in one direction than in another—say from above downwards than from side to side. That being so, the perpendicular rays of light will be more powerfully refracted, and will come to a focus earlier than will

the horizontal rays; and hence the same surface represented by the two different kinds of rays will appear to be in different planes. This defect, which is not very common, is termed astigmatism, and may be remedied by invoking increased lens-power of an artificial kind for the aid of the less curved surface; and this may be done by means of cylindrical glasses.

We all know, from the simple experiment of Sir Isaac Newton, that white light is a compound of various coloured rays. These are composed of waves, differing vastly in length and in refrangibility; so that, in passing through ordinary transparent media of the lens kind, some of these tend to come to a focus more speedily than do others. Hence an object examined by means of such lenses is apt to be surrounded by various coloured circles, representing the different kinds of coloured rays. We are all aware that our eyes seem to present no such defect, and the question has long been a vexed one, Is the human eye corrected for chromatic aberration —*i.e.*, is it perfectly achromatic? The story of this discussion is a long and interesting one. Suffice it to say that it concludes in one way: the eye is not perfectly achromatic. And it may be proved thus. We take a piece of coloured glass which has the power of absorbing all the middle colours of the spectrum, and through it survey a luminous point at a distance. If we are so situated as to see this luminous point by means of red rays as a red light, we shall also see it surrounded by a halo of violet light—that is to say, the red rays have been brought to a focus on the retina, the violet have not. But the whole subject of colour is too interesting to be so briefly discussed.

THE LATEST NEWS FROM THE GOLD COAST.

The news which has reached us by the recent mails which have arrived in this country from the West Coast of Africa is not quite of such a cheering nature as preceding reports have prepared us to expect. The effects of that climate which has over and over again been stigmatised as "the worst in the whole world" are beginning to tell upon the constitutions of the gallant and energetic staff which accompanied Sir Garnet Wolseley upon his difficult mission. First and foremost the indefatigable chief has himself been rendered *hors de combat*—not by exposure to the sun, as has been erroneously reported, but from an attack of fever. It is a source of much gratification to learn that the seizure was not severe, and that Sir Garnet had so far recovered as to justify the sanguine expectations that he would be ready and able to place himself at the head of the European force upon its arrival at Cape Coast Castle.

That active employment in the Bush, in moderation, is better for our officers and men than enforced idleness would appear to be proved by the fact that the little force of Europeans quartered at the different stations has not suffered so severely, with all their fighting and exertions, as the crews of the vessels doing duty on the Coast. Thus her Majesty's ship *Druid* is reported to have a sick-list of thirty men, and the *Barracoota* one of twenty-seven men; and the latter has been ordered to Ascension with invalids for the recovery of their health. The *Simoom* hospital-ship has, it is stated, also been ordered off for a cruise to St. Helena and Ascension; she is stated to have sixty-two invalids on board, one of the most serious cases being that of Lieutenant the Honourable A. Charteris, who was suffering from a severe attack of fever. Of the medical staff, Surgeon Connellan has been invalided home, but the absence of any mention of the remainder leads to the hope that at the date of the last advices they were all in tolerable health.

One of the stringent orders which has, we believe, been laid down for the guidance of the leaders in the march upon Coomassie, is that no camping-ground for our troops, or hospital station, is to be selected at, or near, any of the spots which are known to have been occupied as resting-places by the Ashantee invaders. The wisdom of this order may easily be understood by anyone perusing the sickening account given by the special correspondent of a daily paper, of a visit made by him to the camp of that portion of the Ashantee force which so recently attacked our small detachment of men entrenched at Abrakrampa. He says—"The Ashantees must have laid in scores upon the ground; here and there a lean-to roof of palm thatch had been built, probably for a chief: wherever one of these was found the rags, pots, guns, knives, calabashes baskets, stools, brass-pans, scales and weights for gold-dust skulls and bones of enemies murdered, beads, rattles, bags, and ammunition-boxes, all the paraphernalia of savage ornament and war, lay scattered about in heaps. About halfway to Addismadi, such things as these had been thrown down in heaps, so as to make a flooring eighteen inches deep. Such an awful stench never man smelt. Foul odours will arise when masses of black men get together too thickly, and the sickening smell of disease can easily be imagined, but such are nothing to the dreadful reek of an abandoned camp of negroes suffering from want and sickness. It was not the odour of putridity, though now and again a horrid whiff came from the Bush,—it was the stench of mere starvation, leprosy, small-pox, and festering wounds, which made one retch all the return journey."

Such spots as the one described, and their environs, must of necessity be saturated with poison, and with the predisposing nature of the climate would inevitably lead to a fearful sick-list should a halting-place, by any mistake, be chosen in their vicinity; and as these camps have doubtless been selected by the enemy from some local advantage as regards clear space and water supply, it will tax the powers of the quartermaster-general's department to the utmost to provide halting-places for our troops possessing equal advantages with those which will thus be peremptorily barred from their occupation.

The 42nd Regiment will probably by this time have arrived on the Coast, but whether they will be pushed forward in support of the advanced force has not yet transpired. If everything progresses satisfactorily the commencement of the new year may bring us important, and let us hope satisfactory, intelligence of the movements of the little band of pioneers who are to humble the power which has so long done its best to prevent trade and civilisation from penetrating into the interior of the vast African continent.

PRISON HYGIENE IN CEYLON.

We have before us the reports of a Commission appointed by the Governor of Ceylon to inquire into the causes of a very serious amount of disease and mortality which prevailed in the years 1870, 1871, and 1872 in the prison at Willikade, in Colombo, the chief penal establishment in the island.

This Commission consisted of the chief justice, three puisne judges, and an officer of the public works, with whom was associated the principal military medical officer serving in the colony.

It appears that up to the middle of the year 1870 the prison had been healthy, eight deaths having occurred up to the month of June. At this time a case of cholera appeared, which was speedily succeeded by others, and by the end of the year fifteen cases of cholera had occurred, of which eight proved fatal. At the same time diarrhœa was prevalent.

In the latter part of this year a large number of convicts from other stations, who are described as having been in an advanced state of disease, and, without exception, mere skeletons, were introduced into the prison to replace others who had been sent elsewhere. It does not appear that these men were

separated from the others; they were dispersed through all the wards and cells, and great overcrowding ensued—as many as three, and sometimes five, being confined in a cell constructed to hold but one. With this overcrowding, and with great neglect of sanitary precautions, the sickness increased, and by the end of the year 1870 fifty-three deaths had occurred.

In the year 1871 the same condition of overcrowding and neglect continued. The number of deaths in this year amounted to eighty; and this state of things prevailed during 1872, so that up to November the deaths amounted to 104, making a total in the three years of 237. The sick were now removed to another building, and an inquiry was instituted. A divergence of opinion arose in the Commission as to the causes of this great mortality. The learned judges were led to seek for these in alleged misunderstanding and want of co-operation between the medical officer and the governor of the prison. This view appeared to Mr. Watt, the principal medical officer of the troops, to be so insufficient and unsatisfactory that he prepared a separate report, in which he has with remarkable ability traced the mortality to entire neglect and disregard on the part of the medical authorities of sanitary laws and precautions, and to this alone. He has entered fully into all the details of locality, buildings, food, water, clothing, and occupation, and has shown that in all these particulars no cause can be found to account for such unwonted suffering. The immediate cause of this existed, past all doubt, in excessive overcrowding and in the introduction of numerous persons affected with dysenteric disease, so that the whole place became poisoned, and disease was no longer amenable to treatment.

But the worst feature in the case is the condition of the hospital. The building is stated to have been insufficient and unsuited to the purpose, imperfectly ventilated and lighted. At the visit of the Commission seventy sick were found crowded into a space which afforded to each man but 560 cubic feet and 21·7 of superficial area. These seventy men were found lying huddled together on the floor; near each of them was an unglazed earthen chatty for all necessary purposes. These vessels are stated to have been emptied twice daily, and very imperfectly cleansed. In this polluted atmosphere the sick were locked up from 5.30 p.m. to the same hour next morning. They had no change of clothing, nor any provision for personal cleanliness. No wonder that, in such a lazar-house, disease, and especially dysenteric disease, did not yield to treatment. Yet all this misery seems to have attracted no notice from the medical authorities, but during two years to have been regarded as a matter of course.

It appears that the report of Mr. Watt was at once adopted by the government. The sick were removed to another place with immediate benefit; and it is to be expected that due medical supervision will in future be efficient in all the penal establishments. It is but too manifest that a vigorous reform is required in the civil medical department of the colony, if it has not already been effected.

This department was originally organised by the military medical officers soon after the settlement of the government of the island. It comprised a number of native officers of moderate pretensions, who were dispersed through the island and attached to the various public establishments. Among these, however, there have been several native gentlemen of high cultivation and acquirements, who have obtained diplomas from the Calcutta Medical College and even in England. From time to time a few English officers have been engaged in the department, but its advantages are not sufficient to attract a high class of candidates.

We learn that until about fifteen years ago the control of the department was in the hands of the principal medical officer of the troops, and was conducted by him in a manner closely resembling that in which the duties of the army are performed. It is not assuming too much to say that under such control calamities such as we have above described could not have taken place. Circumstances to which it is not necessary to allude led to a separation of the civil medical department from the control of that officer; but in such a case as that before us we are enabled to discern how great is the value of the services of an officer of large experience and superior to all local interests.

THE WEEK.

TOPICS OF THE DAY.

SCIENCE has sustained a great loss in the death of Professor Agassiz. His position was in its foremost rank. The author of works such as the "Poissons Fossiles" and "Monographies d'Echinodermes," of the "Bibliographia Zoologiæ et Geologiæ," will not soon be forgotten. Professor Agassiz was the foremost man of authority in science who has consistently and to the last refused to accept the Darwinian and evolutionary theories of the present day. A hundred years hence whose opinions will be in the ascendant—those of Agassiz or of his opponents?

The English Branch of the General Medical Council met on December 13. We believe they separated without fixing the date of the meeting of the General Council. With regard to the ultimate residence of the Council, nothing is yet fixed. It seems that they have a right to remain for another twelvemonth in the house in Soho-square should they desire to do so. The Addendum to the Pharmacopœia is, we hear, complete. It contains, amongst other things, chloral hydrate, a form for mustard-leaves, and some other preparations of value. There are also some pharmaceutical elegancies—such as a tincture of fresh orange-peel.

Dr. Livy, the Medical Officer of Health for the Borough of Bolton, has resigned his office for the reasons which he states in the following letter, addressed to the Sanitary Committee of the Council of the Borough of Bolton:—

"Gentlemen,—I beg most respectfully to tender you my resignation as Medical Officer of Health for the borough for acceptance at your earliest convenience. I have found that the efficient discharge of the duties of the office requires more time than I had anticipated, or than I have at my disposal. I have also felt that I have been obliged in the interest of the public health to condemn property against the wishes of, and without full and ample compensation being awarded to, its owners. Some of these owners are poor and advanced in years, others are orphans entirely dependent upon it for their maintenance. I consider that the rights of a solitary individual are as sacred as those of a million, and that law is never so odious and hateful as when it is made the instrument of oppression and injustice. I have therefore a decided objection to continue in an office where, even for the best of objects, I am compelled unjustly to deprive persons of property which has hitherto received the sanction and the protection of the law.—I remain, Gentlemen, your obedient servant, JOHN LIVY."

This letter speaks for itself, and it raises the question of the duties of corporations with regard to the owners of properties condemned on hygienic grounds. There is no doubt, as is urged by an able leading article in the *Bolton Chronicle*, that if a man's property is required by a railway or for a street improvement, his fortune will probably be doubled by the compensation he will receive; whilst if it be condemned as injurious to the public health, he will probably be ruined. At first sight, at least, there is an injustice in this. We know that it may be answered that holders of house property in boroughs are bound to keep their premises in such a condition as not to injure the health of the inhabitants or their neighbours. This is perfectly true theoretically. But then we must recollect that England is an old country, and that our ancestors had not the same scientific light to guide them in the matters of building and drainage that we have; and cer-

tainly to deprive a man of an old building because it was built before sanitary legislation was thought of, and to give him no compensation, must appear to the owner in question a public robbery. There ought at least, we think, to be a fair compensation given by corporations for the value of the building, assessed by an unprejudiced authority, whenever, for public hygienic reasons, it is found necessary to condemn house property.

THE MEDICAL PROFESSION AND POOR-LAW GUARDIANS.

USEFUL as the Poor-law system undoubtedly is, it has its drawbacks. One of these is too often seen in the relations established between local boards and their medical officers. The assumption of authority by the former over the latter becomes irksome and offensive. A case in point has been presented to our notice in connexion with a recent occurrence in Dublin. As our readers may remember, the Local Government Board for Ireland last July appointed the Board of Guardians of the South Dublin Union the "nuisance authority" of the port of Dublin, with the view of taking measures to prevent, if possible, the introduction of cholera by sea. The guardians accordingly appointed four medical officers in turn to visit and inspect vessels arriving in the port from infected localities, the names of these gentlemen being Drs. Mapother, Burne, Cameron, and Minchin.

Matters appear to have gone on smoothly for some time, but the Dublin *Daily Express* of the 12th contains an account of certain proceedings at the weekly meeting of the South Dublin Union Board of Guardians, held on the preceding day, which appears to us to have more than a mere local interest, and to closely concern the medical profession. We therefore extract the passage referred to at length :—

"*The Inspection of Infected Ships.*

"Mr. Byrne drew attention to a matter which he thought required immediate action. On the night of the 4th November last the ship *Magnet*, of Rotterdam, arrived in Dublin, and as Rotterdam was an infected port, the constable on duty reported the arrival of the ship to the medical officer appointed by the Board for the purpose of inspecting her. It happened that the vessel arrived at midnight, when Dr. Cameron was on duty as inspector, but he had requested Dr. Burne to act on his behalf. The constable communicated with Dr. Byrne, who inspected the ship, and gave the master a certificate. Dr. Minchin alleged that he had been sent for, and that he inspected the ship, and for doing this he claimed his usual fee. The Board would not pay the fee, because he had not been called upon to visit the vessel by any of the authorised officers of the Board—namely, the officers of her Majesty's Customs, and the members of the Dublin police force, who are sanitary inspectors. When the Board declined to pay the fee, Dr. Minchin wrote to the Local Government Board, complaining of the action of the guardians, and protesting against the retrospective action of the resolution adopted as to the proper persons to call for an inspection, and condemning the insinuation contained therein, as not only unjustifiable, but uncalled for. It was incumbent on the Board to call upon Dr. Minchin to withdraw that language unconditionally, and if he declined to do so to dismiss him from the office he held in the house.

"Mr. Sykes asked whether Dr. Minchin knew that the vessel had already been inspected.

"Mr. Byrne: He was shown the certificate of the previous inspection.

"A resolution, in accordance with Mr. Byrne's observations, was then passed, calling on Dr. Minchin to withdraw the language he had used respecting the Board."

Now, to say the least of it, this seems to be rather a high-handed way of dealing with a well-known, much respected, and senior member of the profession, and accordingly we have taken some pains to sift the matter thoroughly. It would appear that on the evening of November 4 a private letter was sent to Dr. Cameron by the owners of the *Magnet*, to say that she was expected about midnight, and to ask him to inspect her. Dr. Cameron, not being well, forwarded this letter to Dr. Burne, with a request that he would act on the occasion. Dr. Cameron's hours of duty terminated at 3 a.m., when Dr. Minchin's duty began in rotation. The vessel arrived at midnight, but Dr. Burne received no official notification of the fact until 6 a.m.—*i.e.*, in Dr. Minchin's period of duty. He visited the ship shortly afterwards, and signed the necessary certificate. Meanwhile, the shipowners, finding that no one came to inspect the vessel for upwards of six hours, sent a request to Dr. Minchin that he would perform the duty. He arrived immediately after Dr. Burne's departure, reinspected, and countersigned the certificate. As he had been sent for *within his hours* by the shipowners, he claimed a fee. As stated by Mr. Byrne in the extract already given, the Board of Guardians refused to pay him that fee, "*because he had not been called upon to visit the vessel by any of the authorised officers of the Board, etc.*" Mr. Byrne and his colleagues seem to forget that Dr. Cameron had been called to visit the vessel by the very same persons who several hours later sent for Dr. Minchin. And, further, the official notification of the Board, dated August 21, 1873, as to who were the Medical Inspectors of Ships, is addressed "To the Officers of Her Majesty's Customs, the Dublin Metropolitan Police Force, *and to all whom it may concern.*" Surely, if these last few words mean anything, it is that "all whom it may concern" are to apply to the Medical Inspectors, if need be; and certainly shipowners would especially come under this class. Under these circumstances we cannot but think that Dr. Minchin was perfectly justified in appealing to the Local Government Board.

ST. PANCRAS GUARDIANS AGAIN.

THE St. Pancras Guardians at their last meeting had before them a communication from the Holborn Union, asking that they should find room for 200 poor children at Leavesden Schools for a period of six months. The application was made in consequence of the epidemic of ophthalmia which prevailed to a serious extent in the Holborn schools at Mitcham; and the object of the guardians was to save the healthy children from the danger of contagion by accommodating them in another establishment. Dr. Bridges, of the Local Government Board, had suggested the removal of the children yet unaffected by ophthalmia to other workhouse schools. Under such circumstances as these it might have been supposed that the St. Pancras Guardians would have willingly afforded as much assistance as they could by placing the unoccupied rooms at the Leavesden Schools at the disposal of the neighbouring authorities. They, however, not only declined, but their refusal was grounded on what we must characterise as very sordid reasons. During the discussion it was stated that there was ample room for 200 children at Leavesden Schools; that the guardians would be glad to receive them for a period of two or three years, "as it would greatly relieve the ratepayers by reducing the *pro ratâ* charge of each child; but the Holborn Guardians having asked accommodation for only six months, it would be no advantage for so short a time." A resolution to that effect was afterwards moved and adopted. The reason assigned by the St. Pancras Guardians for refusing to accommodate the poor children of the Holborn Union scarcely surprises us. Whenever a question involving money is concerned, the St. Pancras Guardians always take a selfish view of the matter, forgetting or ignoring higher and more praiseworthy motives. In this particular instance we think they have acted not only unjustly, but with the utmost unkindness. For the sake of a small pecuniary advantage they leave the poor children of the Holborn Union in a very unhealthy and even dangerous state. If there is no appeal against their resolution there ought to be; but surely the Local Government Board have the power to interfere in a case the circumstances of which are so grave.

THE FOG.

The recent fog will be long remembered as one of the most disastrous this generation has known. To persons with cardiac and respiratory disease it has in numerous instances proved fatal. The accidents were, moreover, sufficiently numerous, and in several instances in the East of London deaths by drowning in the canals and river occurred. From inquiries we have made at the principal hospitals we learn that at the Charing-cross Hospital there were thirty or forty cases of accidents, and that the patients in the Hospital suffered severely, especially those affected with heart and lung disease. The death-rate during the days the fog lasted was unprecedented—in fact, higher than since the Hospital has been established. In one day six post-mortem examinations were made. At St. Thomas's a man was brought in dead from having fallen from his cab. He had a scalp wound and bruises on the scalp; and a boy was brought into the Hospital burnt in the face with a torch. At King's College Hospital there were two cases of accident—one a crushed hand, another a crushed toe. At Guy's there were four. A man at work upon the leads of a City warehouse in the fog walked off the building, and fell headlong to the ground. He fractured his skull, and was taken to Guy's, where he died shortly after admission. A fog signalman was run over. At Bartholomew's there were no accidents, but an increase of in-patients. From the Royal Free we have reported the accelerated death of in-patients. At University College Hospital there were no casualties. At the Middlesex a case of fractured fibula was received, and a patient suffering from concussion and scalp wound from falling off a mail-cart. At St. Mary's the in-patients are reported to have suffered severely. At St. George's there was a case of burn from a torch, and a case of bruise from falling over the park railings. The in-patients at St. George's and also at the Westminster Hospital are reported to have suffered severely.

THE LATE MR. TURNER, OF MANCHESTER.

We regret to observe announced the death of Mr. Turner, of Manchester, the founder of the Manchester School of Medicine—the first provincial school that had a recognised curriculum. In an early number we shall furnish a sketch of Mr. Turner's career.

PRACTICAL AND SUGGESTIVE.

Dr. Whitmore, Medical Officer of Health for Marylebone, in his report for the month of November, states that the mortality of the parish during that period showed a large increase, caused principally by the present excessive fatality of measles, which destroyed the lives of twenty-four young children; and he adds, one obvious cause for its rapid extension is, that precautionary measures for checking its progress, either by means of isolation or by the use of disinfectants, are to a very great extent disregarded. Less intensely contagious than either small-pox or scarlet fever, and generally less fatal, it fails even when it becomes epidemic to excite any great amount of public attention. In carrying out the system which has for some years been in operation in this parish, of disinfecting rooms in which cases of fever, small-pox, or other contagious diseases have occurred, he has constantly met with the difficulty of not being able to make the disinfection complete. A way of meeting this serious difficulty would be for parochial authorities to rent small houses in each of the poorest and most densely populated parts of their respective districts, to be kept as houses of reception for poor families during the six or eight or possibly twelve hours that it would take properly to disinfect their rooms. In so large a parish as St. Marylebone the annual expenditure for rent and management of the required number of houses for this purpose might amount to £200 or £250, a sum incalculably small when compared with the advantages that would result. We always notice the excellent reports of Dr. Whitmore with great satisfaction—they are thoroughly practical and suggestive; and if his recommendations were carried out with spirit on the part of the authorities, great public good would be effected.

DEFECTIVE LEGISLATION.

The reports of the Sanitary Committee of the Westminster District Board of Works on the result of the recent prosecutions under the Adulteration Act was a subject of some discussion at the monthly meeting held last week. It was remarked that the analyst took upon himself the responsibility of summoning tradesmen, and this Board had no power, their sole privilege being, in case of failure, to pay expenses. It was thought that the Legislature never contemplated placing so much power in the hands of one individual. The Hon. Ashby Ponsonby stated, in reply, that the Act gave power to the analyst to take proceedings without obtaining the authority of the committee. That the inspectors were to obtain samples of articles suspected of being adulterated, which they were to take to the analyst, and upon receiving his certificate proceedings could be taken out. The great uncertainty was the manner in which the magistrates would view the case, for it was a most extraordinary thing, that one magistrate convicted in a case which another one would dismiss. He did not wish to say one word against the London magistrates, but, as a magistrate who sat to hear appeals against their decisions, he could not help making that remark. He had even known a London magistrate omit to endorse a certificate with a previous conviction. He simply meant to say that magistrates looked at Acts of Parliament through different spectacles. Acts of Parliament are frequently drawn in so negligent a manner that they become inoperative.

THE ARMY MEDICAL SCHOOL AT NETLEY.

Surgeon-Major W. A. Mackinnon, C.B., whose period of service as Assistant-Professor of Military Surgery at the Royal Victoria Hospital has nearly expired, has been succeeded in that appointment by Surgeon-Major Joshua Henry Porter. Mr. Porter was for many years attached to the 97th (the Earl of Ulster's) Regiment, with which corps he served during the Crimean campaign, and afterwards in the suppression of the Indian Mutiny of 1857. We believe that Dr. Mackinnon has left this country for Madeira, to organise all the preparations necessary for the reception there of invalids to be despatched from the Gold Coast during the forthcoming operations against the Ashantees.

ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION.

The seventh anniversary session of this Association will be held at Willis's Rooms, King-street, St. James's, on Tuesday, December 30, at 5.30 p.m., when the President (C. A. Lockhart Robertson, M.D., F.R.C.P., etc.) will deliver an address on "The St. Andrews Medical Graduates' Association: A Retrospect." In addition to the general business, an important resolution affecting the future of the Association will be submitted by the Council to the members. The usual dinner will commence at 7 p.m. at the same rooms; Dr. Lockhart Robertson in the chair. Members intending to dine are requested to send their names at once to Dr. Sedgwick, 2, Gloucester-terrace, Hyde-park; or to Dr. Paul, Camberwell House, Camberwell, S.E.; or to the Hon. Secretary. Tickets, half a guinea each, not including wine.

WELL-DONE WORK.

At the monthly meeting of the Local Sanitary Board of Ovenden, Halifax, the chairman at the close of the meeting said he was glad that, as a general rule, they had no difficulty

whatever in removing nuisances. When the attention of the owners of property was drawn to an existing nuisance it was invariably removed immediately. He congratulated the members on the ease with which their work was got through, and thought the Board was now in a most prosperous condition. We infer from this statement that the medical officer of health and his subordinates are faithful and energetic servants.

DR. M'KENDRICK ON OZONE.

Dr. M'Kendrick read a paper giving an account of an experimental investigation made by Dr. James Dewar and himself on the physiological action of ozone, at the Royal Society, Edinburgh, at the first ordinary meeting of the present session, held on the 1st inst. Dr. M'Kendrick described, in the first place, the method pursued by Mr. Dewar and himself of producing the ozone. He then detailed numerous experiments made on frogs, mice, birds, rabbits, and on Dr. Dewar and himself, with the view of determining the action of ozone on the living animal, and the action it exerted on the living tissues of the body. The general facts observed were—(1) The inhalation of an atmosphere highly charged with ozone diminished the number of respirations per minute; (2) the pulsations of the heart were reduced in strength, and this organ was found beating feebly after the death of the animal, which showed that life was not destroyed by direct action on the heart; (3) the blood was always found in a venous condition in all parts of the body, both in those cases of death in an atmosphere of ozonised air and of ozonised oxygen; (4) ozone exercised a destructive action on the living animal tissues if brought into immediate contact with them, but it did not affect them so readily if they were covered by a layer of fluid; (5) ozone acted as an irritant to the mucous membrane of the nostrils and air-passages, as all observers had previously remarked. These effects the authors attributed partly to the fact that the density of ozone was slightly more than that of the carbonic acid of the blood, so that the diffusion of the gases in the air-cells of the lungs was retarded, and there was a consequent accumulation of carbonic acid in the blood. At the same time ozone had also a subtle effect on the blood which further experiments might discover. The authors exhibited the apparatus employed in the experiments, and showed how ozone could be readily produced. The apparatus consisted of arrangements by which a diffuse discharge of electricity from a powerful induction-coil could be sent through a stream of air or of oxygen passing through a glass tube, so that during the action of the coil ozone issued freely from the end of the tube.

A GOOD SUGGESTION.

Mr. John Little, Medical Officer of Health for the Whitechapel district, concludes his quarterly report ending September 29 last with the following practical suggestion:—

"If any alteration should be made in the constitution of the Metropolitan Board of Works, it would be desirable to add to its functions that of a sanitary supervision over the whole metropolis, with power to appoint a highly qualified medical officer of health, who, from his position, administrative talent, and scientific attainments, would command the respect of the metropolitan health officers, and who, in all cases of doubt or difficulty, might be consulted by them. A system of uniformity in all the reports of the medical officers of health should be adopted, and a copy of each report should be sent to the superintending medical officer, who should be required to make a digest of them for publication and general distribution."

THE CORPORATION OF DUBLIN AND THE LOCAL GOVERNMENT BOARD.

At a meeting of the Corporation of Dublin held on Monday, the 15th inst., Sir John Gray proposed that a petition should be addressed to the Local Government Board for Ireland, on behalf of the citizens of Dublin, relative to the pollution of some tributaries of the Vartry river close to the Roundwood Reservoir, in the County Wicklow. In the debate on the proposition, the following remarks, amongst others, were made:—

"Mr. Dennehy did not think the Local Government Board had any power to afford a remedy. An indictment in the Queen's Bench was, in his opinion, the proper means to adopt. As for the Local Government Act, there never was such a piece of bungling legislation since the Union, and he defied any lawyer to interpret it.

"Alderman Plunkett thought it a degrading thing to 'petition' the Local Government Board. Who were they at all?

"A Member: They are a queer lot. (Laughter.)

"Alderman Plunkett said the Corporation ought to 'require' the Local Government to do what was necessary, and not to 'petition' them.

"Sir J. Gray observed that, according to the language of the Act of Parliament, they must 'petition,' and if they adopted any other word instead of 'petition,' it would simply be a non-compliance with the Act of Parliament.

"The question was then put, and the resolution passed."

Did it ever occur to Alderman Plunkett that for him not to know the Chief Secretary for Ireland, the Marquis of Hartington, President of the Local Government Board; Sir Alfred Power, Vice-President; Mr. McDonnell and Mr. Bellow, the members of the Board,—did not detract from their position but merely argued himself unknown?

FROM ABROAD.—PROFESSOR LEIDESDORF ON SATURNINE EPILEPSY—PROFESSOR CROCQ ON CAPILLARY PUNCTURES IN GLANDULAR ABSCESSES.

In the number of the *Allgemeine Wiener Med. Zeitung* for November 4 there is a lecture delivered by Professor Max Leidesdorf upon "Saturnine Epilepsy," of which the following is a copious abstract:—

J. W., a journeyman house painter, twenty-five years of age, had a year ago an attack of lead-colic, and for some time has suffered from tremors of the limbs. A week before his admission into the hospital he had eight epileptic attacks one after the other, which left his mind in a very disturbed state. When admitted he refused to go to bed, tore his shirt off, and spoke disconnectedly. He was of a sallow, unhealthy aspect, the mucous membrane of the lips and throat being pale, and the gums discoloured. The upper and lower extremities trembled, and the extensors of the former were paralysed. The pupils were dilated; the tongue, though in a state of tremor, was straight, and speech was distinct. At the apex of the lungs bronchial respiration was heard, and the heart-sounds were accompanied by metallic tinkling. The pulse was small, and 74. The abdomen was inflated and sensitive, and the catheter had to be employed to relieve the distended bladder. The urine was alkaline, but not albuminous. The patient was for the most part unconscious, but at intervals he answered promptly the questions that were put to him. The general aspect left scarcely any doubt of its being an example of "saturnine encephalopathy." In the night of the third day after his admission the patient was seized with epileptic fits, which lasted five or six minutes, and recurred at short intervals. The pupils became much dilated, and were insensible to light. The fits continued to recur frequently, and the patient could not be roused out of his sopor. He died on the fifth day after admission. The diagnosis which had been made of anæmia and œdema of the brain and tubercle of the lungs was confirmed by the autopsy, performed twelve hours after death. The membranes of the brain were tense and thin, the convolutions were greatly flattened, and the substance of the organ was soft and devoid of blood, the ventricles containing half a drachm of clear serum. The lungs exhibited several cavities. Microscopic examination detected nothing abnormal in the brain or its membranes; but chemical analysis exhibited a small quantity of lead in the urine, as also of the sulphuret and the sulphate in the brain.

The diagnosis in this case was easily derived from the history of the patient, the appearance of the countenance and the mouth, and the characteristic paralysis of the extensors of the forearm; but in the absence of these data the case might easily have been mistaken for one of delirium tremens, on account of the presence of general tremor, the drunken-like unconsciousness, and the movements of the patient as if engaged in his occupation. The epileptic seizures, soon followed by coma, and apparently accompanied by amaurosis, might have been attributed to uræmia had not the quantity of urine secreted and its normal condition precluded any such idea.

As the psychical disturbance and epileptic attacks did not occur until a year after the lead-colic, they must be regarded as independent of it. According to the observations of Tanquerel and Desbois, saturnine encephalopathy may occur in individuals who have never before suffered from disease arising from lead, and Tanquerel reports six instances of this from among seventy-two cases of disease from lead. Saturnine epilepsy is therefore one of the special forms of disease produced by lead-poisoning. Tanquerel observes that in these cases there is no anatomical change produced in the brain, but that they belong to the class of cerebral neuroses generated by poisons Traube, having met with granular kidneys in two cases of saturnine epilepsy, started the hypothesis that the lead-poisoning gives rise to degeneration of the kidney and uræmia, whence proceed the epileptic seizures; and although Tanquerel expressly states that he has not found albumen in these cases, yet both Ollivier and Lancereaux relate cases of Bright's disease occurring in lead-poisoning. In order to decide the question, Dr. Rosenstein, of Gröningen, published in Virchow's *Archiv* for 1867 the account of his experiments on dogs. From these he comes to the conclusion that chronic lead-poisoning gives rise to neither albuminuria nor considerable anatomical changes in the kidney, and that life is often terminated by attacks of epilepsy which resemble uræmic convulsions, as in both amaurosis is present and diuresis is diminished by lead-poisoning. In animals so killed lead is detected in the brain. The diminished urine is concomitant, not causative. The substratum of the epileptic attacks is the anæmic condition of the brain.

Acute œdema of the brain was found by Rosenstein in two cases, but it was absent in two others; and Tanquerel reports that although it is a frequent it is not a constant appearance. When œdema is present it contributes to an increase of the anæmia, but it cannot be regarded as the cause of this. The mode in which anæmia of the brain is induced in lead-poisoning has not as yet been explained; but in face of Gusscrow's statements as to the considerable deposit of lead in the voluntary muscles, the influence it may also exert on the muscular fibres of the cerebral vessels may be worth consideration. According to the researches of Heubel, next to the liver and spleen, which serve for the expulsion of the lead from the economy, the brain and spinal cord are the organs in which relatively larger quantities of it are found, and it possesses a great affinity for the nervous substance in general. He is also of opinion that the chronic occurrences, such as headache, sleeplessness, stupor, melancholia, loss of memory, etc., may be due to the deposit of the lead in the brain, and that the acute symptoms arise from the cerebral œdema and the consequent anæmia.

Professor Crocq, of the University of Brussels, in a recent clinical lecture (reported in the *Presse Médicale Belge*, November 23) described the treatment which he has been in the habit of pursuing during the last ten years in suppurating glandular abscesses. Situated as these usually are in the neck, unsightly scars are often produced, even when they are treated as recommended by Velpeau—by a narrow puncture executed as soon as fluctuation is apparent, and repeated if necessary. Even this leaves a scar, which indeed may become very conspicuous when, as often happens, the little aperture ulcerates and becomes fistulous. Professor Crocq avoids these inconveniences in practising the puncture by means of a grooved exploratory needle or a fine exploratory trocar. Pressure is then made over the swelling so as to expel as much matter as possible. If the abscess is extensive, or the fluid does not issue freely, he makes two, three, four, or five punctures at different points, repeating them daily or every other day, either at the same or at other points. Sometimes it is sufficient to press the tumour somewhat firmly in order to secure the flow of the pus from one of the punctures already made. After some days the matter becomes less abundant and more serous, taking on a reddish tinge, which is a sign of an approaching cure. Sometimes there is now observed a more or less considerable soft and doughy swelling, which if punctured only yields a little blood and serosity. This swelling soon disappears, and the punctures, which at first remained as little reddish points, soon become pale, so that after the cure of the abscess no traces of them remain. This procedure is employed for acute abscesses as soon as fluctuation has become evident, and in chronic cases before thinning and detachment of the skin has occurred. But even when this condition exists it is not a contra-indication, care being taken, however, not to puncture the most thinned portions of the skin, in fear of subsequent ulceration. After the punctures these parts fall in and retract, a depression as from loss of substance resulting; but in general this usually disappears with the lapse of time. Even if it did not do so its aspect would be far less repulsive than that of a cicatrix due either to a natural or artificial solution of continuity. Professor Crocq has never found ulceration succeeding these punctures. He points out that his plan is different from those of Mr. Lawson Tait and Dr. Lorentzer, which combine the employment of aspiration with minute puncturing; and he prefers his own as more simple and more efficacious.

He has also employed the same procedure in opening suppurating bubo, avoiding thus the disagreeable scars that are usually left. Applied in good time, when the collection has well formed, and before the skin has become thinned or detached, it always succeeds, except in the case of "chancrous bubo," when the presence of a virulent pus necessarily leads to ulceration. In the great majority of cases the bubo is a simple inflammatory tumour.

Any subcutaneous abscess which is not of very large extent may be treated in the same manner. Thus M. Crocq has frequently met with great success in treating abscess consequent on erysipelas of the face, and especially in the abscesses consecutive to variola, of which he met with a great number of cases during the epidemic of 1865.

Several cases are given in illustration, for which we have not space.

THE Marylebone Vestry has awarded £50 to the assistant of the analyst of food for his services since the commencement of the Adulteration Act.

ACTION AT LAW FOR A DEATH FROM CHLOROFORM.—A Madame Caron some months since was taken by her husband to a dentist at Lille, to have a tooth drawn. Chloroform was administered in his presence, and his unfortunate wife died. The dentist was condemned by the Criminal Tribunal at Lille to a month's imprisonment and 500 francs fine for "homicide by imprudence." On appeal, the imprisonment was struck out of the sentence. Thereupon the husband, although he had completely authorised the use of the chloroform, brought a civil action for damages, demanding 20,000 francs in his own interest and that of a son, a minor. The Tribunal, considering the fact of homicide by imprudence having been established by the judgment of the criminal court, condemned the defendant to pay 4000 francs damages, 1000 to go to the husband and 3000 to be put out at interest for the son until he attained his majority.—*Union Méd.*, Dec. 11.

LETTERS FROM MADRAS.

No. VI.

Varicosity of Lymphatics: Chyluria; General Characters of Disease; Moral Aspect of the Patients—Crows and Bandicoots.

In the General Hospital there were some cases new altogether, and many more whose characters and the type of treatment required were of foreign aspect. Almost the first case shown me by Dr. Paul was one of varicosity of the lymphatics of the scrotum, attended with some slight enlargement of the glands in one groin. From time to time the scrotum swells and becomes painful, and the lymphatics on its surface stand out distended and shining. Then suppose them punctured on purpose, or that they give way of themselves at some point: there spouts out a clear stream of liquor sanguinis or lymph—a faintly pinkish-white fluid, which, when collected, coagulates, and becomes just as blood would, minus the red particles. The patient is a good deal exhausted by this daily drain. Varicosity of the lymphatics may be found in dropsy from heart disease; but here it is a local hypertrophy.

Side by side I may mention some cases of chylous urine, because it was suggested that this might depend on just such a state of the lymphatics of the kidneys, bursting and bleeding out their lymph into the urine. The urine, of a decidedly pinkish colour, coagulated into a mass of loose gelatinous consistence. But Dr. George Smith, under whose care the patients were, was led by experience to connect the attacks with a disordered state of the circulation in the abdominal viscera; for they were always aggravated by errors in diet. The experiment was tried of confining the patients to a milk diet, but neither in this nor in diabetes does an exclusive milk diet seem to answer here. The attacks of chylous urine were decidedly worse; and in diabetic cases it brought on symptoms of purpura. Search was made both in the urino and in the blood of these patients with chylous urine for the filaria which has been described as infesting the human blood in large numbers; but they have never been found here.

One thing which strikes a European visitor at first sight is the number of cases which have been treated by native remedies, most of which remedies, so far as I have seen, are either imbecile or cruel: the cruel predominate. There are compounds of irritating shrubs with milky juice with red pepper, and coarse preparations of copper and mercury, which are recklessly applied for abscesses, tumours, and rheumatism, to discuss the humours; and they are like some brushes which a Frenchman advertised for rheumatism—if they don't take away the pain, they do the skin. One man, for instance, was brought in with a slough over the sacrum, which had gone clean down to the bone. But this is nothing to the damage done to the eye by irritating compounds put into it, sometimes to rouse a patient from lethargy, or coma, or epilepsy, and sometimes to relieve diseases of the eye by extracting the tears, which is accomplished to perfection. One case I saw of the results of native treatment which was lamentable enough. A poor man had broken his thigh,—and, by some recondite sense of fitness, the persons who treat fractures are potters, who apply bamboo splints, and then plaster the limb with clay. The result in this case was gangrene of the lower leg, and the poor fellow was brought in with the tibia and fibula perfectly denuded of flesh, and the calf rotted away up nearly to the knee. The only thing that could be done was to amputate as near above the seat of fracture as the tissues were sound, and the poor fellow might have done well, but was carried off by tetanus a few days after the amputation.

The general characteristics of the cases to be seen here are the magnitude to which they attain, owing to the reluctance which the native inhabitants have to coming under European treatment, and the time wasted in native treatment. Tumours of such sizes, and strictures so complicated with fistulæ, are not to be seen in Europe. Then there must be noted the tolerant nervous system, so that a very small degree of "constitutional irritation" is produced even by such frightful conditions as the gangrene of the leg just described. In the next place, there is an exuberant tendency to tumours or morbid growths of all sorts, especially epithelioma of the mouth. The most prevalent diseases amongst the natives are phthisis and Bright's disease. This may perhaps stagger some of our brethren at home, who are in the habit of considering a warm climate—and most justly—as a panacea in pulmonary and renal disease, so I will take another opportunity of speaking more fully about it. But it is the *ensemble*, the moral aspect and character of the patients, which is stranger than their diseases to an European. Here is a man, a priest of some petty temple, with his forehead marked with the horizontal lines in white ashes which show that he is a worshipper of Shiva. He is carefully irrigating his knee, which is affected with synovitis from the presence of a guinea-worm just outside. And I may mention, in passing, that simple irrigation with cold water, effected by a skein of thread leading from a bottle by the bedside to a fold of linen on the diseased part is found a perfectly effective mode of quelling synovitis, which is very common. The poor man has a precious little parcel secured round his neck with a string; he begs to be excused from showing it, stating that it is his Swamy, or god. It is no doubt a small silver Lingam. Opposite to him is a poor fretful fellow, a Mohammedan, who is always complaining of his diet. He is treated with the greatest indulgence, and allowed to choose what he would like. So he chose chicken, which he has had for nineteen days running, but now discovers that he can't eat the chicken any longer, because he is afraid that the word *Bismillah* is not pronounced when the creature is killed. Near him there is a grand-looking fellow, a Jew who has come from Babylon, and been admitted here for strangulated inguinal hernia, which was operated on with entire success save that recovery was retarded by an abscess in the scrotum. He is now nearly well, and is pouring out in sonorous terms his thanks and blessings on his benefactors,—a grand old fellow, who might have served as a model for that sublimest of figures, Michael Angelo's Jeremiah in the Vatican. But this venerable personage absconded that evening. 'Tis a way they have; they would sooner go by a petty stratagem out at the back door than go out in the regular open way. Not that they are ungrateful, but tricky. Next comes to my mind an old man with an enormous scrotal tumour, probably weighing one-third of his whole body; he is in a wretchedly dilapidated state of health, with emaciation and diarrhœa, but is most eager to have the tumour removed, and threatens to go and drown himself if it is not done. In noticing the moral aspect of the wards it would not be fair to omit all notice of those most impudent and voracious crows who infest them, and who are always ready to pounce upon anything eatable, especially if the patient is weak and helpless. A native friend, pointing out their voracity, impudence, and insatiable restlessness, asks—If these are not the embodied souls of wicked men, what are they? We may ask the same about the horrible bandicoot rats that haunt the sewers, and creep up into the wards by night. These wretches are not nice at all in their feeding, and when the physician, in his morning visits, asks to see the phthisical sputa, he is not surprised to learn that the bandicoots have gobbled it up in the night.

CONTAGIOUS OPHTHALMIA.

On December 16, Mr. Brudenell Carter read a paper at the Conference of Chairmen and Vice-Chairmen of Boards of Guardians, "On Contagious Ophthalmia as Influenced by the Arrangements of Workhouses and Pauper Schools." He said the subject presented two aspects—the medical or surgical, and the administrative. Glancing briefly at the first of these, he dwelt on the contagiousness of the disease:—

"The contagious matter is the secretion of the membrane that lines the eyelids; and this secretion passes along the tear-passages into the nostrils, and is driven out with the expired air at every breath. Besides the chances of direct contact that must exist when a child with ophthalmia is in the same room, lavatory, or playground with others, the child with ophthalmia is perpetually sending into the atmosphere what I may describe as a spray of contagious particles. The period of contagiousness is often extremely protracted. Until the eyelids are quite well, they remain in a state in which any chance irritation, the entrance of a particle of dust, or of an insect, or even some temporary disturbance of the health, may reproduce a secretion of the most active character. At the various hospitals we constantly see children who have had the disease, on and off, so to speak, for long periods, and who have

been to a succession of public institutions, carrying infection with them." Mr. Carter quoted two cases in illustration of the obstinacy of the disease and the frequency of its recurrence. "My second proposition is that the magnitude of the evil is not so much to be measured by the original severity of individual cases in an outbreak, as by the actual number of the sufferers, and by the duration of the cases. Different outbreaks differ much in severity, and an outbreak in which there is a large percentage of loss of eyes during the early stages of the disease is calculated forcibly to impress the imagination, and to be regarded as a far more serious affair than an outbreak in which the immediate loss of eyes is comparatively small. But in a public institution, where all the cases are under observation from the beginning, the loss of an eye in the early stage should be an occurrence of extreme rarity. We have lately read, in a letter in the *Times*, that the loss of eyes was stopped in the Hanwell Schools, as soon as Mr. Bowman took the superintendence of the treatment; while it is also mentioned, as a comparatively small matter and seemingly as a curious fact in natural history, that 'the smouldering embers were ever there.' The writer of these words was probably not fully acquainted with the fact which it is my object now to state—namely, that the gravest results, in the aggregate, of contagious ophthalmia, are produced long after the acute stage has subsided, and are produced by the continuance of that smouldering which he describes. The ophthalmia leaves behind, when the acute stage is over, a chronic thickening or fleshiness of the lining of the eyelids; and, as an example is better than any amount of description, I have in attendance a little girl who shows this state extremely well. If you draw down her lower eyelids, you will see the thickening of which I speak. Now, this thickening seems a small matter; but it cannot be got rid of without months of exceedingly careful and well-directed treatment; and if it is not got rid of it may entail disastrous consequences. It is liable to undergo a very slow process of degeneration and contraction, by which the form of the eyelids is distorted and their inner surfaces are rendered hard and rough. The eyelids no longer fit the surface of the eye, and therefore they cease to wipe away the particles of dust which float in the atmosphere, and which are constantly deposited from it. Their internal surfaces become themselves sources of irritation, and their altered curvatures bend the eyelashes inwards and cause them to exercise friction upon the eyeball. These changes occur so slowly that many years may elapse before they are fully produced, and their connexion with the original ophthalmia may then easily be lost sight of. They are almost irremediable, because nothing can restore the natural shape, texture, and pliability of the lids, and because operations for altering the position of the eyelashes are often defeated by the continuance of the contraction, which in a few months may reproduce the deformity. The patients are, perhaps, more forlorn and to be pitied than any other class that fall under our notice. They are in a state of constant pain or uneasiness, tormented by every movement of their eyelids, tormented by every particle of dust which falls into their eyes, tormented by their eyelashes, tormented by constant overflow of tears, seldom with sufficient vision to follow any employment, dependent upon the rates or upon charity, half blind and wholly miserable. Such are the ultimate results produced by contagious ophthalmia, when the patients pass away from under treatment before they are completely cured. My third, and perhaps most important proposition, is that contagious ophthalmia is not an affection which can be introduced into, and propagated among, a community of healthy persons. If you take a drop of matter from an eye in the acute stage, and put it into a healthy eye, or if you expose the healthy eyes of a nurse to the manifold chances of direct contact, and to the concentrated atmospheric contagion, of a ward containing a number of infected children, some kind of inflammation will, no doubt, be produced. But before it can spread in the ordinary manner, contagious ophthalmia must find persons prepared for its reception by the existence of an antecedent morbid condition. This antecedent condition is not one of mere ill-health, or debility, either inherited or acquired; but it is something definite, manifested by the development, in the lining membrane of the eyelids, of certain little bodies which are not unlike grains of boiled sago, and which are commonly called after this resemblance. In technical nomenclature they are known as 'follicular granulations'; but to-day I will call them 'sago grains.' They are concealed by the eyelids when these are in their natural position; and when once ophthalmia is set up they are soon concealed altogether, by the swelling and the increased redness of the parts in which they are found. Here, again, example being better than description, I have a patient in attendance who has the 'sago grains,' but who has not yet suffered from ophthalmia. The very existence of these 'sago grains' remained unknown until the year 1848, when they were discovered by Dr. Löffler, the surgeon to a Prussian regiment employed against the Danes. Soldiers on active service have often suffered greatly from contagious ophthalmia, and it prevailed so much in the regiment in question that many men were disabled. Dr. Löffler, in order to treat every case at the very beginning, caused the whole regiment to be paraded daily for inspection, and he examined the inside of the eyelids of every man. In a large proportion of the apparently unaffected men he found these 'sago grains,' and at first he did not know what they were or what they signified; but after a while he found that the men who had sago grains were sooner or later attacked by ophthalmia, and that the men who had no sago grains remained exempt. The inquiry was next taken up, and diligently pursued in the British army, chiefly by Drs. Frank, Marston, and Welch. They confirmed the conclusions at which Dr. Löffler had arrived, and they established that the prevalence of the sago grains is the necessary antecedent of an epidemic of contagious ophthalmia. They furnish, to repeat a figurative expression I have already used, the soil in which the seeds of the disease germinate; and, if the soil is wanting, the seeds either remain quiescent, or, at most, produce disease of a comparatively harmless character. Drs. Frank, Marston, and Welch further established that, when a large number of persons are brought together in close aggregation, and are exposed to insanitary conditions of living, they become the subjects of these sago grains; so that the presence or absence of sago grains affords a delicate test of the sanitary state of a school, regiment, or any similar community. In a regiment the proneness to the development of sago grains is found to decrease as life advances—that is, to be much greater in young soldiers than in old ones; and, by a parity of reasoning, it is assumed to be greater in a community of children than in a community of adults. In any individual, and therefore in any community, the sago grains may disappear without producing mischief. But, as a matter of fact, sources of irritation to the eyes abound in the world, and when these sources of irritation act upon eyelids in which sago grains are already present, they often excite the contagious form of ophthalmia. It is therefore very rare for a community in which sago grains are prevalent to remain for any length of time free from an outbreak. The next step in the inquiry was to determine the nature of the sago grains; and this has been accomplished only within the last two years. Speaking broadly, they may be regarded as enlarged glands, and as bearing considerable analogy to the enlarged glands sometimes seen in feeble or scrofulous children. You know that glands are natural structures, which, in their healthy state, are not discoverable externally either by sight or touch, but which, in certain unhealthy conditions, become manifest as hard prominences on the sides of the neck and in other situations. When thus manifest, they may either remain passive, or, as it is said, indolent, and may after a time disappear by returning to their natural state, or they may undergo an unhealthy form of inflammation and become the seat of abscesses, which often give rise to unsightly scars. The case of the sago grains is almost precisely parallel, for just as a child will not have scrofulous abscesses in its neck unless glandular enlargement has first existed, so a child will not have contagious ophthalmia unless sago grains have first been developed in its eyelids. In this fact, therefore, we possess a clue to the prevention of the disease. When contagious ophthalmia has once taken root in an institution, it can only be got rid of by very troublesome and costly proceedings, which must be continued, as the experience of Hanwell and Anerley has shown, over long periods of time. I have discussed these proceedings at length in the St. George's Hospital Reports, and need not now refer to them. My object here is to show reason for the belief that the disease might, perhaps, be prevented and kept away by measures of a simple kind. At present, concerning the origin and causes of the sago grains, we know only what I have said already—namely, that they appear whenever a large number of people are placed together and are exposed to insanitary conditions of living, and that they are produced more readily in children than in adults. There is only too much evidence that insanitary conditions of living have prevailed—nay, that they still prevail—in many or even most of the establishments under the control of

the Local Government Board; and I think the main problems before us are to find out how it is that these conditions have been suffered to exist, and how they may most effectually be remedied. For my own part, I can explain their existence on no other ground than because there is no system of sanitary inspection for these establishments, as distinguished from general inspection; or, at least, no such system as they require. I assume that the Local Government Board, being charged with the duty of seeing that the Poor-law is applied in its integrity, is bound to employ a machinery of inspection for that purpose; and I presume it will be admitted on all hands that the Poor-law inspectors render most valuable assistance to boards of guardians, in respect of many portions of their responsible and arduous duties, especially in respect of questions of relief, of administration, and of the interpretation of the law. But boards of guardians are not concerned with these matters alone. They are also the directors of a great organisation for sanitary purposes, and my argument is that in this branch of their duties, also, they should be placed in close relation with the central authority by means of skilled inspectors, who would bring to the guardians themselves, and to their officials, the advantages, not only of careful supervision, but also of a wider experience than any which local authorities are themselves likely to possess." After referring at length to the case of Anerley, and contrasting the state of county pauper lunatic asylums with that of schools, Mr. Carter concluded: "I can entertain no doubt that, so long as efficient sanitary inspection of workhouses and schools is neglected, so long will these institutions yield a perpetually recurring crop of abuses; nor can I doubt that these abuses will be infinitely more costly, in sickness, in death, in blindness, in reputation, than the supervision by which they might be kept in check. If a man of Dr. Crichton Browne's position and attainments feels that an efficient medical inspection is a valuable aid to himself and to asylums generally, how much more would his words apply to institutions that are placed in many respects in a less advantageous position? It is implied, of course, in the term efficient inspection that the recommendations of the inspectors are to be carried into effect. There is one point more, and one only, to which I have to refer, and it is the possibility that the formation of sago grains may be due to a single cause among the many insanitary conditions by which the children at Anerley and other schools have been surrounded. The records of medical science are full of examples of diseases which, at one period, could only be explained by the use of a general phrase, but concerning which the evidence was at last narrowed down to some single detail. [Mr. Carter instanced Devonshire colic and scurvy.] Such an inquiry could not be conducted by novices or amateurs, but only by persons thoroughly skilled in investigations of the kind, who would go from institution to institution, and would ascertain all the points of difference, in respect of conditions of living, between the schools that suffer from ophthalmia, or in which the children have sago grains, and the schools that are exempt. Among the latter there are some where the managers attribute the exemption to the observance of some particular precaution, and it would be important to test the correctness of their opinions by the light of experience obtained elsewhere. In the words of my former paper on the subject, it might be that the persons who conducted such an inquiry would ascertain some simple factor of ophthalmia which might be easily and cheaply excluded. It might be that they would point out an effectual remedy which yet, by reason of the expense that it would entail, could hardly be preferred to a total change of system. It might be that they would say, 'These schools are wrong in principle, and must be abandoned.' But at any rate, they would learn and declare the truth; and for the prevention of ophthalmia, or of any other evil, knowledge of the truth is the first and most indispensable condition."

The Managers of the Edinburgh Infirmary on Monday resolved to refuse women students admittance to the operating theatre at the same time as the male students.

The deaths registered in London last week numbered 1759, showing an increase of sixty on the average numbers. There were 133 fatal cases of measles during the week, which exceeded the number returned in any week since the commencement of the present epidemic, and were ninety-one above the average.

REVIEWS.

Annali Clinici dello Ospedale dei Pellegrini di Napoli. Vol. II. Decembre, 1872. (Anno II., Fascicolo 5 e 6).

The volume before us, consisting of about 300 pages, contains a detailed account of all the cases of *wounds*—contused, punctured, and incised—admitted into the Hospital dei Pellegrini at Naples from July 1 to October 31, 1872. We shall pass over the cases of *contused* wounds as presenting nothing of special interest to the English surgeon, and speak only of the punctured and incised, which are very numerous, and remarkable for being in ninety-five cases out of ninety-six of a homicidal character—that is to say, stabs with a knife, dagger, or stiletto.

Stabbing is fortunately not a common crime in England, and it would probably be a long time before the experience of the surgeons of all our large London hospitals together would be equal to that of the surgeons of the Hospital dei Pellegrini in the short space of *four months*. Comparing the number of cases of stab taken in by University College in 1871, St. Bartholomew's in 1872, and St. Thomas's in 1872, as supplied by the Surgical Registrars' reports, we find *four* cases only for the three hospitals. The existence of this relatively enormous number of cases of stabbing at Naples is probably due to several causes: to the hot blood and hasty temper of the southern population; to a chronic state of weak and irresolute government under which the Neapolitans have until recently been living, and to the inefficiency of the police,—both causes likely to foster crime; and lastly, to the narrow, dark, and intricate streets, which allow of a ready escape to a murderer after striking his blow.

Of the ninety-five cases, the larger number were stabs of the chest and abdomen, but in several there were three or more wounds, and in one as many as nine. The histories are given in considerable detail, and arranged according to the region of the body in which the principal wound (if multiple) was inflicted; and there is a summary at the end of each division of the cases in it with remarks on any special points of interest in the injury or its treatment.

There were seven cases of stab of the head and face, all of which recovered. In one Stenon's duct was cut across, and salivary fistula resulted, which healed after repeated cauterisation with nitrate of silver. It was found that the *incised* wounds of this region in the majority of cases suppurated, and became complicated with erysipelas, even though the edges were brought together at once with twisted or interrupted sutures. There were seven punctured and incised wounds of the *neck*; two were fatal. One was a student aged 16, struck by a poniard at the upper third of the external border of the left sterno-mastoid muscle. The wound was four centimetres long, and one broad. The hæmorrhage was so great that the common carotid had to be ligatured. At the post-mortem the upper part of the internal carotid was found divided.

Another case died from pyæmia after ligature of the common carotid for a stab in the left parotid region, and very near the lobule of the left ear, extending to the left mastoid process, and cutting large vessels.

Ligature of the internal carotid was done in one case, which recovered, for a stab in the left side of the neck. One case of stab high up at the back of the neck showed an incomplete hemiplegia of the right side while the wound was in course of cicatrisation. Professor Riverso, the author of the report, remarks that wounds (stabs) of the neck are not only dangerous from the damage which may be done to the large vessels and nerve-trunks, as well as the trachea and œsophagus, but also from injury which may happen to the cervical aponeurosis, which extends to all the anterior region of the neck, and "gives it a certain resisting power, so that it maintains a kind of equilibrium in deep inspirations, and liberates the trachea from the powerful compression of the external atmosphere." Wounds of the neck (stabs), even if they do not penetrate the air-passages, may kill by suppuration in the connective tissue and infiltration of pus. Of the wounds of the *thorax*, eight penetrated into the cavity, and of these three patients died. There were twenty-six cases of non-penetrating wounds, all of which recovered. The wound was not probed or examined with the finger in any of these cases, but the probability of penetration or not was deduced from the size of the weapon in relation to the wound, the blood expectorated,

the direction and force of the blow (where ascertainable), and the presence or absence of emphysema. All wounds suspected to be penetrating were dressed with a view to their healing by first intention, and treated with absolute rest, with the thorax half-raised, and low diet, while snow(a) in small quantities was given with digitalis or opium internally, and bladders of snow applied locally for the first two or three days. The continuous application of bladders of snow to the chest was found most valuable in cases of laceration of the lung; but general bleeding was never, and leeches scarcely ever, used. It was found that the cases of wounds of the thorax without penetration were mostly slight, and the patients could leave the hospital in a week or ten days. Almost all the cases of stabs penetrating the thorax were complicated with wound of the lung, and Professor Riverso believes it to be rare for the lung to escape. He mentions one case in which a stab entering the pleural cavity at the fifth left intercostal space spared the lung, but a second blow penetrated the diaphragm and entered the stomach, and the patient died on the second day. In another case a man received four stabs with a poniard, one of which, striking the spine of the seventh dorsal vertebra, entered the cord, and produced paraplegia, with paralysis of the bladder and rectum, and death on the eighth day.

There were twenty-four cases of wound of the abdomen, *all penetrating*, and of these six died. The intestinal wound was found healed on the twelfth day in a fatal case where the gut was pierced and sewn up with its serous surfaces in contact in the usual way. Death arose from peritonitis, probably due to blood extravasated at the time of the injury. In a case that recovered, and in which omentum protruded, and there was a suspicion of wounded intestine, Professor di Sena, surgeon on duty, enlarged the opening in the abdominal wall, and drew out a loop of intestine which corresponded to the centre of the wound, but, finding it uninjured, he returned it with the omentum, and closed the wound with the twisted suture (*sutura incavigliata*). The patient left the hospital well on the twelfth day. There were seven cases of protrusion of omentum, in which Professor Riverso successfully used a method which he advocates strongly in such cases—namely, plugging the wound (*lo Zaffo*). The abdominal wounds in which he believes plugging to be indicated are, to use his own words, "those in which, through the oblique direction of the wounds, the omentum or loops of intestine protrude, and get strangulated between the fibres of the oblique muscles." Here the wound must be enlarged, and the cutaneous opening made to correspond with the muscular, and then plugged. The plug consists of clean lint spread with simple cerate (*compressa bucata spalmata di unguento cerato*). It must not be allowed to remain in the wound too long, but be removed after about twenty-four hours, and some less rigid and smaller body be substituted for it. In all cases absolute rest was ordered; the thighs were semiflexed on the pelvis, and bladders of snow applied to the abdomen, and snow given internally with opium, while food was given in a concentrated liquid form.

The cases of wounds of the pelvis were six in number. One of them died of peritonitis without wound of any viscus; the others all recovered under the same methods of treatment as used for the stabs of the abdomen. There were three cases of combined punctured and incised wounds of the arms, of which one died after wound of the brachial from septicæmia. The artery, which was wounded in the lower third of the left arm by a stiletto cut, was tied in the wound above and below, and the ligatures came away on the tenth day, but the man died on the twenty-second day with high fever and delirium. All the other cases of wound of the arm and leg, twelve in number, healed well, though some, which were treated in the hope of union by first intention, suppurated and healed by second intention, and one or two were complicated with erysipelas.

Professor Riverso makes a few remarks at the end of his report on gunshot wounds, several cases of which were in the hospital during this period. He recommends tar as of great value in flaccid and atonic wounds of this kind, for "it removes the incipient mortification of their surface, and sets up healthy granulation." "Large applications of unguentum hydrargyri gave rise in the majority of cases to resolution of traumatic inflammation complicating such wounds."

He warns against the too protracted application of ice to gunshot wounds, as it prevents the return of blood to the injured parts, and tends to accelerate gangrene.

(a) Snow, being more easily procured than ice, is in general use in Naples instead of the latter.

In conclusion we may state that this volume contains statistical tables of the number of in- and out-patients attending the hospital during the year 1872, and of the various fractures, dislocations, and wounds of all sorts treated during the months of May to August of the same year.

GENERAL CORRESPONDENCE.

THE HISTORY OF OVARIOTOMY.

LETTER FROM MR. L. BROWNE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am sorry to see that a very temperate refutation of Dr. Wynter's error in putting forward Mr. Spencer Wells as the solitary "reviver" of ovariotomy meets with such strong disapproval from you.

I have the very highest regard for Mr. Spencer Wells as a bold and most deservedly successful operator. There cannot, however, be the least doubt that to Dr. Clay, of Manchester, and to the late Mr. Baker Brown, the credit belongs of having placed the operation of ovariotomy on a sure foundation. I will, however, confine my remarks to Mr. Brown, and I trust that the following facts will sufficiently prove that "Baker Brown was not only Spencer Wells' predecessor and his contemporary in the operation, but to some extent his preceptor." Mr. Baker Brown first performed ovariotomy (having previously from so early a date as 1840 attempted many less radical measures with varying success) in 1851. His first three operations were unsuccessful. The subject of his fourth was his own sister, and success followed his boldness, the lady having since married, borne a large family, and being still alive.

It is quite true that Mr. Brown ceased to operate in 1856; but this abstention was not due in any degree to doubt on his part as to the value or justifiability of the procedure, but simply because he met with such determined opposition on the part of his colleagues at St. Mary's Hospital, one of whom indeed went so far as to threaten him with an inquest the next time a death followed an ovariotomy performed within the walls of that Hospital. It may be interesting to note *en passant* that this gentleman became afterwards an ardent ovariotomist, and succeeded in having a cottage built at the back of St. Mary's for the reception of patients who underwent ovariotomy.

It was in consequence of this opposition, joined with the conviction that the air of a general hospital is unfavourable to recovery after abdominal section, that Mr. Brown founded the London Surgical Home, and he immediately recommenced ovariotomy. The brilliant success that Mr. Brown attained with this operation in that institution (nineteen patients dying out of eighty-five operations) was due, first, to improved sanitary, hygienic, and nursing conditions; secondly, to the employment of the actual cautery. It is "a barefaced sacrifice of historical accuracy" to state that it was "not until after Spencer Wells' cases and papers had revived ovariotomy that Baker Brown began to operate again." Mr. Brown first operated at the London Surgical Home, October 20, 1858. At that time Mr. Wells had performed only two operations—one on February 19, 1858, and one on August 11, 1858. Mr. Wells did not publish any paper until February, 1859. Meantime, from October, 1858, to February, 1859, Mr. Brown had performed five operations, or fourteen in all. Mr. Wells' paper was based on the results of four cases. Further, Mr. Baker Brown was present at Mr. Wells' first operation, and, confining myself to the latter gentleman's own words, "afforded zealous assistance." There are eye-witnesses living who can testify to the value of this assistance. All who knew Mr. Brown would readily believe how zealous he would have been to encourage and assist a brother-surgeon.

But, granting that Mr. Brown was not the actual preceptor to some extent of Mr. Wells, the many accounts he had published of his previous efforts to establish the operation, and the frank manner in which he always discussed the causes of failure, must have taught Mr. Wells many valuable lessons. It is the pioneer of an operation who bears the brunt of the opposition. When Mr. Wells commenced to operate, the way was comparatively clear.

The successes of Dr. Thomas Keith in Edinburgh, of Dr. Tracy in Melbourne, and of many others, no more detract from the merit of Mr. Spencer Wells than do his magnificent achievements obscure the fact that Mr. Brown was, from the

earliest date of his career—even in his student days—an enthusiastic and consistent believer in the cure of ovarian dropsy by operation; and future historians will not be influenced in this matter by the erroneous statement of a clever popular essayist in a lay review. I am, &c.,

LENNOX BROWNE.

41, Welbeck-street, Cavendish-square, W., Dec. 9.

TYPHOID FEVER AT CAMBRIDGE.

LETTER FROM DR. FREDERICK J. LOWES.

[To the Editor of the Medical Times and Gazette.]

SIR,—As typhoid fever, which is now prevalent at Cambridge, is supposed by some people to depend on defective sanitary arrangements, and by others to be caused by impure milk, I should be rather inclined myself to attribute the origin of it to bad drainage, for exactly two years since several cases occurred amongst undergraduates who were down for the vacation.

I remember being requested to see a prizeman of his college, the name of whom I do not now remember. He was a fine young man aged 20, and had worked very hard the last term. His father told me that he thought he had caught cold on the ice with his brothers, but I immediately detected that he was suffering from typhoid fever, which turned out to be a very severe attack; and although he was going on favourably for some time, yet, owing to a little imprudence on his part, a relapse occurred, and after some days petechial spots were diffused over different parts of his body. He became comatose and died. During his illness a letter was sent to him, telling him that three other men from his college had been attacked at their respective homes, and two of them had died.

May not the same cause that produced the disease two years ago have been undiscovered and become the *materies morbi* of the present epidemic? I am, &c.,

FREDERICK J. LOWES, M.D.

72, Park-street, Grosvenor-square, Dec. 15.

"INERTIA" OR "ELASTICITY" AS THE CAUSE OF DICROTISM.

LETTER FROM MR. D. C. MCVAIL.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your columns of December 6 is a letter by Dr. Galabin, written to correct a statement by Mr. Mahomed in a previous number of your journal, in which that gentleman attributes the dicrotic wave to elastic recoil of the aortic wall. In his communication Dr. Galabin affirms that not the *elasticity* of the aortic wall, but its *inertia*, is the cause of the wave in question; and for his arguments in support of this position he refers to his article in the current number of the *Journal of Anatomy and Physiology*. I feel interested in this subject, as at the October meeting of the Medico-Chirurgical Society of Glasgow I read a paper on "Dicrotism," in which I advanced the theory that the dicrotism manifested by any particular part or segment of an artery is produced by elasticity in that very segment itself, as an after-effect of the passage through it of the great primary pulse-wave. The equilibrium of each particular segment being disturbed in succession from the heart outwards, each, ere again returning to equilibrium, passes through a vibratory phase, the agent immediately producing this vibration being the elasticity of the vessel-wall. Dr. Galabin combats the notion of elasticity, saying that the *inertia* of the aorta is the cause of the wave in question. It seems to me that an attempt at a hyper-metaphysical refinement of expression has led Dr. Galabin into an erroneous view of this matter. A tube of metal or of glass possesses inertia, and yet would give no secondary wave, and so it is absurd to say that it is the inertia, and not the elasticity of the vessel-wall, that produces the movement spoken of. The elastic tube of course has inertia—indeed, matter in any form without inertia is inconceivable; but it is the quality of elasticity over and above this inertia that is the cause of the recoil,—it is this *special* factor of the tube as distinguished from factors which the tube shares in common with all matter, to which the particular movement is due; and so the description of the wave as being caused by inertia, and not by elasticity, amounts to an obscuration, if not to a complete perversion of language. To what would Dr. Galabin ascribe the recoil of a billard-ball from the cushion—to inertia or to elasticity? If to the former, dried clay might be made use of for balls, and the provision of an indiarubber cushion would be unnecessary; for, let it be what it would, it and the clay balls would have inertia as truly as the indiarubber and ivory. In a note appended to his article in the *Journal of Anatomy and Physiology* in which he controverts Mr. Mahomed's view that the aortic elasticity is a sufficient explanation, Dr. Galabin says of the aorta, "its contraction is not an active proceeding"; and further on he says, "the mere fact that it contracts cannot at the same time be the cause of an increase of that pressure originating a second wave." Is it meant by this indirectly to convey the idea that the inertia is the active agent? Surely not; and yet, if not, the language is meaningless. Altogether, Dr. Galabin fails to establish his "inertia" theory, or in any way to shake the "elasticity" theory

I am, &c., D. C. MCVAIL, L.R.C.P. Edin.

96, New City-road, Glasgow.

CAPSICUM IN DELIRIUM TREMENS.

LETTER FROM MR. C. S. WILLS.

[To the Editor of the Medical Times and Gazette.]

SIR,—The following case may be interesting to your readers, as bearing additional evidence to the efficacy of large doses of capsicum in the treatment of delirium tremens:—

J. G., a warder in the Military Prison, had a violent attack of delirium tremens on the afternoon of August 6. When I say a *violent* attack, your readers will know what I mean without further description. His bowels being constipated, I ordered a brisk purgative at once, and sixty grains of chloral to be taken at 9.30 p.m. He continued delirious and outrageous all night, except from 10 till 10.30 p.m., when he appeared to sleep. I saw him at 8 a.m. on the 7th, when he had to be held down by two men. I then ordered him thirty grains of powdered capsicum, in bolus, every third hour. After the second dose he fell asleep and slept for five hours, and at my evening visit he was calm, but still raving, having taken sixty grains of capsicum. I ordered thirty grains more to be taken at 9 p.m., soon after taking which he fell asleep and slept about seven hours, waking perfectly conscious and quiet. From this date he had no recurrence of the delirium, and made a rapid recovery.

I am, &c.,

Barbadoes, September 28. C. S. WILLS.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 9.

Dr. C. J. B. WILLIAMS, F.R.S., President, in the Chair.

MR. TUFNELL read a paper on the Successful Treatment of Aneurism by Position and Restricted Diet, which was illustrated by cases, preparations, and drawings. The cases were—1. Aneurism of the abdominal aorta cured in thirty-seven days. The patient, a male, aged 31 years, was a shipwright by trade. Died from albuminuria five months after consolidation of the contents of the sac. 2. Aneurism of the abdomical aorta, cured in twenty-one days. The patient, a male, aged 78 years, was a pensioner from the army. Died three years subsequent to recovery, from old age and general decay. 3. Aneurism of the poplitcal artery, cured in twelve days. The patient, aged 37 years, was a trooper in the Royal Dragoons, and is still serving in that regiment.

Mr. T. HOLMES said few people could have long read the history of the surgical treatment of aneurism without seeing that many operations had been performed when the chances of success were desperate. Statistics were really useless, but they tended to show that the mortality was swelled by cases where there was no reasonable hope of success; often the operation had itself caused death by opening the sac, where the vessels were hopelessly diseased, or in anatomical conditions where recovery was impossible. If the cases had been duly selected, operations would have shown better results. If it were true that many cases could be cured by rest and diet, no doubt the statistics would be modified, and no doubt this was true of the subclavian and descending aorta. He had tried the plan and had been disappointed, having to deal with broken-down individuals, but Mr. Tufnell had now fourteen cases of external and internal aneurism so cured, and Luke's case had long been

before the world. He thought people should always study the behaviour of an aneurism under rest, for they often grew owing to exercise, and rest would tend to cure these. This was especially true of aneurisms near the heart. He was horrified at the rashness of sending down a pad on all the organs lying in front of the aorta till rest had been tried.

Mr. CALLENDER thought this plan compared favourably as regards results with either cutting or pressure. It was very definite, and necessitated selection and careful carrying out. He had tried it in one case, under the care of Dr. Andrews, in a woman aged 42. She was placed in position very carefully, and her food was regulated. She complained only of thirst. At the end of two months she was much better, the sac was thicker, and the pain was gone, when she insisted on going out. He thought the plan must be carried out in its integrity.

Dr. ANDREWS found it impossible to carry the cure out to the end, owing to the self-will of the patients and the impossibility of getting them to bear the want of food. He now had a case where the condition was greatly improved, but the patient was suddenly made to start, since which he had not been so well. He had seen an aneurism in an old gentleman cured by the method.

Mr. DURHAM thought Mr. Tufnell exceptionally fortunate. Had he not seen other cases where the plan failed? There was a certain number of all maladies which could be cured by rest, but a certain number of patients who could not or would not rest. A large number will be restless and call for relief, and insist on something being done. In one of his pressure cases low diet and rest had been kept up for a month before pressure was tried, and he attributed the subsequent fatal result to the patient being thereby reduced in bodily strength. He thought Mr. Holmes too severe on the subject of pressure. He had treated two thus, and one of the patients was now quite well and at work as a plasterer. In the other there was no compression of the duodenum or pancreas; but in another instance at Guy's there was, the pressure being too low down. It should be made as high up as possible.

Mr. HOLMES said he quite agreed with Mr. Durham that, if rest and dieting did not succeed, he would certainly try compression.

Mr. GANT asked under what conditions Mr. Tufnell would recommend the laying aside of rest for pressure. Recently he had had two good cases of popliteal aneurism cured by pressure.

Mr. SAVORY said that the series of cases recorded that evening seemed to show what could be done by rest. The great advantage of the plan seemed to him that it did not interfere with operation by ligature, which compression sometimes did. If one had a case of popliteal aneurism to deal with, he would place the patient at absolute rest, and make a careful examination day by day. If all went well, well; but if there was any increase, the question would arise, how long should he wait? No doubt surgeons operated in desperate cases, but there were also cases where they were bound to operate at once. There were aneurisms and aneurisms. The size, the shape, the relations, the thickness of the walls, all bore on the question of treatment. We were not yet in a position to determine all things satisfactorily, but we should try.

Dr. SIBSON said we might help the patient to rest by morphia subcutaneously. Rest and restriction of food as to bulk, to lower the force and fulness of the pulse, were what was required; but to diminish the quantity of food too much was to lessen the chance of consolidation.

Mr. BARWELL stated that Mr. Savory's opinion as to the compression being an obstacle to the use of the ligature was not held in Dublin. What was the origin of the renal disease in this case?

Mr. J. TUFNELL, in reply, said that he could not assign any definite cause for the renal disease. The diet was only restricted in quantity, not in quality. His cases were not selected, and his recoveries amounted to 90 per cent. He had had cases of men becoming discontented, and going out. Good compression did not, he thought, interfere with subsequent operation. The whole thing must be systematically done.

THE BISHOP OF WINCHESTER opened, on Saturday last, the chapel in connexion with the National Hospital for Consumption, at Ventnor, Isle of Wight. Amongst those present at the ceremony were the Right Hon. Sir Laurence Peel, A. Baillie Cochrane, Esq., M.P., Colonel Pratt, C.B., Colonel Hemell, etc. The building is capable of accommodating 200 persons.

OBITUARY.

WILLIAM AUGUSTUS HILLMAN, F.R.C.S.

Mr. HILLMAN, whose death occurred on the 11th inst., at 2, Argyle-street, Regent-street, was the elder son of the late William Hillman, a retired Surgeon of the Royal Navy. After receiving a sound general education at the school of what was then termed "The London University," and under private tutors, he matriculated as a medical student at University College in 1836, and became a Member of the College of Surgeons in 1841, very shortly after which (in the same year) he had the honour, after competitive examination, of being elected to a studentship in human and comparative anatomy of that College. He highly valued that position, and those who remember him there well know with what zeal and singleness of purpose he worked at the duties which devolved upon him; indeed, he held the appointment for three months longer than the stipulated period, being engaged with Mr. Stanley and Mr. (now Sir James) Paget in making the new catalogue of the pathological department of the museum, and at the termination of that time a very flattering report was sent up to the Council by the Museum Committee as to the way in which he had fulfilled the duties of the appointment. In April, 1845, he became a fellow (by examination) of his college, and in the December of that year he was elected Surgeon to the Farringdon General Dispensary, which office he resigned in consequence of being elected Assistant-Surgeon to the Westminster Hospital, in the medical school attached to which he became Lecturer on Physiology and General Anatomy, and continued the course for ten years. In 1869 he was elected without opposition one of the surgeons of the Westminster Hospital. He thus obtained one of the great objects of his ambition, and the fulfilment of one of his most cherished wishes. Unfortunately he was compelled by the state of his health to resign his appointment at the commencement of 1871, when he received both from the House Committee and from the General Board of the Hospital most gratifying expressions of regret at his forced retirement from his official duties. He had, in fact, long been suffering from some amount of dilatation of the heart; his health having been gradually undermined by the fatigue consequent upon his professional duties combined with that from long and unwearied devotion to his sick and suffering father. Under this constant strain his health broke down; his heart affection became more troublesome, and permanent congestion of the bases of the lungs supervened, so that for four years before his death he was never once able to lie down in bed or on a couch. Anasarca also came on, and though this was prevented from accumulating in consequence of eczematous ulcerations of the lower extremities, from which a constant discharge took place, the pain from these surfaces added at times greatly to his sufferings. During these years he was constantly attended by his friend Dr. Hare. Mr. Hillman was deeply attached to the surgical department of his profession and to the college of which he was a fellow. As an operator he was always ready for any emergency, but he was ever careful not to interfere with the knife unless such a procedure was clearly necessary. Above all, he was careful in the after-treatment of his cases, and always spoke in the strongest manner against any meddlesome interference with parts recently operated upon, which he constantly asserted to be the cause of fatal results in many cases which might otherwise do well.

Mr. Hillman died at the age of fifty-four, and was interred on Tuesday last in Highgate Cemetery. The chief characteristics of Mr. Hillman's mind were unflinching industry and perseverance. No man could have been more persevering and painstaking than himself. He was unquestionably a good surgeon, although, perhaps, not to be placed in the highest class of surgeons. He laboured at diagnosis, at demonstrations, and in surgical procedure. His name is not associated with any special improvements in surgery, but he published in 1846 the "Study of Physic and Surgery."

THE next meeting of the Society of Medical Officers of Health will be held on Saturday, December 20, at the Scottish Corporation Hall, Crane-court, Fleet-street, when J. Rawlings, Esq., of Hartlepool, Medical Officer of Health for Easington Rural Sanitary District, will read a paper on "The Sanitary Arrangements in the Durham Colliery District, and their Effects upon the Morality of the Population."

MEDICAL NEWS.

UNIVERSITY INTELLIGENCE.—UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent B.S. examination for honours :—

First Class.—Colgate, Henry, (Gold Medal), University College.
Second Class.—Skerritt, Edward Markham, B.A., University College; Lucas, Richard Clement, Guy's Hospital.
Third Class.—Barlow, Thomas, B.Sc., University College; Rayne, Charles Alfred, University College.

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.—At the Michaelmas Term examination for the degree of Bachelor of Medicine, held on Thursday and Friday, December 4 and 5, the following candidates were successful :—

Barton, Samuel.		McBride, Robert.
Bluett, George.	Equal.	Moore, Henry Ogle.
Gwynne, Charles.		Hannan, Francis J.
McCarthy, Charles.		

The examination for the degrees of Master and Bachelor in Surgery took place on Monday and Tuesday, December 8 and 9, when the following passed :—

Stack, Theodore, scholar of Trinity College.	Barton, Samuel.
	Drapes, John B.

The names are arranged in the order of merit.

An examination for the diploma in State Medicine was held on Wednesday, Thursday, and Friday, December 9, 10, and 11, when Dr. Thomas W. Grimshaw obtained the diploma on very distinguished answering.

At the Winter Commencements, held in the Examination Hall, on Wednesday, December 17, the following degrees in Medicine and Surgery were conferred by the Right Hon. Sir Joseph Napier, Bart., Vice-Chancellor of the University :—

Baccalaurei in Medicinâ.

Barton, Samuel J.	Gwynne, Carolus Nelson.
Bluett, Georgius.	Hannan, Franciscus Johannes.
Greene, Johannes Josephus.	M'Bride, Robertus.

Magistri in Chirurgiâ.

Barton, Samuel J.	Drapes, Johannes Benward.

Doctores in Medicinâ.

Boileau, Johannes Petrus Hamilton.	Malony, Patricius Johannes.
Fitzgerald, Carolus Edvardus.	Smith, Gilbart.
Finny, Johannes Magee.	Wade, Arturus Law.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows of the College on the 13th inst., viz. :—

Cameron, John, M.D. Glasg., 17, Rodney-street, Liverpool.
Turnbull, James Muter, M.D. Edin., 86, Rodney-street, Liverpool.

The following gentlemen were admitted Licentiates on the same day, viz. :—

Appleyard, John, 38, Harrington-street, N.W.
Bennett, William Henry, 33, Sloane-street, S.W.
Birch, Robert, King's College Hospital, W.C.
Colgate, Henry, 41, Albert-street, N.W.
Davies, Henry Naunton, Cymer, Pontypridd.
Ellis, Herbert Mackay, Chudleigh, Devonshire.
Hale, Charles Douglas Bowdich, 48, Westbourne-park-road, W.
Johnson, John James, Newcastle-on-Tyne.
Nicholson, Arthur, King's College Hospital, W.C.
Paul, Frank Thomas, Guy's Hospital, S.E.
Pilkington, William Binns, Crawshawbooth, Rawtenstall, Manchester.
Skerritt, Edward Markham, University Hospital, W.C.
Stericker, William, Victoria Park Hospital, E.
Syme, William Holland, 241, Kennington-road, S.E.
Thomas, George Tucker, 8, Ampton-place, W.C.
Wilkins, James Sutherland, Guy's Hospital, S.E.

The following candidate having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College :—

Fry, John Farrant, Guy's Hospital, S.E.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College held on Tuesday, Wednesday, and Thursday, December 9, 10, and 11, the following candidates obtained the licence to practise Medicine :—

Allen, Richard Maurice.	Redmond, John Joseph.
Finegan, John Stephen Francis.	Roberts, Arthur Milsom.
Fitzgerald, Joseph.	Ross, James.
Grier, Henry.	Shanahan, John Francis.
O'Farrell, Henry.	Sparrow, William Christopher.
Palmer, John Mansergh.	Turner, Herod.
Panter, James Robert.	Walker, Anster Fitzgerald.

The diploma in Midwifery was granted to—

Allen, Richard Maurice.	Ross, James.
Finegan, John Stephen Francis.	Shipsey, Edward Thomas.
Grier, Henry.	Sparrow, William Christopher.
Palmer, Joseph Mansergh.	

ROYAL COLLEGE OF SURGEONS.—The following Members of the College having undergone the necessary examinations for the Fellowship, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a meeting of the Council on the 12th inst., were admitted Fellows of the College, viz. :—

Franklin, George Cooper, L.R.C.P. Lond., City of London Hospital for Diseases of the Chest, Victoria-park, diploma of Membership dated November 15, 1870, student of St. Thomas's Hospital.
Penhall, John Thomas, L.S.A., Surgeon to the East Sussex Infirmary, St Leonards-on-Sea, April 23, 1855, of St. Thomas's Hospital.
Saunders, Henry William, M.B. Lond., Royal Free Hospital, April 20, 1869, of St. Thomas's Hospital.
Thomas, Andrew Appleby, L.R.C.P. Lond., her Majesty's Indian Army, July 21, 1869, of Guy's Hospital.
Woodman, Samuel, L.R.C.P. and L.S.A. Lond., Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, Ramsgate, April 22, 1863, of St. Mary's Hospital.

Five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months. The next half-yearly examination for the Fellowship will take place in May.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

MURRELL, C. F. F., M.B., M.R.C.S. Eng., L.S.A.—House-Surgeon to the Hospital, Great Yarmouth.

NETHERCLIFT, W. H., M.R.C.S., L.S.A.—Resident Medical Officer to the New Chelsea Workhouse Infirmary.

NAVAL APPOINTMENTS.

ADMIRALTY.—Dr. W. J. Rankin, Surgeon, to the *Malabar*; and John Allen, Surgeon (additional), to the *Aboukir*.

BIRTHS.

ARGLES.—On December 8, at Hermon Lodge, Wanstead, Essex, the wife of Frank Argles, M.R.C.P., M.R.C.S., of a daughter.

BLAKER.—On December 7, at The Grange, Robertsbridge, Sussex, the wife of Walter C. Blaker, M.R.C.S., of a daughter.

DONAHOO.—On December 7, at 129, Blackfriars-road, the wife of T. M. Donahoo, M.R.C.S. Eng., L.S.A., of a son.

GIRAUD.—On November 23, at Poona, the wife of Surgeon-Major Byng Thomas Giraud, M.D., of a son.

HARLEY.—On December 14, at 78, Upper Berkeley-street, Portman-square, W., the wife of John Harley, M.D., F.R.C.P., of a daughter.

WADE.—On November 21, at Sheffield, the wife of Nugent Wade, Surgeon Army Medical Department (late 75th Highlanders), of a daughter.

WATERS.—On December 11, at 41, Bloomsbury-square, W.C., the wife of John Waters, M.R.C.S. Eng., L.S.A., of a son.

MARRIAGES.

ATTHILL—PECK.—On December 10, at St. Faith's, Stoke Newington, Robert Chapman Atthill, L.R.C.P.E., L.S.A., of St. Osyth, Essex, to Sophia Jane, only daughter of Edward Peck, of Ipswich.

DUDDEN—SPENCER.—On December 10, at the parish church, Chippenham, Frederick Homes, second son of the late W. P. Dudden, Esq., of London, to Caroline Georgina, second daughter of Francis Spencer, Esq., F.R.C.S., of Chippenham, Wilts.

HOWLETT—O'DONNELL.—On October 16, at St. John's, Fauresmith, Orange Free State, South Africa, Sidney, second surviving son of the late Henry Howlett, M.R.C.S., of London, to Marianne Agatha, youngest daughter of the late Hugh O'Donnell, Esq.

JOHNSON—RAINES.—On December 16, at St. John's Church, Hull, C. Hargitt Johnson, M.R.C.S., 12, Albion-street, to Isabel, youngest daughter of the late Henry Raines, Esq., all of Hull.

MANSON—MCSWINEY.—On December 6, at Holy Trinity Church, Chesterfield, David Manson, M.A., M.D., of Chesterfield, son of Alexander Manson, Esq., of Kilblean, Aberdeenshire, to Mary Louisa, elder daughter of James Joseph McSwiney, Esq., of Gloucester-road, Regent's-park, London.

PATON—ALEXANDER.—On December 11, at 25, Elmbank-place, Glasgow, John Wilson Paton, M.D., Rock Ferry, Cheshire, son of Robert Paton, Esq., Ayr, to Janet Ann, daughter of John Alexander, Esq.

PURNELL—GELDARD.—On December 13, at Rathmell Church, Yorkshire, Edward Kelly Purnell, son of the late W. A. Purnell, Physician-General Bombay Army, and grandson of the late Lieutenant-Colonel Edward Kelly, formerly of the 1st Life Guards, to Elizabeth, eldest daughter of the late Christopher John Geldard, Esq., of Cappleside, in the county of York.

RICHARDSON—ADAMS.—On December 9, at St. Ann's Church, Dublin, Edward, eldest son of the late John Richardson, Esq., of Poplar Vale, County Monaghan, to Annie Charlotte, youngest daughter of Robert Adams, M.D., Surgeon to the Queen, 22, Stephen's-green North, Dublin.

TALBOT—HAYWARD.—On December 11, at Folkestone, Gilbert, eldest surviving son of the Rev. J. H. Talbot, rector of Newton Blossomville, Bucks, to Annie Ruth, eldest daughter of the late Henry Hayward, F.R.C.S., of Aylesbury, Bucks.

VERNON—WEBB.—On December 10, at St. Stephen's, Dulwich, Bowater John Vernon, F.R.C.S. Eng., L.R.C.P., of 44A, Wimpole-street, Cavendish-square, W., to Alice Marian, youngest daughter of the late Charles Webb, Esq., of High Grounds, Hertfordshire.

WARDROPER—HOLWAY.—On December 4, at St. Bride's Church, Liverpool, Walter Wardroper, third son of William Wardroper, M.R.C.S. Eng., F.S.A., to Emily, third daughter of William John Holway, Esq., of Taunton, Somerset.

DEATHS.

ANDERSON, MARY, widow of the late Dr. James Anderson, Inspector-General of Hospitals and Fleets, at 14, Elgin-road, Paddington, on December 11, aged 85.

BASAN, HORACE, L.R.C.P. Edin., L.F.P.S. Glasg., L.S.A., L.M., at 77, Welbeck-street, Cavendish-square, on December 9, aged 40.

BLACKETT, AGNES, wife of Edward Ralph Blackett, M.D., B.A., L.R.C.S.I., L.S.A., at Wangford, Suffolk, on December 11, aged 39.

BLACKMORE, SAMUEL, M.D., M.R.C.P. Lond., M.R.C.S. Eng., L.S.A., at his residence, 74, Pulteney-street, Bath, on December 14, aged 66.

BURT, GEORGE, F.R.C.S. Eng., formerly of Ely-place, at Wood-green, on December 14, in his 86th year.

ELAM, OLIVE MARGARET, infant daughter of Charles Elam, M.D., of 75, Harley-street, Cavendish-square, W., on December 8.

HILLMAN, WILLIAM AUGUSTUS, F.R.C.S. Eng., late Surgeon to the Westminster Hospital, at Argyle-street, Regent-street, W., on December 11, aged 54.

SKAIFE, JOHN, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., late of Northampton-square, London, second son of the late R. T. Skaife, surgeon, Easingwold, at Easingwold, Yorkshire, on December 12, aged 40.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be M.R.C.S. of Great Britain or Ireland. Applications, with testimonials, to the Chairman of the Medical Committee, Temple-row, Birmingham, on or before December 20.

BRISTOL ROYAL INFIRMARY.—Assistant House-Surgeon. Candidates must be F. or M.R.C.S., or M.S., and also possess medical qualifications.

CARLISLE DISPENSARY.—Assistant House-Surgeon. Applications, with testimonials, to J. H. W. Davidson, Esq., Honorary Secretary, 8, Devonshire-street, Carlisle.

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Candidates must be qualified and registered. Applications, with testimonials, to the Secretary.

CITY OF LONDON LUNATIC ASYLUM, STONE, DARTFORD, KENT.—Assistant Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Committee of Visitors, under cover to Henry F. Youle, Clerk to the Committee, Guildhall, London, on or before January 15, 1874.

COTON-HILL INSTITUTION FOR THE INSANE.—Assistant Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Dr. Hewson, Coton-hill, Stafford.

GENERAL HOSPITAL, NOTTINGHAM.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before March 10, 1874.

GERMAN HOSPITAL, DALSTON.—Honorary Medical Officer to the Eastern Dispensary. Candidates must be natives of Germany and be duly qualified. Applications, with testimonials, to Dr. Walbaum, Hon. Secretary, on or before December 29.

GODSTONE UNION.—Medical Officer for the Southern District. Candidates must be duly qualified and registered. Applications, with testimonials, to E. Alston, Clerk to the Guardians, East Grinstead, Sussex, on or before December 23.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Honorary Secretary, on or before January 15, 1874.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

MANCHESTER ROYAL EYE HOSPITAL.—Three Honorary Assistant-Surgeons. Applications, with testimonials, to P. Goldschmidt, Esq., 100, Albert-square, Manchester.

QUEEN ADELAIDE'S DISPENSARY, POLLARD-ROW, BETHNAL-GREEN-ROAD.—House-Surgeon. Applications, with testimonials, to the Rev. Thomas Peckston, 260, Cambridge-road, E., on or before January 2, 1874.

RADCLIFFE INFIRMARY, OXFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 10, 1874.

ROYAL LONDON OPHTHALMIC HOSPITAL.—Assistant House-Surgeon. Candidates must possess a knowledge of diseases of the eye. Applications, with testimonials, to the Secretary, on or before January 1, 1874.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before January 12, 1874.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before December 29.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to Dr. J. C. Hall, Hon. Sec., on or before December 24.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before January 1, 1874.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Applications, with testimonials, to the Honorary Secretary, Exe Villa, Tiverton, Devon.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Each candidate must attend (with his testimonials) the House Committee on February 10, 1874.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1861.

RESIGNATION.

Sudbury Union.—Mr. E. Andrews has resigned the Gestingthorpe District; area 2609; population 769; salary £10 10s. per annum.

APPOINTMENTS.

Carmarthen Union.—John A. J. Timmins, M.D., M.C., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Llangenderne Upper District.

Chippenham Union.—Henry M. Jay, M.R.C.S. Eng., L.S.A. Lond., M.R.C.P. Edin., F.R.C.S. Edin., to the Pewsham District and the Workhouse.

Holsworthy Union.—Thos. L. Ash, M.R.C.S. Eng., L.S.A., L.R.C.P. Edin., to the Fourth District. Edward T. Pearce, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Workhouse and the Third District.

Huddersfield Union.—Wm. Pinck, B.M. and M.C. Glasg., L.R.C.S. Edin., to the Fulstone District.

Keynsham Union.—John Moir, L.R.C.P. Edin., L.R.C.S. Edin., to the Keynsham District.

Pocklington Union.—Robt. E. Deane, L.R.C.P. Edin., L.S.A. Lond., to the Second District and the Workhouse. Frederick Wright, L.S.A., to the Bishop Wilton District.

Wycombe Union.—Wm. H. Hayden, M.R.C.S. Eng., L.S.A., to the Wooburn District.

INCREASED FEES.—At the last meeting of the Council of the College of Surgeons, Mr. Spencer Wells gave notice of a motion for discussion at the next meeting for the appointment of a committee to prepare a scale of fees for visits, consultations, operations, journeys, etc., for the guidance of the Fellows and Members of the College.

SCARLET FEVER is very prevalent at Lofthouse, near Wakefield, Carlton, and the neighbourhood.

A FRESH outbreak of typhoid fever is reported from Penwortham, near Preston.

FIVE out of ten cases of cholera in the 17th Foot, at Lucknow, have proved fatal.

MR. W. H. NETHERCLIFT has been appointed Medical Officer of Chelsea Workhouse Infirmary, at a salary of £250 a year.

THE Guardians of St. George's-in-the-East and of Mile-end Old Town have ordered prosecutions in cases of several persons in their districts, who, after notices had been served upon them by the vaccination officer, refused to have their children vaccinated.

WE are sorry to notice that there have been other deaths referable to the outbreak of typhoid fever at Cambridge. Mr. F. V. Simpkinson, of Caius College, died on the 15th instant, at North Creake, Devon, from typhoid fever; and Mr. A. D. Winslow died at Caius College, on December 8, of the same fever. Mr. Winslow is, we believe, a relative of Dr. Forbes Winslow.

THE third central conference of chairmen and vice-chairmen of boards of guardians from various counties in England and Wales was held on Tuesday at the Social Science Association, Adam-street, Adelphi, to discuss subjects connected with the administration of relief generally, and the public health in connexion therewith. Sir Baldwin Leighton, Bart., read a paper "On the Duties of Guardians in relation to the Public Health Act." In the discussion which followed, the difficulty of working the recent Act of Parliament was dwelt upon. Amongst the other subjects entered for discussion was "Contagious Ophthalmia, as Influenced by the Arrangements of Workhouse and Pauper Schools," by Mr. Brudenell Carter, Ophthalmic Surgeon to St. George's Hospital. An abstract of this paper will be found in another column.

NOTES, QUERIES, AND REPLIES.

"He that questioneth much shall learn much."—*Bacon.*

Iskender.—Pray let us see it.

Dr. David W. Cheever, Boston, U.S.A.—Enclosure received.

Deus Sap., Soho-square.—Mr. S. S. Savory has succeeded Mr. Hilton as a member of the Dental Board.

Juvenis, Guernsey.—As far as we can at present perceive, our correspondent acted with perfect propriety; and unless there be some special local Act compelling a medical practitioner to register a death *under any circumstances*, we consider the conduct of our correspondent was highly praiseworthy.

T. H., St. Bartholomew's.—The next primary and pass examinations for the diploma of Member of the College of Surgeons will take place on Saturday, the 10th, and Friday, the 16th, of January respectively. You can obtain the necessary blank forms on application to the Secretary.

Cuvier, Belgravia.—Mr. Kitchen Parker, F.R.S., who will deliver the next course of lectures on Comparative Anatomy at the Royal College of Surgeons in the temporary absence of Professor Flower, was recently admitted a Member of the College.

Effects of the Fog.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As people send accounts to the papers of strange matters simply to record them, I give to you a bit of curious experience. Here we have had—like the Londoners—three days of dense fog with frost. On one of these days I walked out with a friend, and had repeated small attacks of dyspnœa, each of which ended in the expectoration of ordinary mucus, mixed with a patch of black matter. The last fit occurred just as I reached home, and I took the opportunity of examining the stuff under the microscope. It consisted of mucus, coloured with amorphous matter of a deep brown colour—nothing like a granule being visible with a good half-inch object-glass—and of a quantity of blood-globules. The phenomenon ceased after I had returned to the house. The matter is only interesting in connexion with the illness from which certain cattle and (I understand) some individuals have suffered during a corresponding fog and frost in London.

Clifton, Bristol, December 15. I am, &c., Medicus.

A Pupil.—You are too late; the examination in Arts took place on Tuesday. The next recognised one will be that of the Apothecaries.

Argus, Norwich.—The person named is *not* a Fellow of the College of Surgeons. The title "Fellow-elect" is unknown.

L.D.S., R.C.S., and F.R.C.S., Great Yarmouth.—The person named is not a Licentiate in Dental Surgery of the College of Surgeons, neither can the name of the person giving him a testimouial be found in the list of the *Fellows* of that institution.

Odontologist and J. M.—Had the writers in the *British Journal of Dental Science* applied, as we have, to the Secretary of the College of Surgeons, they would have learnt that the diploma in dental surgery is not likely to be altered until the Conjoint Scheme has been adopted, when it is stated all the diplomas of the College will undergo a great alteration.

Political Doctors.—It is no discredit to our profession that during unsettled times of political parties, and when the fate of a Cabinet is uncertain, some of the most eminent and trusted physicians should be employed to sound the inclinations of politicians and to carry messages of conciliation between rivals. In the days of the Prince Regent, who trusted his physicians as a luxurious hypochondriac is wont to do, the Court physicians were pretty actively employed in political work. Sir Henry Halford was constantly employed in the vexatious and (as it now seems) tyrannical treatment of the Princess Charlotte, with reference to her governesses, household, and lovers. Baillie, Clive, and Keate sent in a "rouud robin" as to the necessity of change of air. How odd it seems in these days that the journey of a princess from London to Weymouth for the sake of health should be made a matter of State importance. The "round robin" in question got into the *Morning Chronicle*, and Dr. Baillie was employed to find out who sent it to the editor. The autobiography of Miss Knight tells all the histories of the intrigues of that day.

King's College Hospital.

The medical students of King's College gave a dramatic performance on Wednesday, the 10th inst., in aid of the Hospital Funds. In spite of the dense fog, the Bijou Theatre at Westbourne-grove was well filled, and we have reason to know the entertainment will result in a handsome offering to the Hospital funds. The pieces selected were "A Wilful Ward," "An Old Score," and "Briganzio the Brigand." They were admirably played by Messrs. Lavies, Willau, Bird, Sibbald, Griffiths, and others. The prologue, from the pen of a well-known member of our profession, was well spoken by Mr. Willans. It was full of fun and wit, as the following extract shows:—

"Prospectus is before me," he commences,
"Euclosed, a 'family' guinea towards expenses.
I like your notice,—largely advertise it;
I'll take the liberty to *criticise* it.

"You've acted wisely to seek, first of all,
The patronage of your good Principal.
(Printer, a *wag*, however,—see his spelling!—
He thought, no doubt, it would be far more telling
To treat our Cannon to an extra letter,
And make the entertainment 'go off' better.)

"Committee *next* in order—right again—
With mighty Nobles following in their train
(I hope you'll not appeal to *them* in vain);
Then in the list two Baronets we see,
Aud after them a talented M.P.

"Next come 'The Staff,'' adorned by Ladies fair;
Bells of *both* sexes we perceive are there.

"(Printer once more his waggery displays,
For after all the *B*'s he puts the 'Hayes,')
No matter, *such* a Staff must needs be good,
Composed, as 'tis, in part, of worthiest *Wood*.

"If more attraction 's needed, with 'a claw'
Cartwright appears, and *he* is sure to 'draw.'
And Playfair, whose renown doth daily grow,—
The Playfairs are *all* 'men of Letters' now!
One will, they say, a new 'crest' shortly boast,—
Lion, with upturned gamb (upon a Post),
A bag of guineas coming down to meet it,—
Motto, '*Consequitur quodcumque petit.*'

"Invidious 'twere, when *each* distinction claims,
To run the gauntlet of illustrious names.
But *this* I'll say—for 'tis my firm conviction
And, what is more, I *challenge* contradiction—
Your 'Staff' 'gainst any *other* may be matched,
Held by a Sheppard, newly (Colney) hatched.

"The pieces you have chosen are *first-rate*.
I only hope their *names* will not create
A fear you *men* may have imbibed a drop o' the
Puerile stream that's known as Homœopathy.

"For, *will full Wards* by *a* '*wilful Ward*' be improved?
An '*ancient debt*' by '*an old score*' removed?
And lastly, folks will ask, 'Can it be fitting
'To *heal wounds* by burlesques that are *side-splitting*?'

"Let them attack,—you must return their banter;
Pay in your coin—beat them in a canter
Similia similibus curantur."

Kahn's Museum.—Thanks to the Society for the Suppression of Vice, this notorious exhibition is closed. Some of the most disgusting preparations are still in possession of the police at Marlborough-street, and will be effectually destroyed.

Thomas Guy.—Yes; Vice-Admiral Sir Astley Cooper Key, C.B., who received his additional honours from her Majesty on Monday last, is a son of the late Mr. Charles Aston Key, of St. Helen's-place, Surgeon to Guy's Hospital, and formerly a member of the Council of the College of Surgeons.

J. M.—Consult the catalogue of Messrs. J. and A. Churchill. Perhaps you could not make a more interesting Christmas offering to your young country practitioner than the second edition of Dr. Fayrer's magnificent work on the Poisonous Snakes of India, interesting both to the naturalist and physiologist.

Dr. M.—The late Mr. William Augustus Hillman, F.R.C.S., was elected one of the students in human and comparative anatomy at the College of Surgeons in 1841. His colleagues holding a similar appointment were Professors Crozier (subsequently of the Queen's Indian Army), and Quekett (afterwards conservator of the Museum). Of the eighteen gentlemen who have held this appointment only eight survive, viz.:—Messrs. John Williams, F.R.C.S., E. C. Hulme, F.R.C.S., J. T. Arlidge, M.D., D. H. Monckton, M.D., F.R.C.S., John Falconer, H. V. Carter, J. L. Lizars, and H. R. Silvester. Mr. Hillman received his professional education at University College.

*** We republish from the pages of the *Edinburgh Medical Journal* the following speech by Professor Maclagan, the chairmau at the centenary of the Edinburgh Æsculapian Club. The speech is in itself delightful, and is a good example of the genial humour of the esteemed Professor; moreover it shows that the social qualities which so highly characterised "Auld Reekie" are not lost in the present generation. May the Æsculapian live and flourish another hundred years.

Æsculapians,—The toast that I have now to propose to you is to be regarded as the toast of the evening. It is to the health of our guests who have done us the honour to come here to celebrate the hundredth anniversary of the Æsculapian. We are met here as social men to enjoy social intercourse. We have surrounded our table with those who may be regarded as the representative men of the Scottish metropolis, and from their presence we may infer that the community which they represent is not out of sympathy with the aims and objects of the Æsculapian. To enjoy social festivity, however, something more is required than merely that the host should be hospitable, and the guest willing to be entertained. There must always be some reserve, possibly stiffness, where they do not know each other thoroughly, and are not acquainted with each other's personal and domestic history. We know our guests—they may know us individually—but I suspect many of them do not know us in our corporate capacity, and I therefore may be permitted to give them some account of the Æsculapian. I am enabled to do this by having had access to two most interesting volumes of Minutes, which, under an interchange of very formal documents, are deposited in the library of the Royal College of Physicians of Edinburgh. The Minute bearing date April 2, 1773, without any preamble, states briefly, and in a business-like style, the origin of the Æsculapian:—

"The Æsculapian Club was conceived in a happy moment, and in due time brought forth. Drs. Duncan and Hamilton, Messrs. Hay, Bell, M'Lure, and Dewar assisted at the birth on the first Friday of April, 1773. They also stood godfathers at the christening. The various rites and ceremonies usual on these occasions, such as eating a good supper, etc., were concluded with a bumper recommendatory of the Club to the peculiar care and patronage of Apollo (this is intelligible, because Apollo was the father of Æsculapius), Bacchus (this is intelligible, because it shows that the Æsculapians did not intend to sit dry-lipped), and Venus."

This rather formidable-looking dedication is explained by the Minutes, which show that it means that they were to meet upon Friday, *Die Veneris*.

They seem at first to have contemplated doing something towards the promotion of medical science, for in 1777 they proposed to institute a gold medal for the best essay on some scientific subject. They appear, however, to have very soon discovered that they had quite enough to do in taking charge of the social concerns of the Æsculapian, for they abandoned their idea of the prize medal in 1778. There appears to have been some diversity of opinion upon this subject, for Dr. Duncan wanted to resign the office of secretary. He did not do so, however; and we learn from the subsequent Minutes that he continued to act as secretary until

December 1, 1827. It is probable, I think, that this abandonment of the plan of giving a medal for the promotion of science led to the formation, in 1782, of another society—the Harveian—which is now approaching its centenary, and which continues still to give from time to time a prize for an essay upon some experimental subject.

Along with this Minute we have the list of original members of the Society. They are as follows:—Mr. William Chalmer, Mr. Andrew Wood—and here it is interesting to note how Æsculapianism runs in families, for we have his grandson, in the person of my friend Dr. Andrew Wood, to-night discharging the duties of croupier at our festival—Dr. James Lind, Dr. James Hamilton. Dr. Hamilton is well known to us by his *sobriquet* of "Cocky" Hamilton, as he continued, up to a period within the recollection of many of us, to wear the *chapeau à trois cornes*, the Court-cut coat, knee-breeches, and silk stockings, with his chubby hands exposed to the cold in the sharpest weather. Mr. Thomas Hay, who, my Lord Provost, afterwards became City Chamberlain, Mr. Benjamin Bell—here we have another example of Æsculapianism running in the blood; for we not only have the pleasure of seeing his namesake and grandson among us to-night as a respected Æsculapian, but we have the pleasure of receiving among our guests his great-grandson in the person of my friend Dr. Joseph Bell,—Mr. Forrest Dewar, Mr. Hamilton M'Lure, Mr. Colin Lauder, Mr. John Balfour, who was, I rather think, a member of the old family of Balfours, of Pilrig, and if so, was at least a collateral ancestor of our guest, Dr. G. W. Balfour, the editor of the *Edinburgh Medical Journal*. Dr. Nathan Spens: his face is known to most of us from a very admirable portrait of him in his capacity of an archer, by Raeburu, in the Hall of the Queen's Body Guard, and which is known to many more by the admirable engraving of it. Mr. Alexander Wood: This gentleman is better known to all of us by his designation of "Long Sandy Wood." It is interesting to us to bear in mind that he is the great-great-grandfather of the sons of the Right Honourable and learned Lord Justice-General, who sits on my left hand. Mr. Alexander Hamilton: This gentleman was afterwards Professor of Midwifery in the University of Edinburgh, and was the father of my former teacher, the late Professor Hamilton. Dr. James Hay: He afterwards became Sir James Hay, of King's Meadows, and was the ancestor of the present baronets of that title. Dr. John Hope, who was Professor of Botany in the University of Edinburgh, and father of my late instructor, Dr. Thomas Charles Hope, Professor of Chemistry. Mr. Thomas Wood, who was a brother of "Long Sandy," and, lastly, Dr. Andrew Duncan. Dr. Duncan many of us are old enough to remember. He retained his vigour and energy up to a very late period of his life, continuing to ascend Arthur's Seat upon May morning until he was nearly, if not actually, an octogenarian, cultivating his garden out in St. Leonard's with the motto *Hinc sanitas* upon the door; and many of us remember him going about the streets of Edinburgh as an old man, with, what my colleague the Professor of Botany would call, his specific character of an umbrella with a hooked ivory handle. Such were the original members of the Æsculapian. The remarkable characteristic of the Minutes is the constant recording of bets made among the members. These were always either in magnums of punch or magnums of claret, and the magnum of claret was also the maximum, for no higher bet was permitted to be taken. They were always even bets; on no occasion do I find odds given, except when in one instance Dr. Monro bets two melons to one. It is clear that these bets were essentially an ingenious device by which the fluids necessary for the consumption of the party were provided by individuals. In fact, I find that in 1790 Drs. Hamilton and Wardrop, without the formality of a bet, confess the loss of a magnum each *pro bono publico*. Everything and anything seems to have been enough to become the subject of a wager. Occasionally they indulged in a good-humoured way in discussions on politics. Thus, in 1782, we find a bet taken as to the chances of Lord North being out before the end of the session. Later in that same year, a bet is taken that Mr. Fox is to be out in a year; and we find subsequently discussions with regard to a person who is called Mr. William Pitt, Dr. Duncan offering to give claret if he is Premier in five years, Mr. Wood offering the same if he is not, and Mr. Benjamin Bell offering to give it for the national good whether Pitt is in or out. We thus see that this great surgeon, so distinguished by his surgical writings, was equally versed in therapeutics and hygiene, and saw the national importance of the Æsculapians getting their due supplies of claret. Passing events occasionally engaged them. Thus we have—of course again a bet of punch or claret—a wager that Lord Howe will have an engagement with the allied forces before his return home. This was in October, 1782, when Lord Howe sailed for the relief of Gibraltar, landed men, ammunition, and provisions, and offered battle to the allied fleets, which they refused, esteeming discretion the better part of valour. Among passing events we have one of a rather touching character. Dr. Duncan bets that Miss Kitty Morrison shall be married in twelve months to a friend whose name he whispers into the ear of Dr. Rutherford, the grandfather of our present Æsculapian, Dr. Daniel Rutherford Haldane. I regret that I have not been able to find any record of what became of Miss Kitty Morrison, whether she became a wife and a happy mother of children, or whether she spent the remainder of her days in single blessedness. It has just occurred to me that it might be possible to get some interesting information upon this point by referring it to my honourable and learned friend Lord Ardmillan, who might possibly be able to make out whether Miss Kitty was a sister or other relative of Mary Morrison, who has been made immortal by Burns in one of his sweetest songs. Professional questions, which are with us now *vetitum nefas*, occasionally make their appearance. Thus in 1790 some claret is staked upon this issue, that Mr. David Stewart's child, when it recovered from hydrocephalus, did not get any mercury; and for the settlement of this question reference is made to the books of Mr. Alexander Wood; and in another Minute we find Mr. Thomas Hay betting that he will produce certain very disagreeable effects within two hours upon any individual, by administering to him a drachm of ipecacuanha infused for twenty-four hours in one ounce of vinegar. Philology is not neglected. Thus we have a discussion upon the word "Bartisan," but all the information that we have with regard to it is that Dr. Hay produced a learned Greek work bearing on the subject. Ethics are also discussed, Mr. Alexander Wood staking a magnum of punch upon the thesis that a man most attentive to his own interests is the most generous man. How this was settled I do not know; but probably by seeing that his own interests in the matter of liquor were duly attended to, he may have found himself to be most generous to his brother Æsculapians. Literature also makes its appearance, Mr. M'Lure referring to the votes of the company the question, if the poet Burns is "superlative in his degree." If Mr. M'Lure, who seems to have supported the negative in this question, were alive now, I think he would find himself in a minority. They do not hesitate even to deal with questions of law. Thus we find—of course again under the sanction of a wager of claret—the statement made, that a card, though holograph, is not strictly binding in law; and the settlement of this question is referred to the Dean of Faculty. One grave omission I observe in the Minutes with regard to this, which is, that the Dean of Faculty does not appear to have been asked to dinner on the occasion of his delivering his opinion on the matter. I hope, however, that my learned friend, the present Dean, will understand that we have no intention to endeavour to extract from him any opinion upon this intricate subject, otherwise than in the regular way of memorial by the hands of an agent. There is a variety of subjects of wager which I can classify in no other way except as miscellaneous, of which I give only one example. Mr. Lauder pays a pint of claret for having a bigger belly than Mr. Hay. This seems to have been a sort of fine inflicted upon him for being *totus teres atque rotundus*. They do not scruple even to discuss questions of theology, for I find—of course again as the subject of a bet—a discussion as to the question, whether or not the whole tendency of Mr. Ritchie's sermon to the volunteers, on January 1, 1796, is to support the doctrine of predestination, and this is referred to Dr. Moodie and other divines. The great subject of bets, however, in almost every Minute, is their matches at golf. This seems to have been the great athletic exercise of the Æsculapians, sometimes in twosome, sometimes in foursome matches; and we have records of not merely who lost or won, but occasionally of the number of strokes played in each match, four rounds of Leith links being in general the extent of their golf competitions. And in reference to this I have to note a curious feature in these old Æsculapians. They had from time to time what they call a Gymnastic Convention, when they met to compete for prizes in various athletic exercises, chiefly golf, bowls, and swimming. A number of them were members of the Royal Company of Archers, and were prize-winners there; and I am happy to think that the practice of drawing the long-bow in the field is not extinct among Æsculapians, for my brother Æsculapian, Dr. Dunsmure, now present, is at this moment the holder of the much-coveted prize of the silver arrow given by the city of Edinburgh. The records of these gymnastic feats consist in the medals appended to the three silver cups which are before me on the table. Many of these are very interesting, merely as recording the date upon which well-known individuals joined in these gymnastic competitions. Some of them are in English, many of them in Latin. I quote only one example of the latter. It bears this inscription, that *Gulielmus Cheyne, inter natandi studioso e conspectu quidem telluris pontum pectore pulsans, victor renavit*. This idea of a doctor swimming out of sight of land, like a sea-going steamer, appears to us rather a strong statement in these modern days; but what the medal does not tell, tradition explains, and we are told that on the occasion in question, when the party had met for their swimming competition, there was, *horresco referens*, a deeided "easterly haar"; that Dr. Cheyne was the only man who ventured into the water; that he soon lost sight both of land and of his companions, and, speedily returning, claimed and obtained the prize. They seem not to have been contented, however, merely with their gymnastic conventions and their social meetings, for once or twice they gave evening parties for the benefit of their wives and families. Thus, in 1791, we have it stated in the Minutes that there was to be a "Grand Corruscation" or oyster-party, and we have not only the fact recorded, but we have the names of the gentlemen and their partners who formed the assemblage. These are mere samples of what is contained in the Æsculapian Minutes, and I have confined my remarks to the earlier periods, not wishing to occupy your time by tracing them on to the period of our own existence.

I have looked back at the history of the Æsculapian from its beginning. May I be permitted to look forward? I am led to indulge in a little bit of fancy from seeing present among our guests the great-grandson of one of the original founders—Dr. Joseph Bell; and I am led to think of some little Bells in a house in the west end of the town, who I hope at this hour of the evening are sleeping the sleep of innocence in their respective cribs, but who probably a few hours ago were chiming out peals of merry infantile laughter in a certain nursery in Melville-street; and it seems to me possible that some one of these,—still very young

Porrigens teneras manus,
Dulce rideat ad patrem,
Semihiante labello—

may, in 1973, looking back to a long and honourable line of Æsculapian ancestors, be called upon to preside at the second centenary of the Æsculapians when the gravestone of your present chairman is moss-green and weather-beaten. The Æsculapian may perish—like all other human institutions, *absit omen*, it may decay; but though it perishes, its principles will remain, for they are immortal. Viewed apart from the social entertainments, which are merely accessories, the principles of the Æsculapian are neither more nor less than these: to promote in our own circle, and, so far as our example goes, beyond our circle, peace on earth, by cultivating goodwill between man and man. It may be said that, after all, our meeting is merely a piece of epicureanism, and that we are merely men engaged in an arduous profession, who like to meet together from time to time and enjoy our meat and wine and social chat, to exclude from our minds those carks and cares which are inseparable from every arduous profession. I do not mean to say that even upon this very low ground the Æsculapian is not defensible. Men who are engaged in any anxious profession, be they doctors or lawyers, or what not, are fairly entitled to refresh their minds from time to time by changing the currents of their thoughts, just as they are entitled, at their holiday season, to change the air that they breathe, and so refresh their bodies. But Æsculapianism means something better. If we do not know it from our own experience, we have it told us by the highest of all teachers, that "it must needs be that offences come;" and the object of Æsculapianism is not merely to prevent offences from growing, but by clearing the ground properly to prevent them from ever germinating; and if I wished to express truly the basis upon which Æsculapianism rests, I would be content to rest it upon this one short but pregnant sentence of the great apostle to the Hebrews, "Let brotherly love continue."

Æsculapians, these remarks, addressed to the company generally, have been only introductory to the toast, which I now more especially address to you, of "Our Guests." We drink to them collectively. We know them individually; and I ask you, on looking round at those who surround our table, whether it was a rash statement that I made in the outset of these remarks, that we had with us to-night the representative men of the Scottish metropolis. We have present among us divines whom we always gladly welcome to any of our social meetings; we have the brave defenders of our country; we have men learned in science belonging to this and other Universities; we have the majesty of the law represented in those potent, grave, and reverend seigniors, whom we are always so glad to meet in their social capacity, and whom we all earnestly eschew in the discharge of their official functions; we have art represented by the genial President of the Royal Scottish Academy; and we have literature with us, not merely

medical literature, in the person of the Editor of the *Edinburgh Medical Journal*, but general literature as represented by Dr. John Brown, or rather I should say by Rab among his Friends. We should be glad to hear one and all of these individuals in replying to this toast; but the timepiece behind me warns me that the hours are fast passing away, and that I have consumed an inordinate amount of their constituent minutes. I shall, therefore, connect this toast with the health of one who is well entitled to be the representative of the representatives. To you it is unnecessary that I should say anything with regard to the Lord Justice-General, for you all know him as well as I do. You have all marked his brilliant career at the bar, his important and useful work in Parliament, the benefit of which I, in common with all other Professors of Scottish Universities, am now enjoying. You have marked the dignity and ability with which he discharges his high official duties, and I ask you, therefore, to connect his name with this toast. Rise, then, Æsculapians, show that our hearts are warm and our lungs sound, by a hearty cheer to The Guests of the Æsculapian. *Nunc est bibendum.*

An Old Member, Epsom.—In February last Mr. Hancock delivered the Hunterian Oration, which is now given *biennially*; consequently there will be no Oration next February.

J. C., St. Bartholomew's.—The "singularly happy and striking likeness" of the late Mr. F. C. Skey, alluded to in the Reports of your hospital, forms one of the admirable series published by Mr. Stone, of the College of Surgeons.

Murphy Secundus.—There is an old proverb that a warm October predicts a cold February, and—

"If there's ice in November that will bear a duck,
There'll be nothing after but sludge and muck."

COMMUNICATIONS have been received from—

Dr. Sparks, London; Mr. Ingpen, London; Dr. McVail, London; Dr. Pitman, London; Juvenus; Mr. C. Heath, London; Mr. Leonard Rudd, London; The Rev. C. Hillman, London; Mr. H. W. Verdon, London; Mr. Brudenell Carter, London; Dr. Lowes, London; Mr. Barraclough, Catford-bridge; Dr. Peacock, London; Mr. J. Chatto, London; Dr. B. W. Richardson, London; Mr. William Rose, London; Mr. T. M. Stone, London; Dr. Balthazar Foster, Birmingham; Mr. J. Howell Thomas, Bristol.

BOOKS RECEIVED—

Balfour's Introductory Address in the Edinburgh Medical School—Pettigrew's Introductory Lecture to a Course of Physiology—Transactions of the American Otological Society—Deutscher Verein für Öffentliche Gesundheitspflege—Influence du Mode D'Installation Nosocomiale sur les Maladies Infectieuses et Contagieuses, par M. le Dr. Léon Colin.

PERIODICALS AND NEWSPAPERS RECEIVED—

Edinburgh Daily Review—Lancet—British Medical Journal—New York Druggist—Boston Journal of Chemistry—La Tribune Médicale—Le Bulletin Thérapeutique—La France Médical—Le Mouvement Médicale—Le Progrès Médicale—Gazette des Hôpitaux—Monthly Review of Dental Surgery—Pharmaceutical Journal—Gazette Hebdomadaire—Monthly Return of Births, Deaths, and Marriages registered in the Eight Principal Towns of Scotland—Quarterly Return of Marriages, Births, and Deaths registered in Ireland.

APPOINTMENTS FOR THE WEEK.

December 20. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

22. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Farquharson, "Cases of Infectious Tonsillitis." Dr. Pearson (communicated by Dr. Farquharson), "An Epidemic of Sore Throat with marked Constitutional Symptoms." Dr. Dowse, "On Cerebro-spinal Meningitis, with Clinical Records." Mr. Nelson Hardy, "A Specimen (living) of Persistent Papillary Membrane."

23. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

24. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

25. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Quekett Microscopical Club. No Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 13.

BIRTHS.

Births of Boys, 1047; Girls, 1011; Total, 2058.
Average of 10 corresponding years 1863-72, 2138·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	894	865	1759
Average of the ten years 1863-72	787·9	756·5	1544·4
Average corrected to increased population	...	...	1699
Deaths of people aged 80 and upwards	...	...	64

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	17	2	2	5	...	3	2	1
North... ...	751729	3	61	2	4	10	...	6	...	2
Central ...	334369	...	14	1	...	9	...	1	...	1
East	639111	1	27	10	1	8	3	9	...	3
South... ...	967692	...	14	7	1	10	...	6	...	2
Total	3254260	4	133	22	8	42	3	25	2	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·421 in.
Mean temperature	33·6°
Highest point of thermometer	49·9°
Lowest point of thermometer	22·1°
Mean dew-point temperature	31·1°
General direction of wind	S.W.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 13, 1873, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1873.*	Persons to an Acre. (1873.)	Births Registered during the week ending Dec. 13.	Deaths Registered during the week ending Dec. 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3356073	43·0	2058	1759	49·9	22·1	33·6	0·90	0·00	0·00
Portsmouth ...	118280	12·4	75	58	52·0	26·2	39·6	4·22	0·06	0·15
Norwich	81677	10·9	59	24	45·0	24·0	35·4	1·89	0·00	0·00
Bristol	189648	40·4	140	71	...	...	...	...	...	...
Wolverhampton ...	70084	20·7	61	39	45·7	20·8	34·0	1·11	0·01	0·03
Birmingham ...	355540	45·4	257	177	47·0	19·0	35·1	1·73	0·00	0·00
Leicester	102694	32·0	106	33	46·7	21·5	34·2	1·22	0·00	0·00
Nottingham ...	89557	44·9	56	37	46·5	19·4	34·4	1·33	0·00	0·00
Liverpool	505274	98·9	323	237	48·2	24·5	39·1	3·95	0·00	0·00
Manchester ...	354057	78·9	271	177	48·7	22·0	36·6	2·55	0·00	0·00
Salford	130468	25·2	103	83	48·5	21·7	37·0	2·78	0·01	0·03
Oldham	85141	20·4	56	42	46·0	...	...	...	0·01	0·03
Bradford	156609	23·8	94	71	47·6	28·6	39·7	4·28	0·00	0·00
Leeds	272619	12·6	257	173	48·0	26·0	39·3	4·06	0·02	0·05
Sheffield	254352	11·1	205	128	49·0	23·7	38·8	3·77	0·00	0·00
Hull	128125	35·9	106	54	...	...	...	...	...	...
Sunderland ...	102450	31·0	84	32	...	...	...	...	...	...
Newcastle-on-Tyne	133246	24·9	117	81	51·0	31·0	44·4	6·89	0·00	0·00
Edinburgh	208553	47·1	114	93	...	...	...	...	...	...
Glasgow	498462	98·5	348	257	49·3	32·2	42·2	5·67	0·01	0·03
Dublin	314666	31·3	156	177	49·5	23·0	38·6	3·66	0·00	0·00
Total of 21 Towns in United Kingd'm	7507575	34·5	5046	3803	52·0	19·0	37·6	3·11	0·01	0·03

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·42 in. The lowest was 30·38 in. at the beginning of the week and on Tuesday morning, and the highest 30·48 in. on Friday morning.

* The figures in this column for the English towns are the numbers enumerated in April, 1871, as finally revised at the Census Office, and raised to the middle of 1873 by the addition of two years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the revised number enumerated in April, 1871.

ORIGINAL COMMUNICATIONS.

ON THE BENEFICIAL INFLUENCE OF SEA VOYAGES IN SOME FORMS OF DISEASE.(a)

By THOMAS B. PEACOCK, M.D.,
Physician to St. Thomas's Hospital, etc.

(*Concluded from page* 689.)

The beneficial influence of a sea voyage in the treatment of disease may be ascribed to the peculiarities of the marine climate, to the constant movement of the ship and the free exposure to the air, and to the entire change of scene and habit.

There does not appear to be any very marked difference between the atmosphere at sea and on land, so far as the proportion of the chemical constituents—the oxygen, nitrogen, and carbonic acid—is concerned. The air is, however, very moist, and the vapour contains the constituents of sea-water, and the inhalation of these must affect the system. The chief peculiarities, however, of the marine atmosphere are the purity of the air and the equability of the temperature. In the ocean there must be an entire absence of all animal and vegetable emanations which can generate disease; and from the currents excited by any change of specific gravity resulting from increased warmth, evaporation, or other cause, the temperature of the water, and consequently of the air above it, is kept remarkably equable—so that there is but little difference between the temperature of the day and night and of the different seasons and regions. The heat of the day and of the warmer climates is lessened, and that of the night and colder regions raised. Indeed, if we except the narrower and smaller seas—such as the Mediterranean, and the limited belt of the Atlantic which intervenes between the north-east and south-east trades to which the term of "horse latitudes" is given, and in which there is a constant succession of calms and squalls, with heavy rain and great heat,—the heat at sea is never very great. I have myself noted a temperature of 76° Fahr. in the south-east trade, with a vertical sun, at midday. We all of us also know how remarkably our own climate, and that of north-western Europe generally, is mitigated by the currents flowing from the tropical seas. The effect of this remarkable equability of climate at sea is to enable an invalid to be in the open air for a larger portion of the twenty-four hours, without the risk of taking cold on the one hand, or of suffering from exposure to the sun on the other, than he would possibly be if on shore in the same latitude.

In the higher latitudes, however, and in the smaller seas, where greater extremes of temperature obtain, care must be exercised to prevent the invalid suffering either from the cold or too great heat, and the time of taking the voyages should be regulated so as to avoid the extremes. The Cape of Good Hope and Cape Horn, if possible, should be passed during the summer, when the weather is warmer and there is less likelihood of storms occurring. I have known patients who had been to Australia or New Zealand, and had greatly benefited by the outward voyage, suffer very much on their return round the Horn and lose all the benefit which they had received, and reach home in a worse state than when they left. So, also, the Mediterranean is much too hot during the summer for a health-voyage. On a recent trip we had a strong south-east wind, or sirocco, all the way from Gibraltar to beyond Malta, and the heat and dampness were far from pleasant, and could not but have been injurious to an invalid.

Another peculiarity which has been considered to conduce to the restorative effect of a sea voyage is the constant motion of the ship; and that this is influential is shown by the effect produced on the peristaltic action of the alimentary canal. Constipation is very generally experienced at sea; and this, too, entirely independently of the diet, and when there is an ample supply of fresh meat, vegetables, and fruit, and it is doubtless due in part to the motion of the vessel. The free exposure to the air, and the constant though imperceptible change, must also conduce to health; and it is, indeed, an important element in the beneficial influence produced by a sea voyage. Were it not for this, the mildness and dampness of the atmosphere would be very relaxing; whereas it is a matter of universal experience that a moderately bracing effect is produced, so that the appetite at sea is increased, and digestion and assimilation assisted.

Much, however, of the advantage derived from a sea voyage results from the rest and absence of excitement, the entire change of scene, and the regularity of all habits,—the times of rising, taking food, and retiring to rest. These are specially useful to persons suffering from general and local debility the result of overwork of body and mind, and which, indeed, often depends upon the artificial habits of modern society, and the neglect—wilful or unavoidable—of proper precautions for the preservation of health. It is also quite possible that the little inconveniences which almost necessarily attend, more or less, a sea voyage may not be without their advantages by increasing the contrast with the habits of home life. The exchange of our sombre and misty skies for a bright and clear atmosphere must also exercise a beneficial influence. The effect of the climatic conditions which I have named must be to excite the functional activity of the skin, to lessen the irritability of the bronchial mucous membrane and lungs, and to increase the appetite and promote healthy digestion and assimilation; while the moral influences tend to remove the weariness and gloomy forebodings which almost necessarily attend prolonged illness, and encourage a cheerful and hopeful state of mind,—all of which are eminently conducive to the restoration of health.

In considering the desirability of sending a patient to sea, there are various circumstances that must be taken into account. In the first place, the inclinations of the patient must be ascertained. It is useless to recommend a course of treatment which is distasteful to him, when there are other plans which offer equal—or nearly equal—advantages. Ability to bear the fatigue and privation which may have to be experienced must also be considered; and especially it must be ascertained whether the patient is a good sailor, and not likely to suffer severely from sea-sickness. I have already said that to most persons this is not of much moment. Few suffer for more than a few hours or a day or two, unless the weather is exceptionally bad. In a steam-vessel a voyage to the South takes the traveller into comparatively quiet latitudes in three or four days, and even in a good sailing-vessel similar progress is made in about a week or ten days—after which the vessel will run into 30° or 40° of south latitude without any trying weather; and then the invalid is generally sufficiently habituated to the motion of the vessel to bear some additional movement without suffering. Some persons, however, seem to be quite incapable of becoming acclimatised. We are all familiar with the case of our great admiral, who never went to sea, after being some time on shore, without being more or less sea-sick. I have been told by the captain of one of the mail-steamers between Hull and Gottenburg, that when his ship had been laid up for two or three months during winter, the first voyage always affected him more or less; and in crossing the Atlantic I sat at the same table with a stout, strong, and healthy-looking man, who told me that he had been in the regular practice of visiting Europe at least once every year, and sometimes twice, for fifteen years, yet he was seldom able to leave his cabin if the sea was at all rough, and, I think, never remained at table in the calmest weather till a meal was finished. For persons so susceptible as this, a sea voyage as the means of restoring health is clearly inapplicable.

It is essential, if a long sea voyage be decided upon, that it should be undertaken in a good and well-found ship, and it would be better that it should be a vessel not carrying emigrants or many passengers, and that the invalid should have a cabin to himself. It is impossible that much benefit can be derived from the voyage unless the traveller has a sufficient amount of good wholesome food, and sleeps in a roomy, well-ventilated cabin.

The time of commencing the voyage is also important. He should leave home at the end of August or early in September, so as to get out of the Channel before the equinoctial gales set in, and be able to pass the Cape of Good Hope in advanced spring or summer. Much, also, will depend upon his habits on shipboard. He should rise early, so as to enjoy the exquisite freshness of the morning. After being on deck for a time, he should have a bath, and then dress for breakfast. In the forenoon he will do well to devote some time to some regular pursuit. It is quite true that laborious study is almost impossible on shipboard, but by steady resolution much work can be got through, and the regular habit of devoting a

(a) Read before the Hunterian Society on Tuesday, November 13.

portion of the day in that way will lessen the tedium which otherwise is apt to be felt during a long sea voyage. Especially I would recommend the traveller to take an interest in the shipping matters—to note the course of the vessel, the daily run, and the peculiarities of the winds, etc. He will find charts and books on board relating to these matters, and the study of them will form a very pleasant occupation.

After lunch, if he take that meal, he will do well, especially in warm latitudes, to lie down and rest till shortly before dinner, after which, and for the remainder of the day, he can remain on deck. Nothing can exceed the delightfulness of the evenings at sea in the tropics, with the fresh air, the clear skies, and the brilliancy of the stars and moonlight; and there is not the danger of suffering from the evening air which is so common in warm climates on shore. The patient may remain on deck till his cabin is cool, and he can retire to bed with the prospect of refreshing sleep. I have often heard a sea voyage objected to as being too sedentary; but this is incorrect. In a large vessel an ample amount of exercise can be taken, and there is something in the motion of the ship which seems to promote the tendency to walk.

The clothing must also be considered: it must be sufficient to keep the patient warm, but not so heavy as to promote perspiration; and in all latitudes some slow conducting material—silk or woollen—should be worn next the skin; and the latter, in consequence of its absorbent properties, should be preferred in warm climates.

As to diet, the invalid should content himself with plain but nutritious food. He does not need much stimulant, and will do well to limit himself to a little bitter ale or some light French wine. I should also recommend him not to smoke; or, at least, to indulge very sparingly in that special temptation of sea life.

SNAKE-POISONING AND ITS TREATMENT.

By GEORGE B. HALFORD, M.D.,
Professor of Anatomy, Physiology, and Pathology in the University of Melbourne, etc., etc.

(*Continued from page* 577.)

Case 11.—James C., aged 33, a farmer, living on McCullum's Creek, nearly four miles from Talbot, was on November 27, 1869, bitten twice on the left hand by a very savage large brown snake (diemenia superciliaris), five feet long, whilst endeavouring to kill it. Blood issued freely from the four punctures. The man began to suck the parts, and his wife within a few minutes tied a ligature firmly round the wrist. This was about nine o'clock; and having drank about two wineglassfuls of brandy, he started to walk to Dr. Dowling's house. He afterwards said that he had felt all right until he got to the upper end of the township, and then noticed that the houses seemed running about and getting upside down; soon drowsiness came on, with a feeling of nausea and faintness, oppression about the chest, and increasing difficulty in walking—to use his own words, he felt "fast going." He had two more glasses of brandy before Dr. Dowling saw him, which was at twenty minutes past eleven. Dr. Dowling proceeds to say:—"The left hand was only very partially strangulated by the ligature. The man appeared anxious and distressed, and, without adequate obvious pain, was unable to keep still; the breathing was irregular and distressed; pupils rather contracted; pulse 60, small and feeble; surface cold and clammy. He complained of nausea, giddiness, and faintness, with drowsiness, and a sensation (to use his own words) 'as if I was going.' Soon general clonic muscular spasms set in, just short of convulsions. It was now half-past eleven, when I laid bare the median basilic vein in the right arm, and gently injected twenty minims of ammonia solution, strength two-thirds strongest liq. ammoniæ, specific gravity 880, to one-third water. Almost immediately he looked relieved, and said he felt better. In about ten minutes I injected another similar quantity. Within two minutes after this he looked up naturally and brightly, like one aroused and refreshed from a sleep, and said, 'I feel all right now.' The restlessness and the muscular spasms were gone, and the countenance had lost its deadly pallor, and the pulse was stronger. I now let him lie down, and kept talking to him. Soon I noticed a restless movement of the limbs, which gradually increased to periodic clonic spasms, and these soon became a general and pretty constant convulsion. The pulse began to get more feeble, and he appeared to have a vacant look, although he kept saying he was all right. At half-past twelve I injected another similar quantity into the same vein, and almost instantaneously the vacant look disappeared and the convulsions subsided into a more gentle spasm. He said, 'I am awake now, but how long have I slept?—why did you let me go to sleep?' and got up from where he was lying to go to another spot. I now gave him half a drachm of liq. ammoniæ in half a tumbler of water to drink. The muscular spasms were now pretty frequent, but (to use his own expression) were 'getting weaker.' To ease himself, and because he found the spasms less troublesome when moving, I let him walk about with a man at his side, and he continued so doing until half-past three o'clock, when all spasms had left him. He now said he felt all right, and so he looked. Pulse 82, natural and good. By my wish, but against his own inclination, he took a basin of soup, the first food since his seven o'clock breakfast. At 6 p.m. I removed the ligature, and at 7.30 p.m., having smoked a pipe, he began to feel worse again, and as I was not directly at hand, the bystanders gave him about two ounces of brandy, which temporarily seemed to relieve the faintness that was stealing over him. At ten o'clock I saw him. He complained of sickness and a drowsy sensation, and the muscular spasms had again become nearly incessant. I now laid bare the median cephalic vein in the left arm, and injected twenty minims of a stronger solution of ammonia (liq. ammoniæ fort. ℥xv., aquæ ℥v.). Hardly any perceptible effect was produced, so after waiting twenty minutes I injected another twenty minims, and in a few minutes he said he felt better, breathing freely and looking cheerfully around; the spasms getting less and less. After this no further active treatment was required." Dr. Dowling adds that there were four punctures, indicating two separate bites. This case is interesting in showing how frequently the ammonia may have to be repeated, and also how a return of the bad symptoms may be brought about by loosening the ligature. It is this which makes the application of a ligature an uncertain proceeding, for if it be sufficiently tight to prevent circulation, a time comes when it must be loosened, and then absorption of any poisoning about the wound occurs, and the symptoms become as dangerous as if no ligature had ever been applied. An eye-witness to the treatment of this case thus writes:—"When I went to see the man, I was quite sceptical of the ammoniacal injection; but its action is so startling, I may say so magical, that if a man on seeing it could not be convinced, he must be singularly constituted indeed."

Case 12.—A middle-aged woman was bitten on the morning of November 20, 1869, at Jarraville, Gipps Land. Soon after she became sick and vomited. When seen by Dr. Eccles she was cold, pulseless, insensible, and apparently on the point of dying. Dr. Eccles injected fifteen minims of liq. ammoniæ fort. in one drachm and a half of water, and the pulse immediately became perceptible, and consciousness returned in twenty minutes. After this she was allowed to sleep, and upon waking was quite well. Dr. Eccles states—"I am fully convinced that had it not been for the injection of the ammonia the case would have terminated fatally."

Case 13.—A woman having been bitten, ammonia was injected, both into a vein and also subcutaneously, by Drs. Cooke and Hutchinson. This had the effect of rousing her, but the subcutaneous injection produced afterwards very ugly sores. The case was also complicated with the administration of brandy and ammonia internally.

Case 14.—About 1 p.m. on December 24, 1869, Mrs. D., in crossing a log fence at Redesdale, noticed a brown snake coiled round her foot. She fell down, and on getting up saw the snake escaping. She noticed a spot of blood upon her stocking. Having taken during the afternoon two glasses of brandy, and rubbed ammonia and iodine on the wound, she was brought at 6 p.m. to the Hospital at Kyneton, under the charge of Dr. Langford. At this time the only symptom was drowsiness, but, as this seemed to increase up till midnight, brandy was occasionally given—in all about four ounces. But she became worse; could not be kept awake without shaking; the pupils got dilated, and the extremities cold and clammy. Having consulted with Dr. Geary, Dr. Langford injected twelve minims of liq. ammon. fort., diluted with twice as much water, into a vein of the forearm. The patient roused at once, and said, "I do not feel a bit sleepy now." In a few seconds the veins of her forehead became distended, she broke out into a perspiration, and complained of headache and burning hands; she retched a little, but soon said she felt quite

well, and, in fact, walked up and down the ward without help. In the morning she took her breakfast, and returned to her home.

This case fell under the care of the same medical practitioner that treated her little boy (Case 8) twenty-seven hours after the bite, and failed to produce any good effect by injecting ammonia. Dr. Langford has since assured me of his great delight at the instantaneous effect of the treatment in this case, and of his thorough reliance upon it. He says—"Having used the injection three times in the boy without effect, I used it in this case with the full expectation of failure, and was never more surprised than when I saw my collapsed patient rise up and walk away."

Case 15.—A boy aged 12 was bitten at Devil's Creek, and, after having had the parts freely excised and brandy given pretty frequently, became in an hour's time comatose and totally helpless; the countenance pale, the eyes fixed and glassy, and the pulse scarcely perceptible. After waiting an hour and a half, and still giving brandy and ammonia, six drops of liq. ammon. fort. with two drachms of water were injected into a vein of the forearm by Dr. Walpole. Consciousness at once returned, the pulse became good, and recovery soon after followed.

Case 16.—A man was bitten by a snake at 12.30 p.m.; at 4.30 p.m. he reached Colac in a perfectly comatose and apparently dying state. The pupils were widely dilated and fixed, and the surface of the body and extremities cold. Dr. Rae injected ammonia of gradually increasing strength into a vein in each arm until as much as one drachm and a half of liq. ammon. fort. had been used. Improvement followed each injection; the pulse and breathing were well restored; the jaw, which had fallen, drew up; the pupils responded to the stimulus of light; consciousness returned; and, to the surprise of everybody present, the man walked away unassisted two hours after his arrival.

Case 17.—A woman was bitten at Bambra, and soon after became drowsy and helpless. On arriving at Winchelsea, a distance of fourteen miles, she was completely comatose. The pupils were fixed and widely dilated. Dr. Meyler injected ten minims of liq. ammon. fort. mixed with fifty of water into the cephalic vein. During the operation she was quite insensible. Before half a minute had elapsed she roused up into consciousness, the pulse became fuller, and the temperature of the body sensibly increased. In a quarter of an hour she began to eat bread and butter, and from that time rapidly recovered. Dr. Meyler concludes by stating—"The treatment of this case was not only decidedly successful, but exceeded my most sanguine hopes, and finally removed any lurking doubts that may have lingered in my mind as to the value of this mode of treatment."

Case 18.—A woman was bitten between 9 and 10 a.m. at Tumbacumba, New South Wales. Ammonia was injected beneath the skin, but by 5.30 p.m. she had become quite helpless, pale, and nearly insensible. Twelve minims of liq. ammon. fort. mixed with twenty-four of water were injected into a vein of the arm. It had almost an instantaneous and magical effect. Consciousness returned, the muscular power was restored, and she became cheerful. This did not last long; she became as bad as ever. The injection was twice repeated; each time she improved, and after the last rapidly got well. She had no recollection of anything having happened after the stupor first set in. I may remark that for the particulars of this case I am indebted to Mr. R. D. Matthews. It was his syringe and ammonia that were used, and although he is not a medical practitioner, I feel his account is thoroughly reliable. A remark is made in this case about the forgetfulness of everything that happened after a certain time. If I have not mentioned this peculiarity in the other cases, I may at once state that it is a usual accompaniment of the stupor of snake-poisoning.

Case 19.—A child, seven years old, was supposed to have been bitten by a snake in the morning. No particular symptoms occurred till 7.30 p.m. He was then seen by Drs. Bennett and Keating, and was pale, cold, and clammy, the pupils widely dilated, very drowsy, but easily aroused, and able to answer questions sensibly. Liq. ammon. was injected into the median basilic vein. The child rallied, and was put to bed quite easy and comfortable; pulse 90, skin warm, and the pupils natural. When seen by Dr. Bennett the next morning, the neck, cheeks, and tongue appeared swollen. At 1 p.m. he refused to swallow, the pupils were again widely dilated, the extremities cold, pulse 130, and drowsiness constant. Injections into the vein were now made four times at intervals of a quarter of an hour each. The child improved very much; his colour returned, he could drink easily, the pupils were less dilated, he became quite sensible, now and again talking voluntarily to his mother. Drs. Bennett and Keating left perfectly satisfied with the progress of the case, but on returning soon after 10.30 found him greatly changed; pulse 160, very weak. "I wished," says Dr. Bennett, "to inject again, but the mother would not allow it, and I have only to regret that I did not enforce it." Soon afterwards the child died.

It is interesting to note the similarity of the symptoms in this case and that of the little boy (Case 8). In both cases there was no certainty of a snake having caused the symptoms, but I agree with Drs. Langford and Bennett, that there can be little doubt that these were cases of snake-poisoning. I would further remark that, taking the symptoms of this case in their insidiously progressive character, they may be looked upon as a very dangerous type. The widely dilated pupil, with only a little drowsiness, intellect unimpaired, but after some hours stiffness of the neck, although not apparently so formidable as the helpless stupor in other cases, are in reality fraught with the greatest danger. They are, moreover, as will be seen further on (Case 22), so likely to lull the fears of the medical practitioner—to put him off his guard, as it were, rather than to look forward to a fatal termination. Of the treatment of this case nothing could have been more reassuring. I will not say that fuller doses of the ammonia at the last might have saved the child; Dr. Bennett evidently regrets not having insisted on a further injection. I will only remark that the poor mother acted probably as most parents would have done—let her child die in peace rather than suffer its last moments to be disturbed by another injection. Alas! surgeons know too well that yielding to the feelings of nature will not always do, that to the last our duty must be done, and that when we give way to other influences we have too often to regret it.

Case 20.—On November 1, 1870, at half-past one in the afternoon, a boy, aged 11 years, the son of Mr. Patrick G., was bitten just above the ankle by a snake. The punctures of the fangs were distinctly visible, and blood was flowing from them. A ligature was applied, and about half a tumbler of strong spirits was given in two doses. The symptoms increasing in severity, a piece of skin was taken from over one of the most prominent veins of the bend of the elbow, the point of the syringe carefully introduced into the vein, and ten minims of prepared ammonia injected. The relief was almost instantaneous. Some time after, the foot having become painful below the ligature, this was removed, and soon the worst symptoms of snake-poisoning returned—viz., total loss of power over the limbs, cold, clammy skin, breathing almost imperceptible, and all that could be felt of the pulse was an occasional fluttering. Ten more minims were injected into the same vein. In two minutes the pulse could be again detected, a decided improvement set in, and by seven o'clock the same evening the boy was well, laughing as heartily as anyone could wish.

This case illustrates again the inconvenience of the ligature, for when it was removed absorption of fresh poison evidently occurred, needing a further injection of the ammonia. It is also another instance of the remedy having been used in the absence of a medical practitioner. My informant, Mr. Stevenson, was evidently by his letters to me both well educated and well informed in matters of general science.

Case 21.—The following case I transcribe literally from a letter to me from James Jackson, M.D. Lond., Assistant Colonial Surgeon of South Australia. Dr. Jackson had previously seen me experimenting on dogs when I first began seeking for remedies, and had he not left Melbourne for the appointment he now holds I feel convinced I should have derived great benefit from his suggestions and assistance. However, it will be seen that, just as on the earliest symptoms appearing I injected my dogs, so did he his patient, and with exactly similar results. I cannot too strongly recommend the details of this case, uncomplicated as they are by any other mode of treatment, to the attention of the reader.

"To Professor Halford.—My dear Sir,—I beg to furnish you with the following brief notes of a case of snake-bite which was treated by me at McDonnel Bay on December 23 last (1870):—

"I had just driven into the yard of Lodie's Hotel, when I was summoned to see the servant, who, while hanging out the clothes among the rushes, had been bitten by a large brown snake (diemenia superciliosa) on the back of the hand about

ten minutes before. I found the woman in a state of extreme agitation, declaring that she had been bitten by a snake about four feet long; and on carefully examining the back of the hand, I found a wound such as would be produced by the bite of a snake.

"I immediately excised the bitten portion, including a piece of skin about the size of a sixpence. I sucked the wound, and then washed it with a strong solution of ammonia.

"The patient was then placed in the recumbent position, and still remained very much agitated, though up to this time there were no special symptoms of snake-poisoning. I determined, therefore, to wait for symptoms. In about twenty minutes nausea was complained of, with a feeling of internal distress at the epigastrium, followed by violent and persistent retching. I now considered my patient under the influence of the poison, and determined to lose no time in injecting the ammonia. I accordingly opened the median cephalic vein, and injected fifteen minims of the ammoniacal solution. The vomiting ceased immediately, and the woman expressed herself as being very much relieved. In about half an hour the retching returned, as violent and persistent as before; another fifteen minims were injected, which again gave immediate relief. For three-quarters of an hour the patient lay on the sofa quite comfortable, at the end of which time the vomiting again returned. For the third time I injected fifteen minims of ammonia, when the vomiting ceased as suddenly as before. I remained with the patient for half an hour after the third injection, and was then obliged to embark for Adelaide.

"I left the patient in the hands of Dr. Cotter, of McDonnel Bay, who throughout gave me valuable assistance. This gentleman found it necessary to repeat the ammoniacal injection twice more, after which the woman gradually recovered, and is now in the enjoyment of perfect health."

I will only add to this most valuable account that from what we now know of the impunity with which ammonia may be thrown into the circulation, it is most probable that had larger doses been used the injection would not have been required so repeatedly.

"TOOTH-EDGED CUTTING SCISSORS."

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the London Hospital.

To-day I happened to be in the shop of Messrs. Krohne and Sesemann, and was shown Dr. Richardson's new invention. I had arranged to operate on a case of internal hæmorrhoids in the afternoon, and determined to try the instrument. The case was a typical and uncomplicated one of internal piles, which I proposed to ligature. Having seized one hæmorrhoid, I proceeded to sever with the scissors the mucous membrane at its junction with the skin at the base of the pile, in order to form a groove for the ligature to lie in. This instrument effected my object most readily, and *without bleeding*, the structure divided requiring perhaps two applications of the toothed scissors where one of the common scissors suffices. My colleague Mr. McCarthy, and Mr. R. Kershaw, late House-Surgeon of the London Hospital, who assisted me, noted the absence of bleeding. Five hæmorrhoidal tumours were thus treated.

16, Queen Anne-street, W., December 20.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

RHINOPLASTIC OPERATION.

(Under the care of Professor JOHN WOOD, F.R.S.)

For the notes of the following case we are indebted to Mr. William Rose, Surgical Registrar:—

J. P., aged 23, was admitted May 28, 1873, with destruction of the entire nose, the result of lupoid ulceration.

Six years ago ulceration of the soft palate set in, which was arrested by nitrate of silver. A year after this a fresh patch of ulceration appeared on the left nostril, which in spite of treatment spread to the right side. This was attended with little pain. Soon after he was taken into the Bristol Infirmary, where chloride of zinc was applied with some success. The ulcerative process had, however, entirely destroyed the alæ, and small portions of necrosed bone were repeatedly coming away from the interior. The septum at that time was unaffected. After the lapse of one year from his discharge from the Infirmary, there was a recurrence of the ulceration in the skin over the bridge of the nose, between the eyes, which extended deeply very fast. The septum then necrosed and was removed. No history of syphilis; no family history of importance; father, mother, and sisters alive and healthy. The patient is of a strumous habit, and is a native of South Wales. The whole of the nose has disappeared; skin, cartilage, and the following bony structures—the nasal bones and the lachrymal, the nasal process of the superior maxilla, the lower turbinated, the vomer, and the whole of the ethmoid with the exception of the cribriform plate,—so that a chasm is left extending back to the muscles of the soft palate, which can be seen in action during deglutition. All sense of smell is lost. The interior of this cavity is covered by a scab, on removing which an irregular suppurating surface is brought into view. The lower opening of the lachrymal duct is visible on either wall. On the upper lip a little to the left is a white cicatrix, the result of some of the previous ulceration.

June 7.—Chloroform was administered, and Mr. Wood performed the first operation, which consisted in making a columna for the new nose, and also in bringing the cheeks closer together, and thus diminishing the size of the opening. (The integument of the cheeks and forehead is fortunately very lax in this patient.) Two vertical cuts were made through the upper lip, so as to leave a central piece free, about five-eighths of an inch broad: this was turned up. The lateral portions of the upper lip were then brought together by harelip-pins. The upturned portion of the lip was then split from below upwards, so as to make the mucous and cutaneous surfaces continuous and facing inwards, the raw surface looking outwards. Then, having dissected up the cheeks from their deep attachments on either side for a distance of about an inch and a quarter, and having pared their edges at the lower part, Mr. Wood easily brought them together in the median line across the lower part of the chasm in such a way that their deep raw surfaces should be in contact with the raw surface of the upturned flap. The parts were held in position by wire sutures, and tension was taken off the flaps by a stout harelip-pin, which transfixed both cheeks.

11th.—Pins removed from upper lip. Perfect union has taken place. Flaps look healthy and are also uniting.

16th.—The cheek-flaps have firmly united in the median line. Pin transfixing them removed.

23rd.—Mr. Wood has inserted below the edge of the united cheek-flaps two small rolls of adhesive plaster, one on each side of the base of the upturned flap from the lip, so as to form openings for the future nostrils. A slightly projecting incisor tooth has been removed. There has been some œdema about the lower lid of the right eye, but it has now disappeared. Since the operation the patient has regained to some extent the power of smell.

July 2.—Two portions of skin about half an inch square from the newly formed flaps immediately over the openings of the future nostrils were respectively reflected and turned in, being kept in position round these apertures previously made raw, in order by the presence of integument to prevent their too great cicatricial contraction, and possible subsequent closure.

August 6.—Third operation.—A flap with broad pedicle was taken in the usual manner from the forehead, and twisted down—the edges of the opening having first been pared, and the integument covering the newly-formed flaps over the lower part having been dissected from below upwards, so as to expose an extended raw surface on which to implant the forehead flap. Deep and superficial wire sutures were used to keep the parts *in situ*. Warm-water dressing to flap.

8th.—Transplanted flap looks well; no sloughing.

11th.—Some of the wire sutures removed.

18th.—The new nose has united firmly except for an extent of one inch opposite the inner canthus on either side. Wound in forehead granulating vigorously.

21st.—Pedicle of flap divided to-day, a good-sized vessel supplying it being cut, which had the effect of making the nose feel cold and look slightly congested. At the same time an attempt was made to close the chinks on either side between the eyes. There was great difficulty in doing this, as the

destructive process had stopped just short of the lachrymal sac, which was only thinly covered by skin; but by carefully paring the edges, they were brought together by wire sutures. Warm-water dressing to be kept constantly applied to nose.

25th.—Wire sutures removed. Circulation in nose quite established, but there is a slight superficial slough, about the size of a fourpenny-piece, where the pedicle was divided.

September 1.—Only partial union has taken place at the sides of the new nose at the upper part: the opening on the right side is now half an inch in length, on the left nearly an inch. A piece of No. 10 gum-elastic catheter is constantly kept in each nostril, the openings of which show a great tendency to contract. Throughout the stages of the operation the patient's health has been remarkably good. There has been some inflammation of the conjunctivæ, which yielded to the application of astringent lotions. Wound in forehead quite healed. It is interesting to observe that if the point of the nose be touched with anything, such as the end of a pencil, the patient, with his eyes previously and still closed, when told to place his finger on the part irritated, will immediately raise his hand and put his finger on the cicatrix in the forehead.

October 4.—The openings on either side of the nose still remain, and to-day Mr. Wood pared the edges of that on the left side, and brought them together with wire sutures.

11th.—Wire sutures removed. Union has taken place. Opening on left side completely closed.

22nd.—Operation for closing the opening on the right side performed to-day in the same way as that for the left side. The difficulty seems increased by the fact that the patient has been accustomed to breathe through these openings, and therefore the air has a constant tendency to re-open the wound.

29th.—Wire sutures removed from right side. The opening is quite closed.

November 19.—Patient discharged with directions to keep the nostrils open by inserting the catheter tubing. His sense of smell is now almost perfect.

THE ABUSE OF THE IODIDES IN SECONDARY SYPHILIS.—Professor Gamberini, the well-known syphilographer of Milan, has lately called attention to the way in which nowadays the iodides of potassium and sodium are prescribed "in all the forms of secondary syphilis," and deprecates such practice strongly. He says—"The iodides are used as if mercury were no longer of any value. I have examined a large number of cases treated in this way, and have been able to prove that ordinarily the iodides are not beneficial, and that the virtues assigned to them are only the expression of the natural pauses in the course of the syphilis. It is my firm belief that the prolonged use of the iodides as an exclusive remedy in secondary syphilis only serves, as a rule, to impoverish the blood, and so to accelerate the appearance of syphilitic chlorosis." Professor Gamberini recommends those who are sceptical of the truth of his assertions to compare for themselves cases as nearly similar as possible treated with mercury and with the iodides. Is not the warning given above as applicable to English as to Italian medical men?

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Medical Times and Gazette.

SATURDAY, DECEMBER 27, 1873.

ANNUS MEDICUS 1873.

REGARDED from the weather point of view, the year has not been a very pleasant one. It was not so almost continuously wet as the year 1872, but in general character it might be instanced to justify the saying of a foreign cynic and wit, that "in England there is no climate, they have only weather." We had two short bursts of fine, hot summer weather, and a short early St. Luke's summer, while the rest of the year was cold and very often wet. But, *en revanche*, the year was very healthy; at least, the rate of mortality was very low. During the first quarter it was lower for the whole country than in any year since 1862, and for London the rate was even below that for the whole of England; and during all the year it has been below the average. Whether this may be taken as denoting a high state of health and vital power is, perhaps, questionable; but we have as yet no statistics for striking a general sickness-rate, and no means of judging the general state of health; we can only tell the general death-rate, and that, as we have said, has been low. During the autumn some alarm was felt lest we might, by importation from abroad, suffer from Asiatic cholera, but the port of London and our chief seaports were placed under strict and active sanitary inspection and care, and, thanks to the prompt and efficient action of their medical officers of health, no such calamity has occurred. In the port of London, at any rate, more than once cholera has been imported, but the vigilance of the medical officer has prevented all spread of the disease. And till lately the year had been distinguished by the absence of any severe and wide-spread epidemic; during the last two or three months, however, measles has been very prevalent in London, and very fatal. Until October the average weekly death-rate from measles in London for 1873 had been only 20·1, and the weekly mortality had never exceeded 33; but since the beginning of October it has risen rapidly, and in the week ending Saturday, November 22, 130 deaths were registered in London from this disease, 116 of

which occurred in the North, East, and South districts, and only sixteen in the West and Central districts. The Registrar-General informs us that this is the highest mortality from the disease which has been returned since 1840, when the weekly returns of deaths were first published. He also tells us that an epidemic of measles is due in England in 1874; but we cannot affect to think that this information, however interesting it may be, is at all consoling. If, indeed, it could have any effect in leading our politicians to put aside party, to shelve "sensational" measures, and to legislate for mankind, it would be incalculably valuable. But, alas! when can we hope to see a great party "educated" up to a living practical faith in the cry of "Sanitas sanitatum, omnia sanitas!" or a time when politicians will feel the hope, or the demonstrable certainty even, of saving thousands of lives yearly by wise and well-considered sanitary measures for stopping preventable deaths, as potent a charm to persistent action as is a battle over Acts to extend the franchise to the ignorant and uneducated, or for the spoliation and destruction of institutions for the teaching of that which our forefathers held to be a faith to be lived by and died for, but which, according to "the spirit of the age," we are to look on as an enslaving superstition or an effete myth?

In September and August a very remarkable and serious outbreak of enteric fever occurred in the West-end of London. In the first week of August, Dr. Whitmore, the Medical Officer of Health for Marylebone, found good grounds for suspecting that it was caused by contaminated milk, supplied by the Dairy Reform Company, and communicated his suspicions to the Company; and on the 7th of the month Sir William Jenner and Dr. Murchison wrote to the Company that they had been called in to see a large number of cases of enteric fever; that of thirty-seven families, in which it had come to their knowledge that the fever had occurred, thirty-five were supplied with milk from that dairy; and that they considered the evidence so strong that the milk had been the medium of carrying the poison that they hoped the Company would suspend the issue of it till the cause of the outbreak had been thoroughly investigated. They added that Mr. J. N. Radcliffe had been deputed by the Privy Council to inquire into the matter. The Company could not believe that their milk—"pure milk, coming from the country"—could possibly have been the vehicle by which the poison had been spread; but on the 12th of August they deputed Dr. Corfield, Professor of Hygiene in University College, and Medical Officer of Health for St. George's, Hanover-square, to accompany Mr. Radcliffe and Dr. Whitmore on a visit of inspection of the farms supplying the milk distributed by the Company. On the evening of the same day it was discovered that there was typhoid fever "on or in the neighbourhood of" one of the Company's farms, and the supply from that farm was immediately stopped. This is not the place for any expression of opinion as to whether the Dairy Company acted with sufficient promptness and decision, or paid such attention as might be expected to the opinions of such authorities on typhoid fever as Sir W. Jenner and Dr. Murchison. It will be enough to add to the above, that having learnt, from what may almost be called a pathological experiment, the lesson that milk may be the vehicle of disease, the Company took excellent measures for insuring its purity. They ordered weekly reports from medical men and veterinary surgeons of the health of all individuals, biped and quadruped, on their farms, and took various other admirable precautions for securing the stable-door in the future—all, no doubt, in the purest spirit of philanthropy, and in furtherance of what they "have always desired to be," viz., "an useful and reliable instrument in the hands of the physicians of London." When Dr. Whitmore reported to the Marylebone Vestry at the end of September on this outbreak of typhoid fever, he stated that ninety families had suffered from it, and that the number of persons attacked had been 320. The exact percentage of death could not be learned, for in many cases the fever had declared itself only after the sufferers had left London, but about twenty fatal cases were then known of, though only some five or six of these had ended in Marylebone. One had died in France, one in Wales, and others in different parts of the country. Each case in which the poison of the fever was thus carried from London became a possible new focus of infection, and so disease might be spread enormously. Milk has now been indisputably proved to have been the vehicle by which the infecting poison has been spread in several outbreaks of enteric fever, and in more than one outbreak of scarlet fever, and it is clear that all dairies and dairy-farms ought to be placed under frequent and careful sanitary inspection. But, while fully admitting that a free supply of milk may possibly be turned into a great evil and danger, instead of being, as it ought to be, an unmixed good, we must give a word of warning against any hasty assumption that milk is always or very often the source of mischief in outbreaks of zymotic disease, and there does just now appear to be some danger of "a run" on milk-infection. In the London outbreak the public were greatly indebted to the medical men we have named for the skill shown in tracing out the source of infection, and the promptness and boldness with which they acted. Dr. Murchison was, we believe, the first to suspect the milk, his suspicions having been excited while endeavouring to trace out the source from which three of his own children, who were attacked on July 22, had been infected with the typhoid poison; and the greatest credit is due to him for the sagacity, perseverance, and courage displayed by him in his inquiries and in his communications with the Dairy Company.

Only one Bill directly affecting our profession was passed by both Houses of Parliament, and received the Royal assent, this year—the short Bill, namely, for giving the University of London the power to unite and co-operate with any two or more of the colleges and bodies named in the Medical Act of 1858, in conducting examinations. One of the clauses in the Bill provides that the assent of one of her Majesty's principal Secretaries of State shall be necessary to give force to any arrangement between the University and the co-operating bodies; and that one of such Secretaries of State may, at any subsequent time, revoke such assent if he think fit to do so. One more step has thus been made towards the formation of one Conjoint Examining Board for England; and we believe that the Apothecaries' Society have obtained the promise of the support of Government to enable them to obtain like powers next year. But supposing that done, and an English Conjoint Board formed, it remains to be seen whether any benefit will arise therefrom to either the profession or the public. We own to a suspicion that the establishment of a Conjoint Board for each division of the kingdom may prove to be by no means an unmixed good, but it appears to us that an attempt to work a Conjoint Board in England only must be productive of great mischief. Invidious distinctions will almost certainly, and naturally, be drawn between medical men possessing the different diplomas; and it appears at the least probable that the medical educational establishments and the examining bodies in the other divisions of the kingdom will gain at the expense of the like institutions in England.

We were threatened with a Medical Acts Amendment Bill,—Mr. Headlam having introduced one, which might be called, we suppose, the Bill of the British Medical Association, or perhaps, more strictly, the bill of the British Medical Association journal,—but it did not come to anything. A formidable show of opposition was very early made against it by Dr. Lyon Playfair, Mr. Maclaren, the Marquis of Huntingdon, and Dr. Lush; and Government gave, to say the least, very

little encouragement to its supporters, and it died, and made no sign.

Mr. Fowler and a few agitators brought in a Bill for the repeal of the Contagious Diseases Acts of 1866 and 1869, but it was opposed, on the motion for its second reading, by Sir John Pakington, who was seconded, in a powerful speech, by Mr. J. D. Lewis, and the Bill was rejected by a large majority. Sir C. Adderley brought forward a lengthy, and, on the whole, valuable Bill, embracing certain amendments of the Public Health Act of 1872, recommended by the Sanitary Commission. The Government assented to the Bill, but had neither time nor power to push it through the Houses of Parliament. The Bill met with great opposition in committee, and Sir C. Adderley withdrew it early in July. There was no popular panic to give momentum to it; and when Government is strong it occupies itself with what it is pleased to call "large measures of reform," while, when weak, it has too much to do with nursing its own health to be in earnest about such a comparative trifle as a Public Health Act.

The General Medical Council met on March 26, and again met in the inconvenient and undignified apartments they hire in the Dental Hospital, Soho-square, neither of the Royal Colleges being able to offer them accommodation. The session of the Council was, as usual, opened by an address from the President, from which it appeared that difficulties, which should not have been quite unexpected, had arisen in the perfecting of the English Conjoint Examination Board. The University of London and the Apothecaries' Society had been in communication with the Secretary of State for the Home Department on the subject of obtaining an Act enabling all licensing bodies to join in forming conjoint boards. The Secretary had approved of the project, and had promised that the Government would introduce an enabling Bill; and on the strength of this the two bodies immediately concerned had relied, and had patiently waited for a draft of the Bill from the Home Office. As the time for the meeting of the General Medical Council drew near, however, and no draft Bill had been received, the Apothecaries' Society grew uneasy, and wrote to inquire after it, and, to their surprise, received an answer from the Privy Council Office stating that the Lord President had decided not to introduce into Parliament any such measure as that they had written about. His Lordship thought that "any Bill to be introduced on the part of her Majesty's Government for amendment of the Medical Acts ought to be such as would cover all the grounds where amendment of the Medical Acts is wanted." The President of the General Medical Council felt confident that the Conjoint Board schemes would eventually be carried out, and "hoped it would be done without any sacrifice of the honour and dignity of the profession, and without any interference with, or infringement of, the independence and the power of self-government, of which the profession was very proud and (he thought very wisely) jealous." This was very pretty, but not very wise confidence, for, as we have often pointed out, the Privy Council has shown a determination not to do anything for the profession except at a sacrifice of its independence, being convinced that it can govern the profession much better and more wisely than it can govern itself. In the long and warm debate to which this negation of action on the part of Government gave rise some very curious and interesting revelations were made. It appeared that the "Privy Council people" having found out what had been going on between the University of London and the Apothecaries' Society and the Home Office, took that office to task for poaching on their preserves. This is an educational question, said the Privy Council, and you of the Home Office have no right to meddle with it; and perhaps the Privy Council intimated in official language that the matter was beyond the comprehension, as well as beyond the powers, of the Home Office. At any rate, it was more than hinted that there had been a sharp conflict between the two departments as to which should have the handling of the subject, and the Privy Council won the day. The Medical Council were also informed that the Under-Secretary to the Home Office had stated that Lord Ripon—the Lord President of the Privy Council—had been willing to introduce a general enabling Bill, on conditions that the fees of candidates should not be raised above the present standard in any case without the sanction of the Privy Council, and that the rules of the various conjoint boards, when framed, should be submitted to the Privy Council for approval—an outspoken expression of the intention of that department to place the profession, if possible, under its control. Many hours were spent by the Medical Council in discussing what they should do under the circumstances—whether they should ask for an interview with the Lord President, and if so, whether it should be simply to inquire if the Government would aid in the removal of any legal difficulties that stood in the way of the formation of conjoint boards. Eventually a deputation from the Council had an interview with the Lord President, Lord Granville, and Mr. Bruce, and were enabled to inform the Council that the Lord President was not much disposed himself to introduce so small a measure as an enabling Bill, but that he was disposed to be favourable to such a Bill if one should be introduced by a private member, and had even been gracious enough to name a private member of the Upper House as a very fit person to bring in the Bill. The total result, so far, has been, not the obtaining of a general enabling Bill, but that the University of London has got an enabling Bill for itself; the Apothecaries' Society has yet to try to get one. During the session of the Council a great amount of time was given up to discussions on the position taken, or thought or feared to have been taken, by the Government with regard to conjoint boards, on the Irish conjoint board scheme, and on conjoint board schemes in general. All who took the trouble to read the debates must have felt, we think, that an increased dread or distrust of the effects of the general conjoint scheme, if it should ever be carried out, was plainly shown by some of the members of the Council, and that no real advance was made towards the formation of even imperfect divisional conjoint boards. A very full and elaborated scheme was presented from the Irish bodies, and was approved and sanctioned by the Council; but it is an imperfect scheme, the Queen's University in Ireland and the Apothecaries' Hall having been unable to join in it. The latter has since done so, but the Queen's University still stands, and, for aught that appears to the contrary, is likely to stand, aloof. But of course the Council "desired to express a strong hope" that those bodies may be able to co-operate in the scheme. Hope never dies in the heart of the General Medical Council.

From Scotland no attempt even at a scheme came, and it seems very improbable that the Scottish examining bodies ever will voluntarily produce a conjoint scheme. The opinion expressed by Dr. Alexander Wood, that "it would repress and cramp the mind of students to put them all into one Procrustean bed of examination, and torture them to the same arbitrary standard," appears to be very generally held north of the Tweed.

Another and very important subject was discussed at great length, and with more satisfactory results. The "Report of the Committee on the Visitation of Examinations," which was dated July, 1871, but had been held over, was taken into consideration, and the Council passed a resolution recognising the benefits that had arisen from the former visitations, and expressing the opinion that "the time had come when the alternative afforded by the Medical Act be adopted, and the aid of competent persons, not members of the Council, should be obtained to aid in performing the duty," and a committee was appointed to prepare a scheme for drawing out such a

plan, including the due payment of the visitors." Later in the session the report of the committee was presented, and gave birth to long discussions and many amendments; the final result being, we believe, that power was given to the Executive Committee "to appoint a visitor or visitors, not members of the Council, and to make the necessary arrangements for the visitation of examinations by them, conjointly with the members of the Council." That this was a good step in a right direction hardly can, *pace* Sir Dominic Corrigan, be seriously disputed. The effects of the previous visitations were marked and most beneficial. Dr. Storrar asserted that the visitors' reports had been productive of much good, as regarded even such a body as the University of London; and the suspension of them by the Council caused great regret and surprise. We may hope that the resumption of them in the manner now determined on may lead to the work being entrusted to men of high attainments, of considerable practical professional experience, and not members of the Council. This would necessitate high salaries, but the Council ought to be able to afford that.

The report of the "Committee on the Medical Education of Women," obtained last year by Dr. Acland, was considered, and—well, we will not say that a great deal of time was wasted on it, but much time was consumed by it, and, judged by the standard of cost, the time of the Council is very precious. Nothing more need be said about it here, because the Committee was reappointed, and empowered to find out, for the information of the Council, whether any public institutions exist that provide for the education and examination of women as midwives, dispensers, or superintendents of nurses and of medical institutions, and to report whether, and in what manner, a public register of persons obtaining these qualifications might be kept.

It was resolved that "it is expedient that, under any future legislation, power should be granted to the Council to register a qualification in State medicine, after such qualification had been granted according to regulations approved by the General Medical Council."

The Council had the pleasure of learning that the then Chancellor of the Exchequer had caused information to be conveyed to Dr. Quain, "that an official communication had been made to Mr. Ayrton on the subject of housing the Medical Council in the house hitherto occupied by the savings-bank at the corner of St. Martin's-lane," and that he hoped the matter would be satisfactorily arranged in a few days. It was felt that this recognition of the official relation of the Council to other departments of public business was highly gratifying; and the situation of the building named left nothing to be desired. But put not your faith in Governments! our readers have lately learned from our columns that the Council have been informed that they can have the house mentioned, but must pay a rent of £600 a year! Such a mode of "satisfactorily arranging" for the housing of a public body needs no comment.

The Council adopted the report of the Pharmacopœia Committee, recommending a reprint of the Pharmacopœia, and an appendix supplying information respecting "new medicines, and new forms of medicines, that have become established or been introduced to the favourable notice of the profession." We hear that this appendix is now completed and ready for publication.

The Royal Colleges of Physicians and of Surgeons have openly censured the system of advertising medical works, which has gained ground more and more of late. The College of Surgeons was content to express disapprobation of "the practice of frequently advertising medical works in the non-medical press"; but the College of Physicians spoke out more fully and more explicitly, passing the resolution that "the practice of medical authors frequently advertising their own works in the non-medical journals, and especially with the addition of laudatory extracts from reviews, is not only derogatory to the authors themselves, but is also injurious to the higher interests of the profession." It would have been well if the Colleges had also seen fit to express an opinion against the practice of advertising distinguished medical and surgical patients; but it is to be hoped that this is never done with the sanction or knowledge of the physician or surgeon named as being in attendance on such and such a distinguished, eminent, or celebrated person; and probably the Colleges thought that no censure of theirs would affect the press-feeders or indiscreet friends. Of course we do not allude to Royalty bulletins—they are necessarily and rightly signed by the professional attendants.

In February, some important alterations, conceived in a just and liberal spirit, were made in the by-laws regulating the admission, or rather the nomination, of Members to the Fellowship of the Royal College of Physicians. The selection of the names of the Members to be submitted to the Fellows for election rests with the Council, a body of nineteen; but it was necessary that a majority—*i.e.*, ten—of these should vote in favour of any Member, so that in a small meeting of the Council two or three black balls would exclude a Member. Now fifteen members of the Council must be present to constitute a quorum. Also, any one Fellow (instead of any two) may propose any member to the Council for nomination. And the qualifications for the Fellowship (to be set forth in the proposal papers) are—standing in the College, academical honours, distinctions in literature and science, professional eminence, public appointments, and social position (whatever that may mean). About six-and-twenty Members have since been elected to the Fellowship—some of whom certainly ought to have been offered that distinction many years ago. Dr. Burrows was again re-elected President of the College, a recognition of the admirable way in which he has watched over their interests that honours the Fellows as much as it does Dr. Burrows.

The Baly Medal, for physiological research, was awarded to Dr. Sharpey, an acknowledgment of his eminence as a physiologist that was hailed with satisfaction by every man of science, and conferred additional lustre on the medal as an honourable and desirable distinction.

We cannot conclude our notice of the College of Physicians without a very brief reference to Professor Rolleston's very able and valuable Harveian Oration. We had the pleasure of publishing it in full in our pages, and need not therefore allude here to its special merits; but both as a literary and scientific production it is admirable, and has rarely, if ever, been surpassed by any of the long list of Harveian orators.

On July 1 the Council of the College of Surgeons elected Mr. John Marshall and Mr. Timothy Holmes members of the Court of Examiners, in place of the late Mr. Richard Partridge and of Mr. S. A. Lane, who had completed his five years' term of office; and on the 3rd of the month the annual election of Fellows into the Council of the College took place. There were four vacancies and eight candidates, one of whom (Sir James Paget) had retired by rotation, and stood for re-election. Sir James was of course successful, and was returned at the head of the poll. Messrs. Haynes Walton, George Southam, and John Marshall were the three other successful candidates. Some of the candidates ran each other very close: Mr. Marshall stood only seven votes below Mr. Southam, Mr. Cooper Forster but one below Mr. Marshall, and Mr. Savory only ten below Mr. Forster.

Both of the Royal Colleges were called upon at various times to consider very elaborate reports from the Committee of Reference upon the method of carrying out the conjoint board examination. The President of the College of Physicians observed, in his address to the College in April, that "the

Committee had found it necessary to deviate in some minor particulars from the strict letter of the original scheme agreed upon by the co-operating medical authorities, and had been compelled to ask for the sanction of the College to their modifications;" and that it was essential that the College should, "in a question of such novelty, intricacy, and difficulty, grant to its representatives a certain discretion, and accord to them a large amount of confidence." Some of the Fellows thought that the Committee of Reference were in some points altogether exceeding the powers conferred on them, and that some parts of their reports did not merit the approval of the College; but the College as a body responded to the President's appeal, and gave the Committee "a large amount of confidence."

The forty-first annual meeting of the British Medical Association was held in the metropolis, and will be remembered for its brilliancy and success as long, we should think, as the Association lasts. More than 2000 members attended the meeting, and certainly nothing was spared or wanting to make it notable, impressive, and eminently satisfactory—except more space in the halls and rooms opened to it. But certainly it was the fault of the members themselves that any inconveniences were felt. The Reception Committee had over and over again implored all the members who meant to attend to send up their names beforehand; but only about 700 did so, and when splendid weather and other attractions finally brought up 2000, it was no wonder that some overcrowding and other inconveniences and disappointments occurred. It was rather a wonder that, owing to the indefatigable exertions of the Reception Committee, all passed off so well as it did. The meeting was opened by an address from the President, Sir Wm. Fergusson. The addresses in medicine, physiology, and surgery, given by Professors Parkes, Burdon-Sanderson, and John Wood, were in every way worthy of the occasion, and of the reputation of the men who delivered them; and it would be difficult to give higher praise than that. The sections were very fully attended, and were richly supplied with valuable papers, which gave rise to some good and instructive discussions; and the museum well deserved more time and attention from the members than could possibly be spared to it. In the halls and rooms of King's College, where the meeting was held, most of our eminent physicians and surgeons, metropolitan and provincial, were at various times to be met, and many of our illustrious foreign *confrères*. And if the work was exceptionally remarkable, not less so was the social part. The Royal College of Surgeons gave a *conversazione* to the members, while University College and the Lord Mayor gave elegant and brilliant receptions, which were attended by ladies as well as gentlemen, and were only almost too well appreciated and thronged. Windsor Castle, Clevedon, and Lambeth Palace, and the picture galleries at Stafford House, Grosvenor House, and Mr. Holford's were thrown open; excursions were arranged to Hampton Court and the Brighton Aquarium; and the benchers of Lincoln's Inn granted the use of their beautiful hall for the public dinner, which was graced by the presence of the Prime Minister. But have not these and other glories been duly recorded and frequently expatiated on in the organ of the Association?—which, if powerful, is certainly not without its trumpet-stop. The meeting was really a remarkable success; and the Association is said to have added nearly 1000 members to its strength during the year.

The St. Andrews Medical Graduates' Association do not hold their annual meeting until the 30th of the present month; Dr. Lockhart Robertson is the President for the year. The Association held an extra-general session on February 8, when Dr. Lyon Playfair addressed the graduates on the "One-Portal System," to which he is strongly opposed.

The British Association for the Advancement of Science held their forty-third meeting at Bradford, under the presidency of Professor A. A. Williamson. It was a very successful one, and some of the papers on anatomical, physiological, and sanitary subjects excited unusual interest and attention. Dr. Allman, the President of the Biological Section, gave a very able and valuable address, indicating the present position and value of the evolution theory in biological science. Professor Ferrier's address on the "Localisation of Functions in the Brain" was extremely able and lucid, and drew a crowded audience, who listened with the utmost interest and attention to the Professor's description and exposition of physiological researches that are certainly among the most remarkable that have been made in recent times. We cannot even enumerate here the many other papers of note—such as those by Professors Rutherford and Burdon-Sanderson, and some papers on "The Purification and Utilisation of Sewage,"—but abstracts of many of the most important of them were published in our columns at the time, and we must be content to say that the meeting was signalised by some addresses and papers of universal interest and value.

The various medical societies of the metropolis have been active, and doing good work. The session of the Pathological Society was distinguished by the discussion on the anatomical relations of pulmonary phthisis to tubercle. The subject was introduced by Dr. Wilson Fox, who occupied one whole evening with his very able and interesting exposition of his own views on the subject, and two other evenings of the Society were given up to the speeches of such well-known workers in pathology as Moxon, Cayley, Payne, Douglas Powell, Charlton Bastian, J. E. Pollock, C. J. B. Williams, and others. The discussion was interesting and valuable, and must be of service in one way at least—viz., by exciting attention to the danger of making the morbid anatomy of disease too exclusively the basis of medicine, of neglecting too much the life-history of a disease even in its pathological classification.

The Medical Society of London has taken possession of its handsome and very convenient new rooms in Chandos-street, has celebrated its centenary, and entered on its second hundred years of life with renewed vitality and power. The oldest of the medical societies of the metropolis, it has this year been as active and vigorous as the youngest among them. Though it meets every week, the meetings have been fully attended, there has been no lack of good and practical papers, and the discussions have been animated and instructive. "*Floreat semper!*"

The year has not been kind to the medical women and their supporters. They cannot well feel that they have had "a good time." Even abroad they have met with what we should be inclined to call very uncomfortable rebuffs and discouragements. In Edinburgh the law has been interpreted against them; and it seems at present as if they mean to give up the fight and retire from the field. In June, the judges of the Second Division of the Court of Session, after having formally consulted the other members of the Scottish Bench, delivered their decision in the case of Miss Jex-Blake and others *versus* the Chancellor and Senatus of the University of Edinburgh. They decided that the legal rights claimed—viz., that women be admitted as students to the classes of any professor in the University on precisely the same footing as male students, etc.,—"could not be maintained and enforced, irrespective of the regulations adopted by the University Court." In this view "all the consulted judges, without exception," had agreed; and Lord Justice Clerk and Lord Giffard, who had held a contrary view, confessed they had been in error. And, further, the majority of the judges were clearly of opinion that the University Court had no power to confer any such legal right as regards the Faculty of Medicine, and that the regulations by which the professors were "permitted" to give instruction in medicine to women were not only beyond the powers of the Court, but were a manifest encroachment on those of the Crown and Parliament. Consequent on

this judgment, the University Court determined to suspend the regulations for the education of women in medicine; and the Senatus came to the conclusion that, in the present state of affairs, it was undesirable to admit women to the medical preliminary examination in arts. Shortly after this, Mrs. Garrett-Anderson, M.D., wrote to the *Times* a long letter, in which, *inter alia*, she recommended women who wish to practise medicine to give up England and Scotland, and go to Paris, where they can get a degree. It is true that foreign degrees are not registrable, and cannot therefore give the licence to practise; but that may be changed some day. The Ladies' Association for the Promotion of the Medical Education of Women applied to the Council of Queen's College, Birmingham, for the admission of women to the medical classes; but the Council, though "fully recognising the right of women to occupy any field of employment for which they may deem themselves qualified, and desirous to afford any facilities in its power towards the higher education of women," considered that it could not under existing arrangements conveniently admit female students to any of its departments, and was not prepared to make such alterations as the admission of female students would require. Forty out of fifty of the male medical students of the College had signed a memorial against the admission of women to the classes.

But the "unkindest cut of all," we think, came from Bristol. Dr. Eliza Walker was appointed House-Surgeon to the Children's Hospital there, but managed somehow to behave to one of the physicians in a way that could not be overlooked, and the whole of the honorary staff resigned. This led to the resignation of Dr. Eliza Walker, and in a letter to the daily papers she complained bitterly of the action of the medical staff, because, she says, "They must have known how important it was to the cause I represent that the experiment of my appointment should prove successful." She acknowledges that "an outbreak of anger placed her at the mercy of Dr. Bush,"—she refused to obey orders, we believe,—and says, "of this, as a natural consequence of my weakness, I do not complain"; but she cannot see, apparently, that such "natural consequences" are just what those fear who think women are unfitted to be doctors,—nor that the medical staff had to consider the interests of their patients and the orderly working of the hospital, and not "the cause she represented." We much fear that this little *contretemps* must be considered decidedly unfavourable to the medical women's cause. And discouragement has come from abroad also. Miss Emily Faithful, a strong supporter of "women's rights," wrote some time ago a letter to the *Times* from the American University of Michigan, in which she said, "After a considerable trial, the mixed-class system has been abandoned in the medical department; and this I am informed has been the case in all the American colleges." And news came not long ago from Zurich that was not at all encouraging to the advocates of the admixture of the sexes in universities. Dr. Eliza Walker, at an agitation meeting at Birmingham, said that in Zurich "the professors had often told her that they had observed a change for the better in the conduct of the men in the mixed classes," but the Russian Government has taken up a strongly hostile position with regard to the mixed-class system, and the vast majority of female students in Zurich are Russian. The *Pall-mall Gazette* published an account of the matter, taken from an official organ of the Russian Government, in which it stated that "very unfavourable reports had reached the Government relative to the conduct" of the Russian female students in Zurich, and that, "in order to put an end to this abnormal state of things, it is hereby announced to all the Russian women who attend the lectures at the University and the Polytechnic School of Zurich, that such of them as shall continue to attend the above lectures after January 1, 1874, will not be admitted, on their return to Russia, to any examination, educational establishment, or appointment of any kind under the control of the Government." Some of the reasons which caused the Russian Government to act thus will be found in page 629 of our first volume for this year.

Sunday, June 15, was chosen to be the first "Hospital Sunday" for London, and the collections made for the medical charities of the metropolis on that day amounted in the whole to £27,700 0s. 1d.—not a large sum, certainly, when we consider the enormous wealth of London, and that the sum thus raised is about £8000 short of the annual expenditure of one hospital—the London—alone. We mention that one because it is the chief hospital taking share in the fund; the great endowed hospitals are of course left out. But the experiment is new, as applied to such an agglomeration of cities as London is, and it may well be that, as the committee of management hope, the sum raised will be larger as the movement becomes better and more perfectly organised, and more generally recognised. The distribution of the fund has met with not a little criticism, but in the main we think it was a good and just one. It was that of encouraging and giving most support to institutions which provide indoor maintenance and relief for the sick, rather than those that furnish medicine and advice indiscriminately to out-patients. The Committee observe in their report—"Our hospitals are, and it is to be hoped always will be, purely charitable institutions, relieving the poor and afflicted without fee or payment of any kind, and therefore not competing with the medical practitioner. The dispensaries seem to stand in a different position, and may perhaps be used gradually as the best available machinery for collecting such payment as the upper working-class can afford for the doctor who attends them." If the Committee can help to the well solving of the out-patient problem they will do a great good. We have at different times pointed out some of the dangers that it appears may arise from the "Hospital Sunday" system; but we most willingly acknowledge that great credit is due to Sir Sidney Waterlow and the rest of the "Committee of the Metropolitan Hospital Sunday Fund," for the ability and devotion with which they organised and carried out all the arrangements connected with it. They awarded £24,571 to fifty-four general and special hospitals, and £2153 to fifty-two dispensaries and other medical charities.

We have had the satisfaction of again recording some, though certainly not many, honours, distinctions, and special rewards that have been conferred on our bretheren. Mr. J. Cordy Burrows, of Brighton, has received the honour of knighthood; Surgeon-General W. M. Muir, M.D., who was already a Companion of the Bath, has been made a Knight Commander of that most honourable Order; while Inspector-General of Hospitals and Fleets J. Rees, M.D., Inspector-General of Hospitals R. Dane, M.D., and W. B. Marlow, M.D., and Surgeon-Major J. Wyatt, have received the distinction of the Companionship; and Surgeon Henry Bellew, Bengal, has been made a Companion of the Star of India. Inspector-General Alexander Nisbett, M.D., and J. R. L. Dickson, M.D., have been knighted. A vacancy having been made in the medical department of her Majesty's household by the death of Sir Henry Holland, Dr. Burrows has been appointed one of her Majesty's Physicians-in-Ordinary, and Dr. Sieveking was made one of her Physicians Extraordinary, in succession to Dr. Burrows. All these honours bestowed on the practising members of our profession have been noted with great satisfaction and approval by the profession at large, while a still wider spread approval greeted the bestowal of the Companionship of the Most Honourable Order of the Bath on that eminent and venerable veteran in natural science, Professor Owen. It is truly a small honour for a man of such world-wide fame, but, in England at least, the devotees of science must be thankful for small mercies from the Government.

There was high festival of the intellectual kind, and a grand gathering in the fine old hall of St. Bartholomew's Hospital, on June the 26th, on the occasion of the presentation of the testimonial portrait of Sir James Paget. Professor Humphry, of Cambridge, had been selected to deliver the presentation address, and acquitted himself right well, describing, in a well-ordered speech and in eloquent terms, Sir James's brilliant career, and depicting the qualities of head, heart, and mind which had won him "the high admiration, the unfeigned gratitude, and the sincere respect" of so many friends. "Two life-like portraits of Sir James by the greatest of living artists, John Everett Millais," were then presented to Sir James and Lady Paget. Many of our readers will have seen the original portrait in this year's exhibition at the Royal Academy, and admired its life-like truthfulness and vigour, and the copy was in no whit below the original. Sir James returned thanks in one of those perfect speeches which he is well known to have the power of making—speeches that very few, indeed, can hope to equal, and none can surpass; and he never was more happy, more interesting, more simply and genuinely eloquent than now. After speaking briefly of his early struggles, the beginning of success, and the increasing flow of reward for his exertions, he alluded with affecting simplicity to the time, not long ago, when "it seemed as if his life of active work had come to an abrupt close, and he was uncertain what would follow. He was then very ill." But renewed health, happiness, and honours came, and life again became bright. "He had never, however, had it in his mind to reach this great honour; but having reached it, he was profoundly grateful." He added that he laid no claim to any self-denial, for he had all his life loved work, loved his profession, loved his hospital, and loved teaching; and to these he had devoted his life with ever-increasing satisfaction. Then, in his own and Lady Paget's name, he presented the original portrait to the Hospital, and promised to leave the copy to one of his sons, who "promised to be all that a parent could wish."

When Dr. Druitt was compelled, by continued illness, to give up his home, his professional labours, and his literary pursuits, and go abroad to seek a renewal of health, those who best knew and could appreciate his works desired to present him with some token of sympathy and friendship; and 107 of the leading members of the profession constituted themselves a general committee for this purpose. Their wish was largely shared in by the profession, and it was with very great gratification that we recorded in this journal that the result was the presentation to Dr. Druitt of a cheque for £1215 in a silver cup, given "by 370 professional and other friends, in evidence of their sympathy with him in a prolonged illness, induced by years of generous and unwearied labour in the cause of humanity, and as a proof of their appreciation of the services rendered by him as author and sanitary reformer to both the public and the profession." This expression of feeling was, we know, most gratifying to Dr. Druitt; and, we may add, scarcely less so to all who know, and therefore admire him. One thing only can please them still more—viz., to see Dr. Druitt come back among us with renewed health and strength.

We have had the pleasure—and it has been a real pleasure—of recording several other instances of honourable and affectionate appreciation of the services of members of the profession; but want of space prevents our particularising them here, while the great eminence of Sir James Paget, and our known connexion in work with Dr. Druitt, will, we are sure, be accepted as sufficient excuse for our having made room to again note the testimonials presented to them.

It would be easy—alas, too easy!—to extract from our pages a sadly long roll of names of our brethren who during the year have passed away from among us. We will not say, of "names once heard, but heard no more," for the names of many of them will for long years be in the mouths of wide circles of friends, and of grateful and trusting patients; and of not a few the names will live in the memories and hearts of numbers who never even saw them, and in some cases will be enshrined in the history of the science and art of medicine. Sir Henry Holland, after a life of singularly unbroken health, prosperity, and success, was taken from us, after a very short illness, on his eighty-sixth birthday. And we have recorded the deaths of many others at a ripe old age—thus, Dr. William Cooke, Mr. John Harrison, and Mr. John Griffith died at the age of 87; Sir W. Rae, M.D., Mr. Joseph Jordan, and Mr. T. Binwell at 86; Mr. C. E. Bissett at 84; Dr. J. Montgomery at 83; Mr. John North at 82; Mr. B. J. Crisp at 81; Dr. R. Pennell, Mr. R. Dobie, Mr. Stephen White, and Mr. Turner (of Manchester) at 80; while Inspector-General Dowse, Dr. Hamilton Roe, Mr. W. Harvey, Mr. A. Eaton, Dr. G. F. Evans, Mr. John Bishop, Mr. Henry Sterry, Mr. R. Partridge, Dr. T. Thompson, Dr. W. Hand, and Messrs. J. Soper Strecter, T. L. Pridham, and J. Grantham had all attained the age of 70 or more. More sad and unwelcome has been the task of recording the loss of men who were still at a more vigorous working period of life—at an age when we might have looked for many more years of active good work from them. Mr. Startin died at the age of 66; Mr. E. V. Austin at 63; Dr. Downing Toogood at the same age; Dr. A. Dymock, Dr. Thurnam, and Mr. John Wynne at 62; Mr. Hugh P. Fuller at 61; Dr. W. T. Dalby at 60; Dr. Bence Jones and Mr. Edward Moore at 59; Dr. Dalrymple at the same age; Dr. Tyler Smith and Mr. J. Butterworth Walker at 58; Dr. Benjamin Hobson at 57; Mr. Holmes Coote, Mr. Henry Bedwell, and Mr. W. A. Hillman at 54; and Mr. Gilbert Love and Dr. Edward Latham Ormerod died at the age of 53; and even while we write comes the sad news of the death of Dr. Fuller, of St. George's Hospital, and of Dr. Collet, of Worthing. Men like these, and such men as Mr. Carden (of Worcester) and Dr. R. W. Smith (of Dublin) leave behind blanks in life which will be long felt. But a yet more aching void remains when death strikes down in the spring-tide of professional life a man who has already done work that has justified the faith his friends had in him, and has seemed to change into certainty the promise of fame and success; and the profession has had to mourn the loss of not a few such men. Dr. W. Colston Warne died at the age of 22; Mr. A. H. Walpole died at an early age of typhoid fever; Mr. Frank Langley, at 28, was crushed to death when helping to cut away a mast on board an emigrant ship; Dr. A. M. Gray, of the Broadmoor Lunatic Asylum, died at 30; Dr. Franklyn Gould, at 33, of Indian fever; Mr. W. Frith Hunter at 32; Dr. Gwynne Harries, at 33, of scarlet fever; and Dr. John Murray, of London, at the age of 29, and Professor H. C. Cutliffe, of Calcutta, at 41—both died of œdema of the larynx. *Multis ille bonis flebilis occidit.*

We must also give a line to again record the death of Nélaton, the most eminent surgeon of the day; Romberg, pre-eminent among neuro-pathologists; and Czermak; and among men of science, Liebig and Coste.

We will now give, as has been our custom, a brief summary of the principal contents of our two volumes for the year. We believe that our readers find this summary of use to easily remind them of the chief subjects that have been treated of in our pages; and we also put it before them as the justification of our hope that the journal has at least maintained its high character as a useful and faithful record of professional work.

Under the heading of "Original Lectures" we have had the satisfaction of publishing the valuable lectures of Dr. Grainger Stewart, "On the Waxy and the Inflammatory Forms of Bright's Disease," and "On Cirrhosis of the Kidney"; of Dr. Peacock, "On Diseases of the Heart"; and of Dr.

Hnghlings-Jackson, "On the Diagnosis of Tumours of the Brain"; Dr. Andrew Clark's excellent and snggestive "Clinical Remarks on a case of Renal Inadeqnacy"; Dr. Edgar Sheppard's "Lectures on Insanity"; Professor Laycock's, "On brief Recnrrent Apnœa as a Cause of Sleeplessness in Cardiac Diseases"; and Dr. Eustace Smith's "Commentaries on Diseases in Children"; Clinical Lectures—by Dr. Handfield Jones, "On Three Cases of Anomalous Rheumatism," "On Cases of Peritoneal Strnmons Disease," and "On Two Cases of Acute Phthisis"; by Dr. Henry Thompson, "On a Fatal Case of Chorea," "On Two Cases of Acute Rheumatism with High Temperatnre," and "On a Case of Otitis, Cerebral Abscess, and Malformation of the Heart"; and by Mr. J. W. Hulke, "On Cases of Rodent Cancer," "Cases of Epithelium of the Hip," "Cancer of the Rectum," "On Sarcoma," "On the Evolution of Cancer," and "On Infantile Purulent Ophthalmia"; selected extracts from Mr. Jonathan Hutchinson's clinical lectures "On Diseases of the Skin," and Dr. Tilbury Fox's lectures "On Pityriasis Rubra and Pityriasis Pilaris," and "On Lichen Planus." We have also been enabled to give our readers lectures—by Professor Dolbeau, "On Retro-Uterine Hæmatocele"; by Professor John Wood, "On a Case of Diseased Knee-Joint," and "On Umbilical Hernia"; Dr. Symes Thompson, "On Dnst-Inhalation as a Canse of Lung Disease"; Dr. H. Letheby, "On the Right Use of Disinfectants"; by Dr. Lionel Beale, "On Hospital Patients, Nurses, and Doctors" (a lectnre very largely admired and appreciated); and a clinical lecture by Dr. Balthazar Foster, "On Rnpture of the Aortic Valves from Accident."

Under the title of "Original Communications" we have as usnal been privileged to give to the profession valuable papers from many of the best-known, most able, and most trustworthy workers inthe profession. Among these articles we may mention Dr. John Cockle's "Contribntions to the Pathology of Tumours of the Neck"; Mr. J. Beswick-Perrin's "Record of Irregular Muscles, 1868-71"; Dr. J. Fayrer's papers on "Fibrinous Concretions in the Right Side of the Heart as a Cause of Death after Surgical Operations," "On European Child-Life in Bengal," "On Experiments on Poison of the Rattlesnake," and on other subjects; Dr. J. B. Garrod's "On Renal Calculus, Gravel, and Gonty Deposits, and the Valne of Lithium Salts in their Treatment"; Dr. W. H. Broadbent's "On a Study of a Case of Heart Disease, probably Malformation"; Dr. Snckling's "On a Rare Case of Monstrosity"; Mr. Bevan Lewis's "On Lead-Poisoning"; and Inspector-General Lawson's "On Two Cases of Death from Fibrinous Concretion in the Right Side of the Heart; communications by Dr. B. W. Richardson "On Methylene Ether, or Ethyl," and on "Opera Clinica"; by Mr. J. Hntchinson "On Subcoracoid Dislocations of the Humerus," etc.; by Dr. D. J. Brakenridge "On Oxide of Zinc as a Remedy for the Diarrhœa of Infancy and Children"; Dr. Stephen Ward "On the Treatment of Chronic Dysentery"; Dr. Peacock "On Five Cases of Paracentesis Thoracis occurring in Private Patients," and "On the Beneficial Influences of Sea Voyages in some forms of Disease"; and by Dr. L. Beale "On the Nnrsing of the Sick in Hospitals, Private Families, and among the Poor." Also Dr. M. Sarell's "Ovariotomy snccessfully performed for the first time in Constantinople"; Mr. T. Bond's "Poisonous Effects of Carbonic Acid"; Mr. H. Jalland's "Case of Scnrvy in a Child ten months old"; Mr. W. Johnson Smith's "Case of Injury to the Upper Portion of the Spinal Cord"; and Assistant-Snrgeon N. Alcock's "Interrnpted Correlation of Respiration, Pulse, and Temperature, in a Case of Gangrenous Abscess of the Lung," and his papers from Pirogoff's "Gleanings in War Sanitation." Fnrther, we have had the pleasnre of publishing valuable papers—by Dr. R. Druitt, "On Two Cases of Intermittent Hæmatinuria"; by Moodeen Sheriff, "On the History of the Epidemic of Dengue at Madras in 1872"; by Dr. W. Moxon, "On a Case of Acute Cancer of the Liver, simulating Suppuration"; by Dr. G. B. Halford, "On Snake Poisoning and its Treatment"; by Dr. Handfield Jones, "On a Case of Hydroa," and "On Cases of Heart Disease affording evidence respecting the Action of Digitalis"; by Dr. Lewis Shapter, "On Motor Inco-ordination (or Locomotor Ataxy)"; by Dr. T. Stretch Dowse, "On Acute Ataxy"; by Dr. R. H. Semple, "On Diphtheria"; Dr. J. W. Ogle, "On Sleeping Sickness"; Dr. John Macpherson, "On the Seasonal Prevalence of some Erruptive Fevers in India"; Mr. C. J. Egan, "On the Erruptive Fever in Kaffraria"; and Dr. James M'Craith, "On the Practice of Medicine in Smyrna"; Dr. J. Haddon's papers "On Small-pox"; and Mr. Arthnr Farre's "On Small-pox, its Erruption, and the Pathology of its Distribution"; Mr. Lawson Tait's report of "Death under the Administration of Methylene Ether"; Mr. Pandurang Gopal's "Observations on Fatty Urine," and Mr. T. E. Amyot's "Case of Fatty or Chylous Urine"; Dr. W. R. Spencer Jeffries' "Case of Comminuted Fractnre of the Cranium, Right-sided Hemiplegia, Aphasia, Recovery"; papers by Mr. C. F. Maunder, "On Coincidences in Snspected Strangulated Hernia," "On Lumbar Colotomy," and other subjects; by Mr. F. A. Mahomed, "On the Physiological and Clinical Use of the Sphygmograph"; by Dr. David Nelson, "On Constipation simnlating Diarrhœa"; by Mr. W. MacCormac, "On Professor Esmarch's Mode of Performing Bloodless Operations"; by Mr. F. Irving De Lisle, "On a Case of Malignant Facial Carbuncle," a case of "Thoracic Anenrism, Consolidation of the Tumonr under Treatment," and "On the Treatment of Delirium Tremens and Allied Diseases by Large Doses of Digitalis"; by Mr. W. Donald Napier, "On the Detection and Removal of Vesical Calculi by a New Method," and "On the Treatment of Vesical Calculi"; by Dr. G. W. MacNalty, "On a Case of Syphilitic Gummata in the Heart"; by Dr. J. Von Tunzelmann, "On Cases of Lead-Poisoning by Drinking-Water"; and Professor Joseph Jones's "Outline of Observations and Investigations on Yellow Fever"; and communications from Drs. T. Laycock, Edwyn Slade-King, and T. Savage; and Messrs. F. W. Lowndes, G. Gaskoin, C. S. Jeaffreson, W. F. Teevan, Philip Foster, Stromeyer, Little, and many other valued contribntors.

We may note here, also, some very valuable papers and lectnres which we have published during the year, though they were not placed nnder the head of either "Original Lectures" or "Original Communications"; snch are Dr. Peyton Blakiston's admirable "Clinical Reminiscences"—we have felt much honoured by being permitted to publish these recollections of a physician of his sagacity, acuteness, and ripe experience; Professor Hebra's lecture "On some Affections of the Skin occnrring in Pregnant and Pnerperal Women"; Professor Depaul's lecture "On Congenital Hydrocephalus in relation to Parturition"; Professor Jaccoud's "On Endocarditis in relation to Erysipelas of the Face"; and Professor Skoda "On Constipation in Pneumonia"; papers "On the Medical Uses of Electricity," "On Aspiration," and "On the Physiology of Vision"; papers "On the Physiology of the Secretion of the Bile," and "Of Menstrnation"; "On the Estimation of Urea in the Urine"; "On Megrim, or Sick-Headache"; "On Researches in the Physiology and Pathology of the Brain"; "On the Action of German Yeast and of Pasteur's Fluid upon Animalcules," by Dr. Leo Popoff, of St. Petersburg; Professor Virchow's "Description of a Hermaphrodite," Dr. James Johnstone, of Shanghai, "On Cases showing the effects of Atropia as an Antidote to Opium"; "A New View of the Genesis of Tubercle"; and abstracts of Dr. Ballard's "Report on the Outbreak of Enteric Fever," and of Dr. B. W. Richardson's Croonian Lectnre "On Muscular Irritability after Systemic Death." The papers "On Guaiacum Blood-Tests" and on Dr. Cornil's "Recent Investigations concerning

Phthisis Pulmonalis" will have attracted notice; and we are sure that the admirably written "Notes on Madras as a Winter Resort" will have been read with great interest.

In our editorial articles we have endeavoured to notice and comment on everything that concerned the honour or welfare of the profession, or that in any degree affected its interests, or the relations of the public to medicine. Thus, we have given articles on "The Causation of Enteric Fever," on "Two Outbreaks of Enteric Fever," on "The Propagation of Zymotic Disease by Milk," on "The Dairy Reform Company and the Outbreak of Enteric Fever," and on "Sewage and Disease"; also on "Vaccinal Syphilis," on "Quarantine," on "Infant Deficit Abroad," on "The Medico-Legal Importance of Intracranial Abscess," on "The Medical Superintendence of a Cottage or Village Hospital," on "The Northampton Provident Dispensary," on "The Durham Poisoning Case," on "The Pollution of Rivers" and on "Metropolitan Slaughter-Houses"; on "The Contagious Diseases Act Repeal Bill," on "The Treatment of Malingerers," on "The Registration of Births and Deaths," on "The Propagation of Cholera" and "The Exclusion of Cholera," on "The Relations between Prescribers and Dispensers," on "Hospital Medical Officers and Hospital Committees," and on "The Guinea Fee." We have had leaders on "The Lessons to be Learned from the Last Illness of Napoleon III.," on "The Chemistry of Calculus," on "The Action of "Digitalis," "The Statistics of Rheumatism," "The Treatment of Diabetes," "Leprosy in the West Indies," "The Rôle of Iron in the Blood and in Food," "The Structure and Regeneration of the Nerves," and on "Glycogen and Glycogeny," on "Archebiosis," on "The Relations of Phthisis to Tubercle," on "The Influence of Age and Length of Residence on Mortality among Europeans in India," and on "The Treatment of Symptoms." We have often had to comment on the action and non-action of the General Medical Council; on the progress made or not made in carrying out the Conjoint Examination Scheme, and on education movements, and in this connexion have written on "The Future of the English Universities," on "The Matriculation Examination of the University of London," on "Preliminary Education," and on "The Commission on Scientific Instruction at Oxford and Cambridge." And, of course, we have had on various occasions to devote not a little time and space to the Medical Women Question.

By means of our Hospital Reports we have given useful and interesting cases, and supplied examples of the medical and surgical practice of the day in our metropolitan and provincial hospitals and infirmaries. By the "Topics of the Day" and the weekly notes our readers have been kept informed of everything of special interest to them professionally and socially; while our Notes from Abroad have told them week by week what topics have come most to the surface with our Continental brethren. The Therapeutic Memoranda and the notices of new inventions and of articles of diet have, we are glad to think, been found useful; and it has given us much pleasure to be enabled to continue giving Mr. J. F. Clarke's most interesting "Autobiographical Recollections."

We will mention only a few more valuable articles that we have from time to time given, such as the notes "On the Surgical Instruments at the International Exhibition"; Dr. R. H. Bakewell's "Experience on board an Emigrant Ship"; Professor Laségue's article "On Hysterical Anorexia"; the "Notes on Foreign Hospitals and Schools of Medicine"; and the meeting of the German Association for the Advancement of Natural Science and Medicine; the Hunterian Oration of Mr. Hancock; Mr. Prescott Hewett's address to the Clinical Society, and Mr. Bryant's to the Hunterian; Dr. Richardson's paper "On Fibrinous Deposits in the Heart"; Professor John Curnow's very remarkable lecture "On Individualism"; an able and interesting article "On the Doctors in 'Middlemarch'"; and the articles "On Workers in Textile Fabrics," "On Yarkand as seen by a Physician," "On the State of Hindu Medicine," and "On Snakes."

We desire to express our warm thanks to all who have so kindly and ably contributed to the value and success of the journal, and to the large number who, as our accompanying advertisements show, have promised us aid and contributions in the ensuing year; and to them and all of our brethren, at home and abroad, engaged in peaceful pursuits or at the seat of war, we wish health and prosperity, "A Merry Christmas and a Happy New Year."

THE PHYSIOLOGY OF VISION.

VII.—The Sensations of Light and Colour.

We have already discussed the peculiar structure of the retina as a nervous structure, and now desire to deal with it as an organ of sensation. We have also pointed out that in every part save the yellow spot the rods and cones, which are the true sentient structures, have interposed, between them and the light, layers which are more or less opaque. Hence it is that in this yellow spot alone is the function of vision perfect; and we, in fact, make up for its small size by the movements of the eyeballs, intended to bring every point of an object in focus for this yellow spot. Other portions of the retina save the optic papilla have the power of being stimulated by light-waves, but in no part is vision so accurate as in the yellow spot.

But the question arises—Is light the only stimulus to which the optic nerve responds? To that the answer is plainly, No; for any violent stimulus, as a blow on the eye or an electric shock, sufficient to affect the nerve or its periphery, will give rise to the same kind of sensation. It is not, therefore, specificity in the stimulant, but specificity in the organ to which the effect of the stimulation is conveyed, which is implied by the sensation of light. And it is only because the retina is deep sunk in the orbit that it is not more frequently stimulated by other agencies than light. This is true of other organs of sense than that of vision, for the faintest electric shock produced by such a simple arrangement as that of two different metals, as zinc and copper, will give rise to a marked taste if brought in contact with the tongue; and it is not always easy to separate the effects of a pungent irritating body from those of a scent, as far as smell is concerned. Anything, therefore, which irritates a special nerve, whether at its periphery or in its course, will be appreciated by its centre, as taste, smell, sound, or light, as the case may be.

It is, however, in discussing the subject of colour that some of the most interesting facts relating to the retina are brought out. Newton was the first, by means of the analysing effects of the prism, to show that white light is not simple, but is compounded of the various coloured rays, which constitute the solar spectrum. The most important of these are three—viz., red, green, and violet,—with yellow intervening between red and green, and blue between green and violet. These colours are produced by waves in the luminiferous ether of varying length, the longest giving rise to the red rays, the shortest to the violet; but, as already pointed out, there are other rays in the solar spectrum not appreciated by the eye. Thus, there are longer waves than the red, and shorter than the violet, but these give rise to no impression on the retina, and hence are not luminous. But the long rays beyond the red are heat-rays, and the short rays beyond the violet are chemical rays. These heat-rays are appreciated by the general surface of the body, but the very short ones are not. We have a good example of the non-luminous heat-rays in the heat which is given off from a blackened stove where no fire is visible, but the heat is readily felt. Such a fact shows the propriety of separating, as is now generally done, the sense of contact—*i.e.*, touch—from the

sense of temperature produced by these invisible heat-rays, apparently appreciated by the same sentient surface.

It is a well-known fact that in preparing pigments a mixture of blue and yellow makes green; but it is a fact only comparatively recently discovered that blue and yellow rays of light do not give green but white light. But white light may be composed in various other ways. If we throw on a screen rays of light which are red and bluish-green, we produce white light; so, if we throw in the same way yellowish-green and violet rays on a screen, again we get white; but the two whites, though undistinguishable to the eye, are characterised by totally different properties,—for whilst the first white would have a stronger heating effect, the second would have a much more marked effect on a sensitive silvered plate, inasmuch as this white contains many more chemical rays than the other. In this respect the eye is inferior in delicacy to the ear, which can, from the volume of sound produced by an orchestra, pick out the tone and note of each particular instrument.

Associated with this is the interesting subject of colour-blindness. Those who suffer from this defect almost invariably are blind to the rays at one end of the spectrum only, and that is the red end. On their retina red rays produce no effect, and hence a surface illuminated by them only seems black. Many stories are told of individuals who suffered from this defect. Nevertheless, the very defect helps us to a theory as to the mode of stimulation of the optic nerve by light-giving rays. In all probability we have at least three kinds of rods and cones—one set which are affected by red rays, another by green, and a third by violet. When all of these or certain of them are stimulated at once, the sensation of white light is produced; but if those sentient of red only are alone stimulated, then the colour red is produced; but in red-colour-blind people no such rods and cones exist.

THE WEEK.

TOPICS OF THE DAY.

Rawdon Macnamara, F.R.C.S.I., M.D. (*honoris causâ*) Univ. Dub., Professor of Materia Medica, and ex-President of the Royal College of Surgeons in Ireland, Surgeon to the Meath Hospital, has been appointed the representative of the Royal College of Surgeons in Ireland upon the General Medical Council of Education and Registration of the United Kingdom.

The Government transport *Sprite*, which left the Thames on Sunday, the 21st instant, for Cape Coast Castle, took out the ten additional army medical officers considered necessary to meet the exigencies of the service on the Gold Coast. These gentlemen were—Surgeons G. B. Stewart, J. Watson, A. Minto, J. Maturin, K. Macaw, G. Andrew, J. Williamson, C. B. Jennings, T. Faris, and T. Oughton. Some idea of the strong European staff necessary to be provided to meet the casualties caused by the climate of the Gold Coast may be arrived at when it is stated that out of forty officers who left England on Sir Garnet Wolseley's staff, thirty have already been more or less prostrated by sickness, and this during a period which is looked upon as the healthy season. There is, we believe, a well-founded rumour that the Admiralty has decided to grant double pay to medical officers of the Royal Navy doing duty on shore, or on board the vessels stationed off the Coast, during the continuance of the present war.

ROYAL COLLEGE OF SURGEONS, IRELAND.

A meeting of the Council, Fellows, and Licentiates of the College was held in the Albert Hall, Stephen's-green, on the afternoon of Saturday, the 20th inst., for the purpose of conferring the Honorary Fellowship of the College upon the Rev. Samuel Haughton, M.D., Fellow of Trinity College, Dublin. Among those present were—the President, Vice-President, and Secretary of the College, many members of the Council, and of the Court of Examiners. The President, in conferring the Honorary Fellowship, alluded in complimentary terms to the high distinction Dr. Haughton had won for himself in the scientific world, and gracefully expressed the pleasure it gave him and his brethren to bestow the Fellowship of the College upon so worthy a recipient. The new Honorary Fellow having returned thanks, the diploma of Licentiateship was granted to the following candidates, who had been successful at the recent quarterly examinations:—G. D. Burke, Arthur Butler, John H. Courtenay, J. B. Emerson, Thomas Enright, J. R. Gentleman, A. T. H. Kerr, F. Langan, S. T. Lewis, Osborne Limirick, Henry Longford, C. E. M'Namara, Joseph M'Namara, Rawdon M'Namara, Charles Morrow, E. J. Murtagh, S. H. Newell, F. O'Flaherty, Alfred Patterson, J. H. Poett, R. Rainsford, L. W. Rawson, A. G. Russell, H. M. Scott, R. Stone, Agmon B. Vesey.

THE CONJOINT EXAMINING SCHEME FOR IRELAND.

We are in a position to state that the Committee of Reference, consisting of two delegates from each of the following bodies—viz., the University of Dublin, the King and Queen's College of Physicians, the Royal College of Surgeons, and the Apothecaries' Hall of Ireland—are at present meeting once or twice a week, with a view of perfecting the details of the scheme arranging the question of remuneration of the examiners, and settling the number of, and time for, the professional and arts examinations to be held under the Conjoint Examining Board. The University of Dublin has already appointed ten examiners—seven in professional subjects, and three in arts—as members of the Board.

THE MEDICAL OFFICERS OF THE SOUTH DUBLIN UNION.

The dispensary medical officers of the South Dublin Union are about to address an application for an increase of salary to the Board of Guardians of that union. Seeing that these gentlemen receive each £25 a year less than the physicians to the workhouse, that they conscientiously discharge to the best of their ability the onerous duties devolving upon them as agents of curative medicine in the slums and alleys of a large city, and that many of them in addition voluntarily act as local health officers in their several districts without fee or reward, it is to be hoped that the board of guardians will accede to an application couched in moderate and truthful terms. We willingly extract two sentences from a document accompanying the application, with a copy of which we have been favoured:—

"We trust that you will remember the continued risk we run from exposure to contagion in its most fatal forms, but too constantly present in this city; for it is upon us, dispensary physicians, and our families that this risk falls far more heavily than upon any other class of medical men, surrounded, as we are in our daily course of duty, by the depressing influence of overcrowding and other evils to be met with in the tenements of the humbler classes.

"The effects of such exposure is but too surely felt by us, as seen in the frequent occurrence of debility, illness, and even fatal results; the former but too often oblige us to relinquish any other means by which we may be seeking to supplement our scanty salaries, and the latter compel the families of your medical officers to seek that assistance from the benevolent which the parent was unable to provide during life.

FISSURES IN ANO TREATED WITH IODOFORM.

Dr. Francesco Parona (*Giornale Italiano delle Mal. Ven. e della Pelle*, October) gives his experience of iodoform in fissures of the anus, and strongly recommends it. He believes it acts in great measure as a local anæsthetic, "which allays the spasm of the sphincter during defæcation, while it favours cicatrisation by neutralising the irritating effects of

fæcal matters which may remain on the ulcerated surface." It has also a direct healing action. Dr. Parona uses the iodoform as an ointment (one part to three of lard), and applies it on a small cylinder of charpie, of a size requiring but little force for its introduction. The charpie has the advantage that its filaments adapt themselves readily to the slight irregularities of the anal mucous membrane. The dressing is changed twice a day, and replaced after each motion, and in the majority of cases the pain and spasm caused by the fissure cease in a few days, and the patient is well in a relatively short time. Of four cases, of which details are given, the longest time was twenty days, while one of the patients had been ill four months previous to the treatment.

CALCUTTA MEDICAL INSTITUTIONS.

The report on the Calcutta medical institutions for the year 1872, by J. Campbell Brown, C.B., Inspector-General of Hospitals, Indian Medical Department, Calcutta, states—"Of the 20,805 patients treated in the various hospitals, 2761 died, the mortality being thus at the rate of 132 per 1000. The chief diseases treated were fever, dysentery, cholera, diarrhœa, and small-pox, and it is curious to observe, in relation to the supply of pure water lately furnished by the Calcutta Municipality, that fever, dysentery, cholera, and diarrhœa all gave more admissions in 1872 than in 1871. In 1871 fevers gave 4251 admissions, against 5003 in 1872; dysentery, 980, against 1184; cholera, 800, against 1142; diarrhœa, 509, against 625. These facts must be annoying to those who see in pure water the panacea for all those diseases."

FROM ABROAD.—DR. JULES SIMON ON THE ABUSE OF WARM BATHS FOR YOUNG INFANTS.

Dr. Jules Simon delivered recently at the Hôpital des Enfants Malades an interesting lecture (reported in the *Gazette des Hôpitaux*, December 2) "On the Abuse of Warm Baths for Young Infants." He says that he has been much struck, both in his private and hospital practice, by the mischief produced by the practice, now so general, of administering daily warm baths to young infants, mothers and nurses not being content with the washing necessary for cleanliness, but keeping the infants in the bath for from five to ten minutes. At first all seems well; the child sleeps more, and sucks less often, and its docility and good condition are matters of congratulation. After a while, however, it becomes pale, and its limbs are soft—in a word, it is enfeebled. And how can it be otherwise? for the infant kept in a bath for five or ten minutes is in much the same position as an adult would be who had been kept in one for three-quarters or a whole hour; and where is the adult in Paris who could stand this with impunity? Whether the fact of the absorption of water be demonstrable or not, it is certain that the epithelial cells, engorged by fluid at the time in these repeated and prolonged baths, furnish to the capillaries a source of future absorption, the surface also being impregnated with heat and moisture. With the skin thus predisposed, the extremities of the surface of the child's body are at the same time most injudiciously exposed—following, as the lecturer says *is* (but should have said *was once*) the English fashion—to the inclemencies of the weather. These frail beings are expected to endure causes of fatigue and exhaustion which we could not tolerate ourselves; for in these northern climates there is not an adult who would submit to such a hygiene with impunity.

It is not intended to decry the reasonable employment of warm baths as a therapeutical agent in young infants. In nervous infants and in those who are constipated and the subjects of severe colic, they are of service; but baths in our climate must only be employed according to indications, and cannot, as in warm climates, be made an immoderate use of without evil results. Not only do they then become a source of enfeeblement, but they not infrequently give rise to cutaneous inflammations, from the fact that the infants, so far from being provided with the reconstituents they stand in need of, are placed in the position of scrofulous subjects attacked by eczema, which emollient baths only aggravate. M. Simon has frequently observed that infants in good health, subjected to these daily baths, become attacked, in spite of them, with intertrigo at the root of the thighs. The duration of the baths is consequently increased, and the disease spreads farther and farther for weeks or months. The baths are suppressed, and astringent lotions substituted, and the inflammation subsides in a relatively very short time.

There are, indeed, infants who remain lively and robust, and to whom these baths do not seem to do any harm; but for the Parisian population this is quite exceptional. From the nursling to the adult, the Parisians are mostly pale and anæmic, requiring much oftener corroboratives than antiphlogistics. In the country there is more power, and the infants, whose appearance there is excellent, will bear warm baths better; but still the bath should be regarded as an active debilitating agent, and not a mere means of cleanliness, and it is very questionable whether a daily warm-bath of ten minutes can be given with impunity to a child at the breast, even in the country. M. Simon also disapproves of medicated baths for children. Thus, in infantile syphilis, not only are the sublimate baths inefficacious, but they exaggerate the susceptibility to cold to which these little patients are so liable. Sometimes, too, the cutaneous manifestations are ameliorated while the disease is still making rapid progress. The skin is, in fact, a bad channel of introduction for all therapeutical agents ununited with fatty bodies; and in the immense majority of cases the sublimate baths, in place of giving tone to the syphilitic infant, enfeeble it, and favour the progress of the disease.

"To sum up what I have said, I consider the daily use of warm baths for young infants a very bad practice, and I interdict them in cutaneous inflammations. In both cases, whether in a hygienic or practical point of view, washing and lotions are far preferable. So, too, the sublimate baths, so much vaunted in infantile syphilis, are far less useful than mercurial frictions and Van Swieten's liquor. Warm-baths should not be prescribed in our climate except as a soothing remedy; and the way they have been abused, especially in Paris, should cause their proscription unless formally indicated. I am not now treating of their indications, my object being a more limited one—that of pointing out the inconvenience and danger of their repeated and prolonged employment."

REVIEWS.

1. *A Manual of the Practice of Surgery.* By W. Fairlie Clarke, M.A. and M.B. Oxon., F.R.C.S., Assistant-Surgeon to the Charing-cross Hospital. Second edition, revised, enlarged, and illustrated by 144 engravings. London: Henry Renshaw, 356, Strand. 1874. Pp. 402.
2. *A Manual of the Operations of Surgery, for the Use of Senior Students, House-Surgeons, and Junior Practitioners.* By Joseph Bell, F.R.C.S. Edin., Lecturer on Surgery, Surgeon to the Royal Infirmary and to the Eye Infirmary, and late Demonstrator of Anatomy in the University of Edinburgh. Third Edition, revised, enlarged, and illustrated. Edinburgh; Maclachlan and Stewart. London: Robert Hardwicke. 1874.
3. *The Student's Guide to Surgical Anatomy: being a description of the most important Surgical Regions of the Human Body, and intended as an Introduction to Operative Surgery.* By Edward Bellamy, F.R.C.S., Associate of King's College, London, Senior Assistant-Surgeon to the Charing-cross Hospital, Surgeon to the Royal Infirmary for Children, Waterloo-road, and Teacher of Operative Surgery in the Medical School of Charing-cross Hospital. London: J. and A. Churchill, New Burlington-street. 1873.

These three manuals are to a great extent supplementary of

one another, and they supply in a piecemeal manner much of all that knowledge which is required to make a competent practical surgeon. We fail, however, in seeing any advantage which small manuals of the practice of surgery and of surgical operations possess for house-surgeons and practitioners over such works as Erichsen and Bryant, for example, in which full descriptive accounts of diseases and injuries and their pathology are given side by side with directions as to what is best to do in different kinds of cases.

Indeed, we would go further, and say that it is vastly more important—and it would be well if all young surgeons felt it to be imperative—that comprehensive treatises should be adopted as guides to practice: works which, as well as being accurate and judicial, are critical and explanatory, rather than those which, to be concise, are authoritative and dogmatic, and abound in tutorial, but not reasoned-out preferences.

It is most undesirable that instruction upon great and intricate subjects—such as surgery, which in its nature and consequences is of momentous importance—should be supplied in a cut-and-dry sort of way; or that it should be dealt out as an exercise for the memory rather than for the reasoning intelligence of the instructed.

It is not the hard rock of dogmatism so much as the bread of lucid exposition that is required. But a small foolscap octavo volume upon a great practical subject must necessarily abound in dogma, and cannot be expositive.

But let it not be supposed, however, that we condemn the substance of the handbooks before us. On the contrary, we commend these manuals so far as they go; while Mr. Bellamy's work on surgical anatomy extends, we think, in area quite as far as it could or ought to go, and in detail, if anything, it errs on the side of fulness and even diffuseness.

Now to add a few words upon each work separately. The merits of Mr. Clarke's manual have evidently been appreciated, as it has now reached the second edition. To this edition has been added the supplement to the first—viz., the little work on "Bandages and Splints"; and the book, as it is now brought out, is improved by the addition of several illustrations—many of which have been copied from sketches by the author himself,—and also by a formulary of receipts and prescriptions, to which frequent reference is made in the text.

The contents are divided into five parts—on (1) Surgical Diseases; (2) Surgical Injuries; (3) Constitutional Effects of Surgical Diseases and Injuries; (4) Diseases and Injuries of Various Parts—Tissues and Organs; and (5) Operations.

It would be obviously unfair to complain of the arrangement of a book intended merely as a pocket guide for young practitioners when reference to any subject is made easy by a good index. But at first sight it strikes us with surprise that surgical diseases are dispensed with in forty-six pages, half of which treat of tumours, and nearly all the rest of inflammation, scrofula, and tuberculosis. No mention is made in Part 1 of venereal diseases, and we look in vain for surgical fever, erysipelas, and pyæmia. These latter diseases, with tetanus and hysteria, are included under Part 3, but we confess to strong misgivings that a very wrong impression is likely to be conveyed by grouping such formidable and fatal diseases as these under the heading of "constitutional effects" of diseases and injuries. Even collapse, as the author himself states, may be produced, independently of any disease or injury, through a sudden mental impression; moreover, some reference ought to be made to the distinction between collapse with hæmorrhage and collapse without hæmorrhage. In the latter case it is open to a doubt whether the injunction, "while the collapse continues, bleeding should on no account be practised," is invariably a sound one.

The amount of space allotted to the various subjects is not in all cases proportionate to their importance. For instance, in Part 4 it will be noticed that paracentesis abdominis occupies nearly as many lines as "ovarian disease," including ovariotomy, not much less than "penetrating wounds of the abdomen," and about half the space of "malignant tumours of the breast." Again, two pages and a quarter are devoted to bubo, and about three pages to the wide subject of secondary syphilis; while ulceration of the great toe receives nearly as much attention as all the varieties of club-foot and their treatment. We are pleased, however, to find that twenty-four pages are given up to diseases and injuries of the eye, in which most of the affections of this organ are alluded to with more or less brevity. It is gratifying to find that the essentials of the surgery of the eye are not altogether omitted from a manual on general surgery.

The get-up of the book is excellent, the illustrations are as clear and telling as they are useful, and the manner and style of the author are good. We have no doubt that the second edition will find even more favour than the first.

Mr. Bell has already on more than one occasion been complimented upon his Manual of Surgical Operations, while the teachers and the students of operative surgery have shown in a very practical manner what their estimation of the book is, as it has now reached the third edition. As is well known to those familiar with the former editions, the manual is chiefly intended to direct students in practising operations upon the dead subject. It supplies, too, a well-tried and systematic arrangement of the course of instruction on the cadaver, and is, therefore, useful to the demonstrator as well as to his class. As a ready aid to the practitioners in the Services, in the colonies, or in the country, who, being thrown upon their own unassisted resources, must themselves occasionally perform important operations, we do not, for the reasons we have stated, consider it has any peculiar merit.

The aim of the author has clearly been to retain the original size and character of his work; and, without pretending to originality, without completeness of detail or variety of method, and while many omissions are self-evident, Mr. Bell's book is, as it ever has been, a methodical and trusty guide and an accurate and intelligible treatise.

Mr. Bellamy's Guide to Surgical Anatomy is a work dedicated to an anatomist by a teacher of anatomy. It will occupy a useful place amongst surgical text-books, as it presents in a compact form those portions and that kind of anatomy which students ought to know when going up for their pass examinations. Although nothing strictly relevant to the subject can be added in a volume on surgical anatomy which is not contained in works of anatomy in general use, still such a volume is valuable to men in the midst of their surgical studies, to whom it would be useless to commend a perusal of Quain and Sharpey, Ellis, Holden, or Hilles.

A treatise on surgical anatomy is, too, and ought to be, a very different thing from one on operative surgery. Surgical anatomy is the foundation-stone of operative surgery, and a knowledge of it ought to be acquired before operations on the dead body are commenced. The one is the science upon which the art is based; the other, the art based upon that science. The one recognises and registers phenomena; the other has an object to gain, and applies means for its accomplishment. The one deals in facts, and is an assemblage of truths; the other deals in precepts, and is an assemblage of directions for action. The one speaks in the indicative mood, and says, "This is the situation of the femoral artery, and these are its relations;" the other speaks in the imperative mood, and says, "Do this, and avoid that, in order to tie the femoral artery." The one has a wider application than the other, is requisite for a correct diagnosis, and often renders as much assistance to the surgeon where an operation is not, as where it is demanded. Hitherto there has been no handbook by any English teacher on surgical, or, as Mr. Bellamy terms it, "applied anatomy," although Mr. Galton has supplied the English student with an excellent translation of Professor Roser's work on the subject. Mr. Bellamy's book, though divided up in the same general manner as Professor Roser's, differs from it in its more detailed arrangement and treatment. The anatomical descriptions are, as might be expected from the author's experience as a teacher of anatomy, reliable and good. For a work on applied anatomy, however, they every now and then impress one a little too much from the dissecting-room rather than from the bedside or operating-theatre point of view; while the directions given for the dissection of parts and regions are not necessary for the ends of surgical anatomy, and are likely to weary and harass the reader. In places the author's thoughts have been too concentrated upon the matter to allow him to pay sufficient attention to the manner of his writing, in consequence of which the sentences occasionally strike harsh and dissonant, and sometimes their meaning is even obscure. On the whole, however, the book is a very creditable performance, and we cordially congratulate Mr. Bellamy upon having produced it.

Letts's Medical Diary for the Year 1874.

Letts's Diaries, 1874. London: Letts, Son, and Co.

Of the general excellence of Letts's Diaries it is scarcely necessary for us to speak—it is acknowledged on all hands; and the issue for 1874 is no whit behind its predecessors. The

"Medical Diary" will prove a very valuable companion to the busy practitioner. It contains a well-arranged visiting-list for every day in the year; a diary for meetings of societies, and other engagements, including midwifery, 280 days from the date being calculated in a parallel column; scales of professional fees; information on English and foreign baths and mineral waters; a table of antidotes for poisons; information as to the administration of chloroform; therapeutic equivalents; the hypodermic injection of remedies; the chemical relations of the urine; English and metrical weights and measures, etc. A more useful pocket-book for a medical practitioner is not to be found. It can be obtained in different bindings, varying with the price. We can cordially recommend it.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 9.

Dr. C. J. B. WILLIAMS, F.R.S., President, in the Chair.

DR. JOHN HARLEY related the particulars of four cases of Disorders of Muscular Movement illustrating the Uses of Conium, which he demonstrated on the patients at the meeting. He said: At the present time an unusually large proportion of my patients are afflicted with nervous disorders, and as several of them are taking full doses of hemlock, I have availed myself of the opportunity of calling the attention of the Society to the uses, both medicinal and surgical, of this invaluable plant. I propose to demonstrate the action of the medicine, and with this view I will at once give three or four of the patients their customary dose, in order that the Fellows may witness the effects towards the close of the meeting. 1. The first patient, W. N., aged 44, is the subject of spasmodic wry-neck, of a chronic and severe nature. The right arm is almost equally affected, and while the head is plucked round to the right, and the chin tilted upwards, the arm is drawn over the chest to the other side of the body. He has been under my care for the last month in St. Thomas's Hospital, and during this time has taken from three to seven ounces of the succus conii of the British Pharmacopœia daily; he is at present taking three ounces and a half of the juice—the quantity which I now give him. 2. The second case is a similar one, but the spasm has not existed for more than fifteen weeks, and it is confined to the muscles of the neck. He too, is a strong, middle-aged, and otherwise healthy man. He has been under my care six weeks, and during this time has taken from five to seven ounces of the juice daily. He will now take his customary dose of three ounces and a half. 3. The third patient, a healthy young man, aged 19, has been long incapacitated for work by spasm of the muscles of the right upper arm. I have only recently given him conium in full doses. He will now take three ounces of the juice. 4. The fourth case is that of a little girl, aged 4½ years. Up to the time she came under my care she was the subject of epilepsy and complete hemiplegia of the right side. She has taken a paralysing dose of hemlock twice a day almost every day for the last three months. The juice I have given is that which I have used for the last year. It is, for juice, an efficient preparation, and one-sixth of the quantity which I have given those men is sufficient to produce moderate cicutism in a woman or a weakly man. I need not observe that the doses which I have administered to these patients are large, nor that the disorders under which they labour require strong treatment. In such cases there was from the first an almost or altogether uncontrollable irritation of the motor centres, an irritation which has now long since degenerated into a vicious habit—the muscles of one side exercising a withering tyranny over those of the other. To relieve such affections the remedy must be somewhat proportionate to the disease. If our patient is overcome by convulsion, we must overcome the convulsion by paralysing, within the limits of safety, the motor centres. If we do not adopt this principle of treatment and conquer the spasm, we may be sure it will maintain the ascendency. I have assured myself of one remarkable and most encouraging fact—namely, that while hemlock is from day to day, from week to week, and from month to month, quieting and restraining the turbulent centres of motion, it is at the same time invigorating them; and that while it holds spasm of one set of muscles in check, the corresponding muscles of the other side, which have perhaps become weakened and atrophied, rapidly improve in nutrition and power. This is most notable in children, and the little patient (Case 4) whom we have just had before us is a good example of it. The voluntary motor system is daily soothed to rest by the conium, as the intellectual portion of the brain may be soothed by opium to sleep, and when it awakes it is refreshed, not for unhealthy, but for healthy action. Here we recognise a most beneficent action—an intelligibly curative effect. The little girl is making a speedy recovery. Three months ago her mother carried her about in her arms; she could not walk, and the right arm hung useless by the side, and for the previous two months she had from five to nine convulsive seizures with loss of consciousness every day. From the day she came to me to the present time I have daily induced cicutism. The fits ceased at once, and there has not been a single return. She now walks alone, and is able to use the arm and raise it to her head. The cases of spasmodic wry-neck have benefited greatly; indeed, ever since I have induced strong cicutism daily in the patients the spasm has been, in the one case (the second) wholly arrested; and in the other almost abolished, and the use of the right arm has been restored. The other case (spasm of the arm) as yet has derived no benefit, but he has had efficient doses of hemlock only one week. Such are the indications for and results of medicinal treatment in disorder of muscular movement. I would now very briefly direct your attention to the surgical uses of hemlock. If you examine the patients at the end of this meeting you will find complete relaxation of the whole muscular system, and the muscles of the head and face are apparently affected to a greater degree than those of the rest of the body. The orbicularis is incapable of resistance; the movements of the eyeball are very sluggish, and there is more or less complete ptosis. The muscles of mastication and deglutition are nearly paralysed. Speech is slow, and effected with exertion; the voice is gruff, from relaxation of the laryngeal muscles. Withal, the heart and breathing are normal, sensation and intelligence are perfect, and the mind is calm. The surgeon will infer from these facts the value of conium in trismus, in spasm of the orbicularis and of the gullet, and in dislocations of joints, where the action of powerful muscles resists the efforts of the surgeon. To the ophthalmic surgeon conium is ready to become a valuable assistant. It at once relieves, as by magic, that powerful spasm of the orbicularis in keratitis which is caused by photophobia; and it is savage to talk of division of this muscle as a preliminary to incisions of the eyeball. There is one operation in which it will prove a great boon; that is, the removal of artificial substances from the gullet. Accidents are occasionally happening with false teeth: it is a merciless and dangerous operation to attempt the removal of such bodies from the stomach or œsophagus without first removing the spasm which their presence causes, and at the same time relaxing the tube to facilitate their extraction. I will not enlarge upon this topic; when you see the effects on the muscular system you will readily make your own inferences. I will, however, ask you to bear in mind one important fact—namely, that hemlock is totally destitute of anæsthesial properties, and that patients under its influence are able to help you by their efforts, and to guide you by their sensations. Those who are unfamiliar with the action of hemlock will probably think that there is danger in using it in the way I have done to-night. I can say positively that there is none. The effects of hemlock are remarkably uniform. The dose required is always proportionate to the motor activity of the individual. Relaxation of the orbicularis muscle may be used as an indication of the degree of cicutism. This indication may be safely reached by giving, a day or two prior to the operation, two or three increasing doses of the medicine. The succus conii varies considerably in power; that which I have used is perhaps a little stronger than the average, but I have at the present time four patients who are taking more than two ounces, six one ounce and a half, and more than a dozen one ounce as a single dose. And yet the succus is the only efficient preparation in the Pharmacopœia. I have long ago shown how a much more powerful medicine may be obtained.

Mr. B. CARTER asked Dr. Harley if he had any experience of these remedies in the condition called nystagmus, where there was a constant to-and-fro lateral and slight rolling movement of the eyeballs. This was supposed to depend on early defect of vision, so that the muscles never had time to become properly fixed so as to allow of distinct vision in one position.

Section of the orbicularis had been long discontinued; spasm could be relieved by a slight incision.

Dr. O'Connor asked if the first or second year's leaves had been used.

Mr. T. Smith asked what cases the remedy had been used in.

Dr. Harley said conia acted exactly like the succus, but was not so suitable for exhibition. He had used conium most largely in epilepsy and chorea, especially in chorea dependent on irritation of the corpora striata, and in the irritable condition of teething children. It was useless in paralysis agitans, save in the first stage. The eyeball was almost fixed. He could not tell what plant was used, but the annual was nearly as powerful as the biennial.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, December 4.

E. J. Tilt, M.D., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—James Johnson Bailey, L.P.B.S. (Stockport), W. A. Concanon, L.K.Q.C.P.I., and Robert William Parker, M.R.C.S.

Dr. G. Murray exhibited an Intra-uterine Pessary hinged to a vaginal portion shaped like Hodge's ring pessary.

Dr. Wynn Williams exhibited a Shield for Supporting a Vulcanised Stem Pessary, which he used in the treatment of anteflexions. It has a pouch or socket in its lower part sufficiently large for the button of the stem to fit into. After introducing the stem by means of the stilette, the shield is passed over the handle of the stilette through a hole in the centre of the pouch, and is thus guided to the button of the stem, which readily falls into its place and is there retained.

Dr. Chambers exhibited his Divaricating Vulcanite Intra-uterine Stem, which he said was light, well retained, and answered all the purposes for which it was required most satisfactorily.

Dr. Tapson related a case of Intra-uterine Tumour. The author having found great difficulty in removing an intra-uterine growth by the ordinary écraseur, and others also failing, he at length effected his purpose in the following way:—Through two canulæ were introduced pliable cutting wires, which were passed high up into the uterine cavity. One canula being made a fixed point, the other was passed round the tumour, encircling it in the loop thus formed. The canulæ were then withdrawn, and the wires externally connected with the écraseur, and thus the tumour was cut through at its base, and the mass removed.

Dr. Potter believed that Dr. Frederick Bird, who had been consulted in this case, would at no distant date send a short communication to the Society describing more perfectly the instrument which had been used.

A case of Extra-uterine Pregnancy was communicated by Dr. MacCullum, of Montreal. The author of the paper was called on by the husband of a lady who appeared to be suffering from a severe attack of indigestion. She was then in her fourth month of pregnancy. He prescribed for her, and made a visit upon a patient some distance from home. On his return in three hours he found an urgent message to visit the lady, and on his arrival found her dead. She had suffered from severe vomiting, abdominal pain, and great faintness; her features became blanched, her countenance changed, and she told them she was dying. She had died about twenty minutes before his arrival. Upon examination the next day, an immense effusion of blood was found in the peritoneal cavity. The fœtus was discovered lying in the abdomen, and connected by a funis with an imperfectly developed placenta. The sac was formed by the structures of the Fallopian tube, near the centre of which the ovum had apparently been arrested. The ovary of the same side contained a corpus luteum. The uterus was increased in size, somewhat flaccid, and its inner surface was covered with a well-marked decidua.

The author also related a second case, which he had diagnosed as a case of Extra-uterine Pregnancy during the second month of gestation. The patient recovered, and, becoming again pregnant, was delivered at full term seventeen months afterwards.

Dr. Edis thought the best treatment in these cases, when there was evidence of collapse from internal hæmorrhage, was the application of cold to the abdomen with pressure, stimulants being only given if absolutely requisite to avoid a fatal termination, the employment of opium being rather indicated. He had found this treatment successful, although the patient was moribund when first seen.

Dr. Aveling said, as the subject of extra-uterine pregnancy was before the Society, he would like to take the opportunity of asking of any Fellows who had met with cases of the abdominal kind in which the fœtus had arrived at maturity, whether in such cases the ordinary uterine pains occurring during labour were observed.

Mr. Scott believed that in the first case mentioned by the author of the paper death had resulted from rupture of the sac, caused by the effort of vomiting—an accident which he believed to be always imminent in these cases from the extreme tenuity of some part or other of the sac. In answer to Dr. Aveling, he begged to refer him to a case which he had read before the Society, in which pains came on at term, subsided for some weeks, and then recurred with such intensity as to necessitate an operation.

Dr. Phillips also, in answer to the same question, stated that he had seen a case of abdominal pregnancy in which labour pains came on at term, and milk appeared in the breasts.

Dr. C. H. F. Routh read a paper, "On the Use of the Intra-uterine Stem in Uterine Diseases." The author, after premising that the most opposite opinions were held by learned men of different schools as to the usefulness of intra-uterine stems at all, pointed out that this arose from sufficient precautions not being taken before they were used; and that it was not sufficiently clearly laid down in what special uterine diseases they should be employed; and thirdly, in the quality of the instrument to be selected. Where proper care was taken to meet these three contingencies the use of intra-uterine stems was both safe and advantageous. I. Preliminary Treatment: All inflammatory and congestive symptoms should be first combated. Local blood-letting, by leeching, scarification, or it may be by the hysterotome; in cases complicated with general induration, potassa fusa; in cases of fundal endometritis, in addition, blisters to the abdomen. In milder examples, glycerine stupes applied for a week or so to the cervix uteri, etc., besides ordinary dietetic means and occasional laxatives. 2. In some cases it was necessary, in addition, to enlarge the cervical canal by tents. The author showed that some of the accidents following the use of tents were due to the neglect of precautionary measures preceding their use; also to the tents not having been properly disinfected; also to straight tents being forced up into straight uteri, in which cases flexed tents should be used. The author explained that some sponge-tents were injurious in this way, and that from too much pressure in their preparation their expansive power was much reduced. 3. The enlargement of the canal was sometimes best effected by the hysterotome, after which he introduced a small disinfected sea-tangle tent, covered with glycerinised and partly iodised cotton, into the outer part of the opening made, and kept it *in situ* by cotton plugs. This treatment was rarely followed by accidents. 4. His experience was entirely opposed to forcible and immediate dilatation by instruments. II. The author next proceeded to state the diseases in which the intra-uterine stem should be employed: 1. In cases of membranous cervix. One unsuccessful case was detailed as having led him to use the stem more heroically, and a second successful, in which this was done, was given in confirmation. 2. In cases of amenorrhœa not due to anæmia, but to a stoppage from some other accidental cause. The presence of a tent in utero provoked a catamenial flow. The advantages of a simple self-retaining stem over the stem made of copper and zinc were dilated upon, and a case given to illustrate the opinion. 3. In cases of dysmenorrhœa two varieties of this form of disease were given. In the first mechanical obstruction existed, and in the second the neuralgic element was most marked. Both had been cured by the elastic caoutchouc stem. 4. In cases of uterine flexion. A case of retroflexion was given, which was cured by the elastic stem, within which a spiral-coiled wire had been placed. The author recommended the use of internal stems, more particularly where Hodge pessaries had failed or could not be borne; where there was synchronously rectal disease, and where the flexions were very acute, with much fundal pain. III. The author then laid down what practice indicated as necessary conditions in the formation of an intra-uterine stem: 1. They should allow an omnilateral movement of the uterus. 2. They should not be longer than two inches, save in exceptional cases, in order that they may not touch the fundus uteri. 3. They should be bicornate

superiorly, so as to be retained in utero. 4. Their diameters should not be too small. 5. They should be light, and not easily corroded. IV. He then proceeded to show that the instruments already used were capable of division into seven groups: 1. Those which fixed the uterus like Dr. Simpson's original instrument. 2. Ordinary cylindrical stems with a disc, and which had been made of almost every known substance. These were chiefly disadvantageous inasmuch as they fell out, and prevented the resiliency of the uterus on itself. 3. Thoso with a vaginal support, either by a diaphragm or a Hodge. Like the last, they prevented the elasticity of the uterus on itself, but did not fall out. 4. Divaricating stems, as originally instituted by Graham Weir. These remained *in situ*, but they all prevented the elasticity of the uterus upon itself. 5. Coiled wire stems, which allowed for this uterine elasticity, but needed a support inferiorly. 6. Caoutchouc stems, as invented by Dr. Greenhalgh, and subsequently modified by others. 7. A modification of the fifth and sixth varieties combined, the caoutchouc stem having a thin coiled wire within. This last he had first used, and found very effective in some cases. Owing to the cornu superiorly a vaginal support could be frequently dispensed with.

Dr. Aveling said perhaps an appropriate opening to the discussion would be to call attention to a fact not mentioned by the author of the paper—viz., that intra-uterine stems were used in the seventeenth century. Henry van Roonhuyse, after dilating the cervix with gentian or sponge-tents, introduced a tent of silver, ivory, or horn after the fashion of a screw, thicker at one end than the other, and hollow. This, he said, might be carried without inconvenience. This practice was adopted in England by James Cook in 1647.

Dr. Barnes said he was convinced that intra-uterine stems were in properly selected cases of the greatest use. He had frequently employed the galvanic pessary with satisfactory results in cases of amenorrhœa, the catamenial discharge appearing and the nervous symptoms passing away. In consequence of the zinc portion becoming rough, he advised the removal and cleansing of the instrument once a fortnight. In cases of dysmenorrhœa he had after incising the os externum used Dr. Chambers' stem with advantage, pregnancy having frequently followed the removal of the dysmenorrhœal condition.

Dr. Heywood Smith supported Dr. Routh in his method of reducing uterine congestion by depletion before dilating the cervix uteri. In dividing the cervix he preferred the use of a nearly straight knife, and the introduction of sponge-tents after incision he thought dangerous. He waited until the edges of the incision healed before introducing any tent.

Dr. Squire remarked that if all the treatment described be really required merely with the object of introducing a stem, surely a prior question arises whether that operation should not be delayed until relief had been obtained by means less severe than those detailed in the paper.

Dr. T. Chambers said he had not found it necessary to adopt the prolonged preliminary treatment urged by Dr. Routh. He thought all dislocations should be reduced at once, and this method of treatment had in his hands proved most satisfactory. He thought it dangerous to introduce a stem in the consulting-room or out-door department of a hospital, and then allow the patient to go home. She should be kept in bed after its introduction at least a week.

Dr. Wynn Williams agreed with the last speaker that rest for several days was necessary after the introduction of the stem. Where much difficulty existed in introducing it, the stem should be made to assume the curve of the flexed uterus. He thought the precautionary measures proposed by the author should be carried out when any diseased condition existed.

Dr. Edis considered the employment of intra-uterine stems to be attended by much risk, not only to health, but also to life, and that although he had occasionally employed them, he avoided their use whenever it was possible. They should be employed with extreme caution and only after preparatory treatment.

Dr. Tilt, whilst admitting the value of stems, stated that he found it necessary to use them only in a limited number of cases. He was surprised that no speaker except Dr. Edis had taken into account the serious consequences that had occasionally followed the use of stem pessaries. He believed they not unfrequently caused or augmented uterine or peri-uterine inflammation.

Dr. Routh said, in answer to Dr. Squire, that if preliminary treatment cured his cases he never thought of applying the stem; and in answer to Dr. Tilt, he begged to say that he did not use the stem in *every* case, but only in those in which the ordinary measures failed.

OBITUARY.

HENRY WILLIAM FULLER, M.D., F.R.C.P.,

Was the son of Mr. W. Fuller, of Piccadilly, one of the leading general practitioners of the time, and "Visiting Apothecary to St. George's Hospital." Henry William Fuller entered as a student at St. George's Hospital, and afterwards studied at Cambridge, where he took the M.D. degree in 1851. He was elected a Fellow of the College of Physicians of London in 1852. He was early in life, by the influence of his father and friends, elected Assistant-Physician to St. George's Hospital, subsequently became Physician, and at the time of his death was Senior Physician. He was a painstaking and careful physician, and a courteous and intelligent gentleman. Without striking brilliancy of talent, he was throughout life a hard worker and a large contributor to professional literature. He was author of works on various diseases and subjects of practical professional import—viz., "On Rheumatism, Rheumatic Gout, and Sciatica," "On Diseases of the Heart and Great Vessels," "On Diseases of the Lungs and Air-Passages," "Tracheotomy in Croup," "Action of Belladonna, and on certain Causes which Modify its Action," etc. These works are carefully written, and give evidence of the conscientious manner in which he studied disease both at the bedside and in the writings of others. He was a fellow and member of various societies, and consulting-physician to several institutions. He died after a few days' illness from pyæmia, originating in abscess of the lung, in his fifty-sixth year. He will be deeply regretted by a large number of professional friends in London and the provinces.

GEORGE BURT, F.R.C.S.,

Was a native of Suffolk. He became a student at the then united hospitals of St. Thomas's and Guy's, under Cooper, Cline, and other distinguished men of the early part of the present century. He passed the College of Surgeons in 1810, and soon after commenced practice in Norfolk. He did not long remain there, and removed to Colchester, where he practised for a short time. He then came to London, where he spent the rest of his life. He resided in several places, but chiefly in Bridge-street, Blackfriars. He admired London very much, and rarely left it even for a short holiday—indeed, during his long career in the metropolis of at least half a century he has been known to leave it on pleasure three times only, and each for a very short period. He became a very diligent attendant at the Skin Hospital, then in Bridge-street, where he sat for many hours together assisting the late Mr. Startin, and frequently acting for him. He was afterwards appointed Surgeon to the Hospital, in which he took the greatest interest. He was a devoted lover of his profession, and had scarcely any pleasure or recreation out of it, and he followed up his duties at the Hospital to the very last, until his failing health (for he suffered for years with prostatic and vesical disease) compelled him to desist. He was a good and skilful practitioner, a kind-hearted and honourable man. He had one son, who was a private pupil of the late Mr. B. Cooper, and shortly after becoming a member of the College he died from blood-poisoning.

Mr. Burt through life never partook of stimulants, but was a great lover of tea, which he maintained always agreed with him. He was a member for many years of the Medical Society, which held its meetings in Bolt-court, but from his advaneed age he has outlived all his contemporaries.

JOHN SKAIFE, L.R.C.P. Edin., M.R.C.S.,

Died on the 12th inst. at his native place, Easington, Yorkshire, whither he had gone for the benefit of his health. Mr. Skaife formerly practised at Myddelton-street, Clerkenwell, and subsequently at 12, Northampton-square, where he carried on a considerable practice. He had been ailing from consumption for some time, but had been seriously ill for the past six months. He retired from practiee in May last. Deceased was forty years old.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received Certificates to practise, on Thursday, December 18:—

Crowther, Arthur Bingham, Hobart Town, Tasmania.
Dodson, Andrew, Sheinton, Shrewsbury.
Hamerton, George Albert, Gloucester-road, Peckham.
Harsant, William Henry, Epsom.
Hawkes, Anthony Mann, Doughty-street.
Hunt, Robert Edmund, Gort, Ireland.
Nicholson, Arthur, Newark-on-Trent.
Riding, Edwin, Liverpool.
Russell, Francis John Roberts, West Ham.
White, Ernest William, Norwich.

The following gentleman also on the same day passed his primary professional examination:—

Hughes, William Lewis, London Hospital.

The following gentleman passed on the 11th inst.:—

Carter, Frederick Heales, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DAVIDSON, DAVID CHARLES, L.R.C.P. and L.R.C.S. Edin.—House-Surgeon to the Dorset County Hospital, Dorchester, *vice* Mr. Hollis, resigned.

GOEDICKE, F. W. E. R., L.F.P.S. Glasg., L.S.A.—Medical Officer of Health for the Parish of East Ham and Little Ilford.

STEWART, JAMES, B.A., L.R.C.P. Edin., L.R.C.S.I.—Second Assistant Medical Officer of the Kent County Asylum, Maidstone, *vice* David Hughes, M.R.C.S.E., resigned.

VINCENT, H. B., M.R.C.S., L.S.A.—House-Surgeon to the North Lonsdale Hospital, Barrow-in-Furness, *vice* J. Settle, resigned.

WOOD, T. OUTTERSON, L.R.C.P. Edin., M.R.C.S.E.—Third Assistant Medical Officer of the Kent County Asylum, Maidstone.

BIRTHS.

HACKNEY.—On December 20, at The Laurels, Warbleton, Hurst Green, Sussex, the wife of Alfred H. Hackney, M.R.C.S., of a son.

KNIGHT.—On December 18, at Shorleycroft, Keswick, the wife of Alexander A. H. Knight, M.D., of a son.

SCOTT.—On December 16, at 16, Murray-street, Camden-square, the wife of David Scott, M.D., of a son.

TEEVAN.—On December 16, at 10, Portman-square, the wife of William Frederick Teevan, F.R.C.S., of a daughter.

DEATHS.

BRIGHT, ELIZA, widow of the late Richard Bright, M.D., F.R.C.P., F.R.S., Physician-Extraordinary to the Queen, at 8, Southwick-crescent, Hyde-park, on December 18, aged 72.

FULLER, WILLIAM, M.D., F.R.C.P., Senior Physician to St. George's Hospital, at 13, Manchester-square, on December 18, in his 53rd year.

GROVE, EMMA, wife of John Grove, M.D., at Hampton, Middlesex, on December 20.

PLUMBE, ROBERT, late Surgeon on Madras Establishment, at his residence, 11, Leonard-place, Kensington, on December 19, aged 70.

TURNER, THOMAS, F.R.C.S., at his residence, 77, Mosley-street, Manchester, on December 17, in the 81st year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made, and the day of election (as far as known) are stated in succession.

CITY OF LONDON LUNATIC ASYLUM, STONE, DARTFORD, KENT.—Assistant Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Committee of Visitors, under cover to Henry F. Youle, Clerk to the Committee, Guildhall, London, on or before January 15, 1874.

COTON-HILL INSTITUTION FOR THE INSANE.—Assistant Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Dr. Hewson, Coton-hill, Stafford.

GENERAL HOSPITAL, NOTTINGHAM.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before March 10, 1874.

GERMAN HOSPITAL, DALSTON.—Honorary Medical Officer to the Eastern Dispensary. Candidates must be natives of Germany and be duly qualified. Applications, with testimonials, to Dr. Walbaum, Hon. Secretary, on or before December 29.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Honorary Secretary, on or before January 15, 1874.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN.—King's Professorship of Medicine. Candidates must be duly qualified. Applications, with testimonials, to Dr. G. Magee Finny, Registrar of the College of Physicians, and to the Rev. Dr. Carson, Registrar of Trinity College, Dublin, on or before February 1, 1874.

QUEEN ADELAIDE'S DISPENSARY, POLLARD-ROW, BETHNAL-GREEN-ROAD.—House-Surgeon. Applications, with testimonials, to the Rev. Thomas Peckston, 260, Cambridge-road, E., on or before January 2, 1874.

RADCLIFFE INFIRMARY, OXFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 10, 1874.

ROYAL LONDON OPHTHALMIC HOSPITAL.—Assistant House-Surgeon. Candidates must possess a knowledge of diseases of the eye. Applications, with testimonials, to the Secretary, on or before January 1, 1874.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before January 12, 1874.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Applications, with testimonials, to the Secretary, on or before December 29.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before December 28.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Candidates must be doubly qualified. Applications, with testimonials, to the Medical Board, on or before January 1, 1874.

UNST, SHETLAND.—Medical Officer for the Parochial Board. Applications, with testimonials, to Mr. White, Inspector of Poor, Unst.

WESTMINSTER HOSPITAL.—Assistant-Surgeon. Candidates must be F.R.C.S. Eng. Each candidate must attend (with his testimonials) the House Committee on February 10, 1874.

MR. DAVID SKINNER, M.R.C.S. Eng., late Medical Officer for District No. 5 of the Hollingbourn Union, Kent, has obtained a superannuation allowance of £30 per annum.

THE Rathkeale Board of Guardians have increased the salary of Dr. McCoy, Medical Officer of the Rathkeale Dispensary District, from £100 to £120 per annum.

THE LATE FOG.—The following notes of cases of accident admitted at the London Hospital during the late fog reached us too late for insertion last week:—*Case* 1: J. C., aged 62, whilst going to his work at four o'clock on the morning of December 10, lost his way in consequence of the dense fog, and "fell into a pit," where he lay for some time in an insensible condition. On admission he was perfectly sensible, and found to have a severe laceration extending through the left cheek and laying bare the facial artery for an inch and a half, but with no wound of the vessel. *Case* 2: J. H., aged 45, was admitted about 11 p.m. on the night of December 11, with a fracture of the second rib of the right side near its sternal end, and also fracture of the right scapula, about one inch and a half of the inferior angle being broken off; fracture of ribs beneath it; also emphysema of the same side. He stated that he was a shipkeeper, and went on board a ship lying in the river at seven o'clock in the evening, there being a dense fog at the time, when a dog flew at him, and, to get out of the dog's way, he unfortunately stepped back and fell into the ship's hold, a distance of twenty-five feet, his back coming in contact with some casks at the bottom of the hold. He was alone on board the ship, and remained where he fell for two hours, when he was found by another man, and brought to the Hospital. *Case* 3: G. S., aged 54, a "fitter," was in the engine-room of his ship, which was lying in the river, when, in consequence of the fog at midday on December 12, he fell into the hold, a distance of sixteen feet, alighting on his left shoulder. On admission he was found to have about an inch of the acromial end of the left clavicle broken off, and fracture of the fourth and fifth ribs of the same side.

THE return of deaths by the Sanitary Commissioner of the Punjaub for the week ending October 18 last states that—"The improvement in the public health noticed in last week's return has continued in the week under review. The total number of deaths has decreased in a large number of districts, and in some cases the decrease is very considerable. In a few there is a slight increase, but in the case of the latter the death-rate had not been unusually high before. Siálkot, Lahore, and Hoshiárpur continue very unhealthy, though there is a decrease of mortality in all three. The total deaths in Rewári have again fallen. In last week's return the number was 84; this week the number is just one-half, or only 42. The rapid decline of the epidemic will be seen from the following figures, which represent the total deaths in each of the last five weeks, viz., 140, 139, 99, 84, and 42. Delhi continues extremely unhealthy, though the total deaths have decreased from 185 to 151. In Faridábád, also, there is improvement, though the death-rate is enormous—viz., 195 per mille. The death-rates of this town for the last five weeks have been as follows:—228, 273, 176, 260, and 195 per mille. Excessive sickness continues in Bahadargarh, in the Rohtak district. This town has had a pestilential death-rate for some weeks. There is no improvement yet perceptible in Panipat, the death-rate is 101 per mille, as compared with 88 per mille for the previous week.

The total deaths have fallen in Jálandhar from 45 to 25, and in Tandah and Urmar from 35 to 27. Amritsar continues very unhealthy. There were only two deaths registered under the head of cholera; both of them occurred in the little village of Fírozpur in the Gurgaon district. Fifty-three deaths were registered under the head of small-pox; they occurred in thirteen different districts. Ten small-pox deaths were registered in Hazára, the highest number in any one district.

THE monthly report of deaths in the eight principal towns of Scotland for the month of November last states that the deaths of 2352 persons were registered, of whom 1184 were males and 1168 females. Allowing for increase of population, this number is 320 under the November average of the last ten years. A comparison of the deaths recorded in the eight towns shows that during November the annual rate of mortality was 20 deaths per 1000 persons in Edinburgh and in Dundee, 22 in Leith, 23 in Perth, 24 in Aberdeen, 26 in Glasgow, 37 in Paisley, and 43 in Greenock. Of the 2352 deaths, 961, or 41 per cent., were of children under five years of age. In Perth, 12 per cent. of the persons who died were under five years of age; in Edinburgh, 32; in Aberdeen, 35; in Greenock and in Paisley, 38; in Glasgow and in Dundee, 45; and in Leith, 58 per cent. The zymotic (epidemic and contagious) class of diseases proved fatal to 574 persons, constituting 24 per cent. of the whole mortality. This rate was again exceeded in Paisley from the prevalence of scarlatina, and in Greenock from that of small-pox and scarlatina. Scarlatina was again the most fatal epidemic, having caused 213 deaths, or 9·0 per cent. of the whole mortality, being the same as during the previous month; but while the deaths from this disease slightly decreased in Glasgow, Aberdeen, and Greenock, those in Paisley increased. Small-pox was the next most fatal epidemic, and still continues on the increase, 83 deaths having been caused by that disease. Of these, 24 occurred in Glasgow and 54 in Greenock, constituting 2·2 and 23·6 per cent. of the deaths respectively in these towns. Fever caused 82 deaths, of which 36 were tabulated as typhus, 40 as enteric, 2 as relapsing, 2 as simple continued, and 2 as infantile remittent fever. Hooping-cough caused 38 deaths; croup, 38; diphtheria, 31; diarrhœa, 28; measles, 22; metria, 12; dysentery, 2; and cholera, 1. Fifty-one deaths were attributed to apoplexy, 46 to paralysis, 113 to heart diseases, 34 to hydrocephalus, and 91 to premature birth debility. The deaths from inflammatory affections of the respiratory organs (not including consumption, hooping-cough, or croup) amounted to 541, or 23·0 per cent. of the whole mortality. Those from consumption alone numbered 194, or 8·2 per cent.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. J. R. Phillips, Kanyaka.—Enclosure received.

Mr. J. E. Gross, Gibraltar.—Enclosure received.

Janson.—The note on the "Action of Pure Water upon Various Metals," by M. Chevreul, is in the *Comptes-Rendus* for November 17.

S. H. Y.—We believe that the Admiralty have decided upon granting double pay to all the medical officers belonging to the Royal Navy while attached to the forces under Sir Garnet Wolseley.

THE GOLD COAST.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I beg to send you a note of some accounts of the Gold Coast which I picked up accidently lately:—"Cruickshank's Eighteen Years on the Gold Coast, 2 vols., 1853"; "Narrative of a Visit to Coomassie, by Capt. Winiette, late Lieut.-Governor of Cape Coast Castle"; *United Service Magazine*, June, 1849, p. 263, etc. Hoping these memoranda may be of some present interest, I am, &c., M. BLACK.

2, George-square, Edinburgh, December 20.

CASE OF SPASMODIC ASTHMA, ILLUSTRATING THE GOOD EFFECT OF CAMPHOR AND OPIUM WHEN GIVEN IN COMBINATION.

By A. CLARENCE FOSTER.

The following case may be deemed not unworthy of perusal, as it affords, apart from its general features, an interesting therapeutic incident not without some practical value:—

Miss L., aged 25, of regular habits and of average general health, was seized on the 30th ult. with slight fever, accompanied by a dry cough, which, however, was neither frequent nor severe.

She was put under mild antiphlogistic treatment, including small doses of tartar emetic, and went on favourably till the 3rd inst., when a most distressing attack of spasmodic asthma came on, lasting twelve hours. It set in at 11 a.m. and continued till 11 p.m., the patient sitting up in bed during the whole time, with the shoulders raised, and the head and body bent forward—any attempt to lean back making it impossible to breathe. The respirations during the fit were 90 per minute, with a pulse at 130. She was ordered while the paroxysm continued an ounce of gin every hour, alternately with a mixture containing full doses of carbonate of ammonia and ether. These remedies were given regularly to the end of the fit, but they had no perceptible influence in relieving it. At 11 p.m. the respiration became quite easy, the dyspnœa passing off without any expectoration, and the patient complaining of nothing but a feeling of exhaustion. The chest, when the paroxysm was over, sounded well on percussion. The circulation was tranquil, and the temperature not increased. Next day, about the same hour, she had another attack, continuing till night, and so the symptoms went on repeating themselves for a week, the patient having during this time frequent counter-irritants to the chest and back, and taking a great variety of antispasmodics, without obtaining the slightest relief; and as she had slept little from the beginning, a dose of chloral hydrate was now given, but with no better effect. She was then ordered half-grain doses of opium at short intervals, and although she took five grains in a few hours, it failed to procure either sleep or mitigation of the dyspnœa. Camphor, in two-grain doses, was now tried, with a like result, when, on the 12th inst., as soon as the fit came on, a powder was prescribed, containing one grain of opium and two of camphor, to be taken every two hours. After the first powder the breathing was much relieved, and when four had been taken it became perfectly easy. Two or three more, however, were administered at long intervals, and the patient remained, and now remains, free from any further attack.

The dyspnœa, under the influence of the powders, passed off gradually, and not somewhat suddenly as before, showing clearly that the shortening of the paroxysm and the prevention of its return were due to the action of the medicine.

It is an interesting circumstance that, although neither opium nor camphor taken alone had the slightest beneficial effect, yet when given together the result was to procure almost immediate relief.

Leeds, November 29.

COMMUNICATIONS have been received from—

Messrs. LETTS, SON, and Co., London; Dr. HENRY LEWIS, Folkestone; Mr. M. BLACK, Edinburgh; Mr. H. W. SAUNDERS, London; Mr. F. A. MAHOMED, London; Mr. W. C. BLAKER, Robertsbridge; Dr. J. W. MOORE, Dublin; Dr. PEACOCK, London; Mr. J. CHIATTO, London; Mr. J. R. PHILLIPS, Kanyaka; Mr. J. E. GROSS, Gibraltar; Dr. GALABIN, London.

BOOKS RECEIVED—

Cleland's Animal Physiology—West on Diseases of Infancy and Childhood, sixth edition—The Chemist and Druggists' Diary for 1874—Census of the Town of Madras for 1871—Ninth Annual Report of the Sanitary Commissioner with the Government of India, 1872—Pathologie und Therapie der Muskulären Rückgratsverkrümmungen, von Professor Dr. Axel Sigfrid Ulrich.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Allgemeine Wiener Medizinische Zeitung—Gazette Médicale—La Tribune Médicale—Le Mouvement Médical—La France Médical—Le Progrès Médical—Gazette Hebdomadaire—The Students' Journal and Hospital Gazette—Pharmaceutical Journal—Gazette des Hôpitaux—Philadelphia Medical Times—Nature.

APPOINTMENTS FOR THE WEEK.

December 27. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 9 a.m. and 2 p.m.; Hospital for Women, 9½ a.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On the Motion and Sensation of Sound" (Juvenile Lectures).

29. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ANTHROPOLOGICAL INSTITUTE, 8 p.m. Meeting.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On the Motion and Sensation of Sound" (Juvenile Lectures).

31. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

January 1, 1874. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Tyndall, "On the Motion and Sensation of Sound" (Juvenile Lectures).

2. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Meeting of Council.

EXPECTED OPERATIONS.

ROYAL FREE HOSPITAL.—The following Operation will be performed on Saturday (this day) at 2 p.m.:—

By Mr. Gant—Colotomy for Rectal Stricture.

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LIST OF ILLUSTRATIONS.

END OF VOLUME II. 1873.

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