

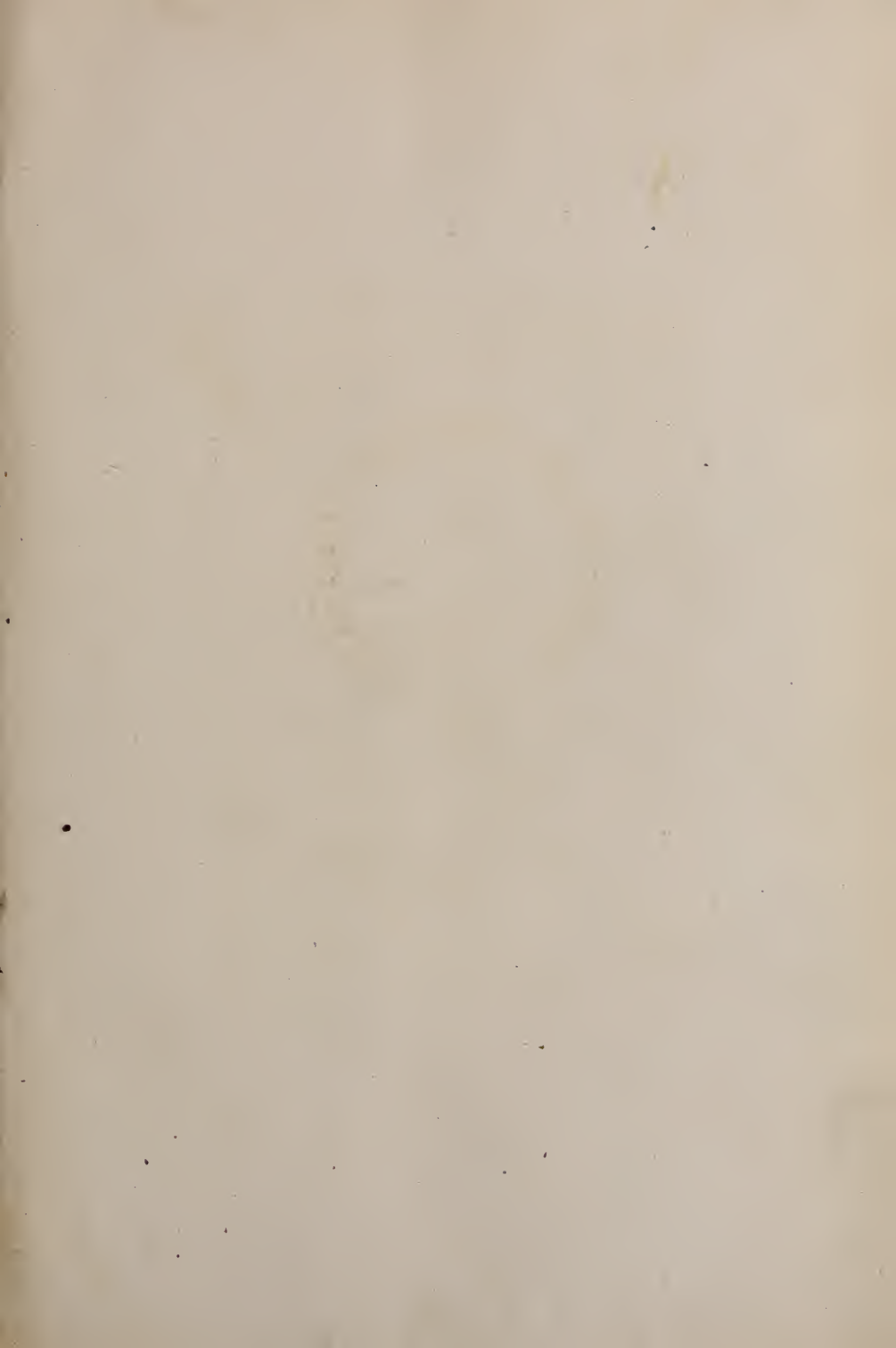


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THE

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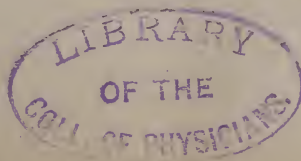
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No. 1.

Original Communications.

SOME PRACTICAL HINTS ON THE FITTING OF SPECTACLES.

By Frank W. Abbott, M. D.

There is perhaps nothing which everybody uses who reaches the declivity of life, and many of the most intelligent in early years, that is used with so little appreciation of the causes for their need and the principles which govern their correct adjustment, as spectacles. Fortunately the healthy eye is a patient and long-suffering member and adapts itself to adverse circumstances with great facility.

A normal condition of vision obtains when, without conscious effort, a clearly outlined picture of an object at any distance falls upon the yellow spot of both retinas. Spectacles fulfill their purpose when with their assistance a perfect picture of the observed object falls upon the retina without conscious effect, and the eye needs glasses when, with healthy tunics and humors, a sharply outlined picture of the observed object does not fall upon the retina at all or only with conscious effort. The ordinary conditions which prevent this desired state of things are called errors of refraction, as you all know, and are presbyopia, myopia, hypermetropia, and astigmatism. As presbyopia af-

fects everybody who reaches the age of fifty years, and as almost every civilized person of that age wears glasses more or less, we will consider this error of refraction first.

Our ordinary book and newspaper print is legible at a distance of about twelve or fourteen inches from the eye, and this the man less than forty years of age can read with ease and comfort. Soon after this age, however, he begins usually to grumble a little at the poor type that printers use now-a-days, and is particular about the light which he uses. It must be pretty strong and fall squarely upon the page or else it doesn't suit him. Perhaps as characteristic a motion as any that he makes now is when he looks at his watch to tell the time of day. When he first pulls out his watch he involuntarily brings it up within eight or ten inches of his face, as he used to years ago, but the figures are indistinct, and with a half surprised, half-impatient gesture throws his head back and pushes his watch a few inches farther away, and soon sees it plainly. It is very likely that at this time any hint by friends that his sight is not what it once was will be indignantly resented, for he says what is very true that he can see off as far as ever he could in his life, and may challenge his friend to a competition in reading a distant sign or placard, and show that in this respect his natural powers are undiminished.

Now, what change has taken place in his eyes to make the reading of his evening paper irksome, instead of easy, as it was formerly?

It is strange that such a theory as that the cornea becomes flattened ever prevailed, for you see at once that a change of this kind would have affected distant vision as well as near. I may be going over ground well known to you all when I give the correct theory of the refractive processes of the eye, but I must make my paper logical at the expense of telling a twice-told tale.

Dr. Moore says that Ophthalmologists love long words. Grant it. But our long words mean something and they have

the same sharp definite meaning every time, and when you once know the lingo, as a revered Buffalo D. D. forcibly puts it, these long words give a precision and accuracy to your statements, which a long circumlocution in short words fails to afford.

Now, the first long word which I want to use, is emmetropia and its adjective emmetropic. An emmetropic eye is a normally shaped eye, in which at perfect rest distant objects are distinctly seen. Emmetropia from *en. in metron* measure, *ops eye*, means this condition of eye, in which the different parts are so in measure that vision for distance takes place without effort, for a perfect picture of the observed object as made by the lens, is printed directly on the lens, for the retina is directly at the principal focus of the lens. Now, when this emmetropic eye looks at anything near by, of course if no change occurs in it, a perfect picture is not made on the retina, for with the change in the position of the object comes a change in the position of the focus of the lens in relation to it.

Here the function of the ciliary muscle steps in. As the object approaches, through the influence of the ciliary muscle, the lens becomes stronger and the focus still remains directly at the retina, a perfect picture is formed upon it and distinct vision results. The eye accommodates itself to any distance of the object we wish to see, and this faculty is hence called accommodation in our lingo. Now, our theory of the refractive processes of the eye is established. The emmetropic or normally-shaped and constructed eye sees perfectly at a distance when at rest, and accommodates itself for near vision by making the lens more convex or stronger.

It is probably superfluous to say that this accommodation becomes an automatic action before we are old enough to be self-conscious, and up to middle life we look from distant things too near and the eye adjusts itself to them, so as to make vision perfect without our being conscious of the slightest effort. But there comes a time when this effort becomes irksome without our knowing exactly what the matter is, only we know that in-

stead of holding anything up close to see it, we must push it away, and if we attempt to read with the paper where it was formerly held, the eyes get tired. Our theory of vision makes the explanation of this self-evident. The emmetropic eye still sees distant objects the same as ever, but refuses to accommodate itself to near objects as formerly. The lens, becoming stiff with age, refuses longer to obey the ciliary muscle as once it did and no longer becomes so converse that its focus for near objects is on the retina.

The trouble need only be stated to suggest the remedy. If the lens will not thicken up at the centre and become more convex when we want to look at any thing close at hand, just put a piece of glass that is thicker at the centre than at the edges, in front of it, and thus reinforced, it performs its lessened work with ease and comfort as before. Now, this condition of the eye, when, through age, accommodation fails, is called the old eye or presbyopia. Theoretically, the relief of presbyopia by glasses is very simple, and in practice we find that such is the power of the eye to adapt itself to circumstances that very many presbyopic people use glasses which are not adapted to their eyes without much complaint. But very many people are complaining of weak eyes when the fault is not with the eyes but with badly adjusted spectacles. When, therefore, we attempt to adjust glasses to the presbyopic age, we find that there are several points to be considered. In the first place we find that the eye does not do its work with ease, unless it uses a certain part of its accommodative power, e. g., suppose we want to give a man, fifty years of age, glasses with which to read at twelve inches distance from his eyes. A glass of twelve inches focus would throw the picture of this object upon the retina without any effort of the accommodation, but in practice the eye will not tolerate so strong a glass and wants a weaker one which will make the eye use some accommodation for perfect vision at this instance. Again, there is a curious relation between the amount of convergence of the two eyes, and the amount of accommo-

dative effort which they can make. We may say that the accommodating power varies directly with the convergence, so that the nearer an object is held to the eyes, the greater is the convergence of the two eyes and the greater the power of accommodation. This fact must be borne in mind further on when we speak of glasses both for old people and for near-sighted people. There is one mere fact which experience has taught us, which we must consider in choosing the proper lens for any eye and that is that the eye cannot long use the whole of its accommodation without fatigue. That is to say, e. g., a man of forty-five can still accommodate for an object nine inches distant from his eye, but no closer; now he cannot read a print so fine that it has to be held at nine inches from his eye without great fatigue. While the youth, who can accommodate for a point five inches away, can read at nine inches with perfect ease. The principle is easy to see. It is difficult to work continuously up to one's limit of one's powers; intense fatigue soon results. So eyes which are just able to accommodate for nine inches by exerting the full force of the ciliary muscle, cannot continue to do so for any length of time without great fatigue. Having found for a patient lenses complying with the foregoing principles, the next question is, what kind of bows to use to keep them in front of his eyes. The first requisite of spectacle bows is that they shall hold the lenses steady and with their centres directly in front of the pupils. This is a very important point, and one to which too little attention is paid. The optician who sells spectacles ought to fix the frames to the shape of the features, as the tailor ought to fit us in coats or the shoemaker in shoes. But most of them pay no attention to this question; so the physician should investigate the fit of the spectacles whenever he sees his patients wearing them, even though they make no complaints.

A moment's study of the action of a lens upon the rays of light that pass through it, will show the reason for this. As the edge of a convex lens is thinner than the centre, the effect of

looking through one side of the lens instead of through the centre, is the same as though we looked through a prism, and the object looked at seems moved out of place. You will remember that, in looking through a prism, the objects seem displaced in the direction of the thin edge of the prism; so in looking through a convex lens between the centre and the circumference, the object looked at will seem to be moved away from the centre towards the circumference of the lens. Now, if the spectacle bows are bent, as we frequently see them, so that one lens sets above the line of the pupils, an object as looked at through this lens looks to be lower than its true position; if the other lens is below the line of the pupils, so that the person is looking through its upper edge, the same object looks to be above its true position. Now, if one eye continues to see an object above its true position, and the other sees it below, we apparently see two objects instead of one, and this double vision the eye abhors so that the superior rectus muscle of one eye gives an extra pull to bring one object right and the inferior rectus of the other pulls the eye down to bring the other object right and the consequence of this discordant action is that the eyes soon become so wearied that work is impossible. The same thing holds true if the bows are so short that the centres of the lenses are nearer together than the pupils; or, if they are so long that the centres of the lenses are farther apart than the pupils. In the first place, when the lenses are too near together, each pupil looks through the outer edge of the lens, in consequence the object seems to be thrown to the right for the right eye, and to the left for the left eye, and the external recti have to pull the pupils apart or make the eyes diverge to prevent double images. Now you may ask what difference this makes, for the convergence of the eyes has to vary with the distance of the object anyway, so what matters a little more divergence than usual for a near object? You will remember that I spoke a few minutes ago of the relations between the convergence of the eyes and the accommodation, that the accommodation power was greater the

greater the convergence. Now, if an object is thrown to the right by a glass before the right eye, which is so near the nose that the pupil, instead of being behind its centre, is behind its outside edge, and the same object is thrown to the left for the left eye in a similar manner, these eyes are made to diverge so much to bring these objects together and avoid double vision that their accommodative power is lessened, and this causes indistinct vision, weariness, etc., etc. So we see that the perfect spectacle frame will hold the lenses directly in front of the eyes, so that their centres will correspond with the centres of the pupils. This indication can hardly be met by any of the numerous patterns of eye-glasses now in the market, but they are so convenient to carry and to slip onto the nose when wanted for a short time, that their use is permissible under such circumstances, but for continuous use spectacles only should be used. For ordinary use the bows with a single side-piece, called single temples, are most convenient and, if rightly adjusted, hold the glasses with sufficient steadiness.

As for the lens itself, the choice lies between pebbles and good glass, with something to be said in favor of each. Glass is cheaper and some opticians say that being a little softer is more likely to be ground with perfect accuracy. But on account of their softness, glass lenses become scratched and rough sooner than pebbles. The advantages of pebbles are their superior hardness, which enables them to keep their polish longer, in careless hands. But spectacles are fragile, and usually are broken before they become scratched up, and the price of one pair of pebbles will buy several pairs of glass lenses. As for their effect upon the eyes there is absolutely no difference between them so far as I know.

So we see that our typical spectacles for age consist of well polished, accurately ground lenses, of such power that the person can see distinctly for a little while at a shorter distance than that at which he wishes to hold his work; these lenses to be in a steady frame which holds the centres of the lenses in front of the pupils.

In myopia the conditions differ. Here, on account of the elongated eye-ball, the focus of the lens falls within the globe of the eye, and consequently but a very indistinct picture of distant objects falls upon the retina, while near objects can be seen with distinctness. Unfortunately, the eye does not possess any power the converse of accommodation, by which it can make the lens weaker and thus throw its image back upon the retina. So this has always to be supplied by external means. This, as we all know, consists of a concave lens, whose thick edges and thin centre have the effect of weakening the power of the crystalline lens and thus throwing its focus back upon the retina and making these a sharp image of the distant object. Then when the eye turns to a near object, it accommodates for it just as does the emmetropic eye. But here, too, we find that empirical facts come in to modify our theoretical conclusions. Myopia in childhood is a progressive disease and is likely to be followed by results very disastrous to vision, and this must be kept in mind in all dealings with near-sighted eyes. The tendency in myopia is toward a gradual distension of the tunics of the eye at its posterior pole, and this may cause such disorganization of retina and choroid as to impair the sensitiveness of the retina to visual impressions. This subject as a whole is far too wide a one to enter upon here. Our purpose is to consider only its practical aspect in relation to spectacles, and the first practical point which I would make is that in myopia properly fitted glasses exercise a decidedly salutary effect, in retarding or stopping the progress of this posterior bulging. The reason is this: myopic people are obliged to hold work and print so close to their eyes as to cause great convergence of the optical axes. Now this convergence is made by a strong contraction of the internal recti muscles, and the other ocular muscles take hold with a steady pull to keep the eyes from wavering about. The consequence is that great force is brought to bear upon the eye-balls, about the insertion of the recti muscles, and this acting upon the semi-fluid contents of the eye causes great pressure

from within outwards at the posterior pole, which constantly tends to increase the existing distension. Suitable concave glasses oblige the wearer to remove the work farther from the eyes and thus relieve the strain from excessive convergence.

Another salutary effect of concave glasses in myopia is that they preserve the power of accommodation, which, without them is weakened or lost through disuse. The philosophy of this lies right on the surface. We will suppose a person is so short-sighted that objects twelve inches from his face are pictured upon the retina without any use of the ciliary muscle in accommodation, you will see at once that this ciliary muscle will very rarely be called into action, for we seldom need to bring anything nearer than twelve inches from the eye to see it, and for anything beyond this distance, of course, the ciliary muscle and accommodation would be entirely relaxed. The consequence is the same here as anywhere else where muscles are kept idle. This muscle loses tone and power, and after a time can be used at all only with difficulty and fatigue. Now, if in youth, before disuse has effected this ciliary muscle, we put a concave glass of twelve inches focus before their eyes, the picture of distant objects falls directly upon the retina; to see anything nearer accommodation comes into play, and so the ciliary muscle being constantly exercised, its power and tone are preserved in a normal condition. If you will pardon a bit of autobiography, I will illustrate this point by my own case. When I was a lad, twelve or fourteen years old, I found I could not see the blackboard in school so as to learn from it what others did, and I bought me a pair of glasses. Every one said I would ruin my eyes by wearing glasses, but I could see distinctly with them and could not see at a distance without them, and so I wore them and have worn them constantly from that time till now. My myopia has not increased any since I was seventeen years of age, and I have kept my accommodation in perfect working order.

Another imperative reason why the myopic person should put on spectacles is, that they may see what goes on around them as well as other people. It is a terrible weight in the fierce race of life to be unable to see with distinctness anything beyond an arms length from one's face. In order to judge of the myope's condition, just put on a pair of convex glasses, say from twelve to eighteen inches focal distance, then you will see things about as an average near-sighted person sees them. Faces will lose all expression; animals, birds, flowers, trees become simply a blotch of color. Nothing can be learned from observation, because nothing can be distinguished and the unfortunate is driven to books as a solace, whose comforting pages only aggravate the difficulty which leads one to seek their consolation.

As myopic people usually wear glasses all the time, I think that bows which hook behind the ears, are preferable, as they hold the lenses steadier than single temples. As concave lenses are thicker at the edges than in the centre, it is easy to groove the edge to let in the bows and this prevents them from slipping out. Light steel bows are ordinarily chosen in this latitude at the sea shore, however, and in warmer, damper climates, steel rusts out very soon and the bows break at the bridge; so some avocations expose a person to steam and gases, which rust steel. In these cases gold bows are more economical, although the first cost is greater. Personally I prefer a frame without a stop at the joint, as being more durable and less likely to be bent by any accidental blow. After twenty-five years, experience and many experiments I have adopted the style of bows which I now wear as the typical bow for constant use. But these hooked bows are never right as they come from the shops. The hooks are bent in a circle of too great radius and the bend begins too near to the lens. The side-piece should be straight until it reaches the top of the ear and then bend in a small circle to fit close behind it. I would never advise pebbles for concave glasses. The thick edges keep the surface of the glass from touching, when laid down or put into a case so that it is not so

liable to be scratched as a convex glass, and opticians are apt to chip and deface the hard pebbles when grooving them to fit a neat frame. Extra care should be taken in glasses for continuous use that the centres of the lenses coincide with spectacles the position of the pupils, for reasons which I have before mentioned. For high degrees of myopia it is advisable to have two pairs of glasses, one for distance which perfectly neutralizes the myopia, and for close work a little weaker. But such cases come legitimately under the care of a specialist and need not be considered here.

I have already trespassed long on your patience and I have not reached the other errors of refraction which demand spectacles, hypermetropia and astigmatism. Suffice it to say that there are multitudes of cases of weak, irritable, inflamed eyes, which are caused by the strain which attends upon any use of eyes affected by these refractive errors whose existence is not suspected, and very many of these cases could be restored to perfect functions by the use of properly adjusted convex or cylindrical lenses.

Clinical Reports.

PUERPERAL CONVULSIONS—INDUCED LABOR—DEATH OF THE MOTHER.

Reported by H. R. Hopkins, M. D.

I was called to see Mrs. O., at one o'clock in the morning of the 18th ult. On reaching the house I found the woman lying in complete insensibility, and heard the following history: The couple married but about a year since, and had recently come to live in the city. The wife, a perfectly healthy young woman of 32 years, was the youngest daughter of a large family of sisters, several of whom had families of from three to five children. Finding herself pregnant she had not thought it necessary to take professional advice for herself, but conferred with her sisters freely and was assured by them that everything was

progressing in a perfectly normal manner. Her husband said that she had in general been in perfect health, but had complained of a very unusual pain in the head during the afternoon and evening of the day before my visit. That for a month her feet had swelled some, and during the last week she had also complained of swelling in her hands, but that they thought nothing of it, but supposed it was usual with women in her condition. He remembered that she complained some of her head after they got to bed, but thought that she was asleep in a reasonable time; but that she awakened him soon after midnight by her peculiar movements, which he found was a convulsion. The lady who stayed with her while the husband came for me, said that she was unconscious during the whole time of his absence.

She was profoundly unconscious, breathing heavily, almost stertorously, with dilated pupils, slightly bloody froth on the lips, a hot, dry skin, swollen limbs and extremities, and a hard, long, slow pulse of 40 to 44 per minute.

After sending for assistance I gave her chloroform for a few moments and the pulse rose to 60, but did not soften. I then took two-thirds of a pint of blood from the arm with effect of raising the pulse to 96 and with a complete restoration to consciousness. She was quite surprised to find what had happened; did not know that she had been ill in any way, and said she did not expect to have her baby for six weeks at least. External palpation and digital examination showed no signs of labor. Dr. Boardman agreed with me that she should be put at once under the influence of bromide of potassium and chloral, with chloroform upon signs of returning convulsions, and after giving the nurse such instructions and the husband a very guarded prognosis, we left the house, I taking with me a few drams of urine drawn by the catheter. The prognosis was not improved upon seeing this turn completely solid upon adding a few drops of nitric acid. Was called again at 7 A. M., and found that she had remained comfortable until about 6.30, when she had a

slight convulsion, and that since then she had been unconscious. At 7.30 had a slight attack. I thought cut short by the chloroform. Has taken four grams each of bromide of potash and chloral by the mouth, and is to have two grams of each every hour per rectum as needed. Could see no signs of uterine contraction. She was free from convulsions until 10 A. M., when she had an attack of extreme violence, followed by another in half an hour. At noon there were slight signs of uterine contractions, the os admitting the finger easily. At 4 P. M. found that she had had no convulsions since 10.30, but was still unconscious. The pulse had gradually risen during the forenoon, was noted at 96, then 100, then 110, and at this time was fully 120 and irregular in both force and time. Dr. Boardman agreed with me that delivery must be induced at once, if we would save either of the lives now in imminent peril.

The uterus could be felt contracting and the os would admit two finger tips. Dr. Boardman began the dilatation and in 15 minutes introduced the ends of the thumb and four fingers. Becoming exhausted, I relieved him and soon passed my hand into the uterus. I then closed my hand and partly withdrew and partly allowed the uterus to expel the fist through the now yielding os. The head followed immediately, was grasped by the forceps, and at a quarter to 5 delivered a living male child of about eight pounds weight. The uterus contracted promptly, the secundines were removed, the os was felt to be free from rupture, and there was no hemorrhage. In spite of our best efforts at supporting and stimulating, the mother showed no signs of returning consciousness and died at ten the following forenoon, about 24 hours from the time of her last convulsion. The child seemed rather feeble at first, but soon rallied and has thrived continuously. This case seems to me, perhaps, worthy of record for various reasons.

It is a most striking illustration of one of the dangers of child-bearing. The patient was intelligent, and possessed of abundant means, and yet she allowed disease to slowly under-

mine the foundations of health and life, without even asking for advice. An examination of her urine would probably have shown the kidney disease to have been of considerable duration, and certainly would have indicated treatment with a fair prospect of saving her life.

I was perfectly clear as to the propriety of the blood-letting, and the return of consciousness would seem to vindicate the value of the measure; at the same time the rise in the pulse during the morning was taken by Dr. Boardman and myself as a warning that further treatment in that direction would not be justifiable. From first to last the circulatory phenomena were most interesting; the long, hard, slow pulse of the first visit was most peculiar, and the gradual early heart failure prominently marked. At 4 P. M. the pulse was 120, and irregular; at 6 P. M. it was 140, at 8 P. M. I could not count it, and at 10 P. M. could not feel it, nor did I again find the pulsation, although the breathing went on for twelve hours. The readiness with which the os yielded to the dilating force of the hand, and the short time required for delivery, are items of favorable testimony for this means of hastening labor in cases of great emergency.

Translations.

THE MEDICO-LEGAL IMPORT OF THE OPIUM HABIT— BY ED. LEVINSTEIN.

Translated from the German by Herman Mynter, M. D.

The author has found by the examination of morphi-um-eaters peculiar symptoms, not formerly described: difference in the size of the pupils, and disturbances of the accommodation; irregularity of the heart's action, and of respiration; loss of appetite, combined with feeling of intense hunger and thirst; cerebral symptoms, as uneasiness, fear, hallucinations, increased spinal reflex irritability, tremor of hands; albuminuria, impotence and amenorrhœa. Besides these symptoms he des-

cribes three forms of morphia fever; the first form, the morphia-intermittent fever, has the same clinical symptoms as a malarial intermittent fever, frost with following heat and perspiration in a tertian or quotidian type. The temperature of a morphia-intermittent fever reaches the same elevation as a malarial-intermittent fever, the intervals are as distinct, the spleen generally enlarged and often as much as in a severe malarial-intermittent fever. We may even find an erratic fever, with irregular attacks of frost with high temperature, heat and perspiration. Sometimes severe delirium may occur.

The second form of morphia fever is characterized by an almost daily (especially in the afternoon and evening) feeling of frost, increased heat and severe thirst, combined with moderate increase of temperature. These symptoms last generally for some hours, but may sometimes continue half a day.

The third form of morphia fever has symptoms like a typhoid fever, headache, ringing in the ears, dizziness. The patients feel weak and languid; keep their bed for three to six weeks; are unable to occupy themselves with anything; cannot read. The examination reveals a paresis of the accommodation, which is characteristic for this form. The temperature rarely increases more than 101.

All these symptoms of chronic morphia intoxication disappear instantly as soon as the use of morphine is discontinued. The irregularity of the eyes and of the digestion, the neuralgias and tremor disappear within eight days, the impotence in the third or fourth week; regular menstruation occurs in four to six weeks, even if amenorrhœa has lasted for years; the morphia-fever and attacks of intermittent fever, which may have lasted for months, disappear immediately, whether we discontinue the use of morphine suddenly or gradually.

The author has in former works declared his belief, that the sudden discontinuance is preferable to the gradual, which has the disadvantage, that it is very difficult, after weeks of treatment, to get rid of the last small doses, (may be only 1 centi-

gram or even 5 milligram) and that the discontinuance of these last small doses is apt to produce the severe symptoms of abstinence, which, by sudden discontinuance, are overcome in four to five days.

To be sure, the sudden discontinuance produces violent symptoms; and weak and feeble patients, especially women, bear it with great difficulty, while patients with chronic, painful and incurable diseases cannot use it at all.

Some might say that it is unnecessary to try to cure the morphium habit in such patients, and in reality it is not advisable by patients, who have but a short time to live; on the other hand, it may be attempted with patients suffering from painful chronic diseases, which may last for years, as morphine, even in increasing doses, loses its power at last; the nervous system is satiated, and the morphine only intoxicates, but does not relieve the pain. If we, in such cases, discontinue its use for a time, the organism returns to its normal state, in which minimal doses of morphine have a narcotic action. In such cases the author recommends a modified treatment, and has used it with effect in phthisis, emphysema, diseases of heart and diabetes.

Before treatment is commenced, the patient is isolated for a few days to determine the daily amount of morphine he is in the habit of using. During these days he receives the amount of morphine he mentions as his habitual doses, subcutaneously; thereafter, the injections are discontinued at once. Very exceptionally a severe collapse will occur in the course of 24 hours after the last injection, and only if the nutrition of the patient is neglected.

At this time severe symptoms of abstinence will appear, from which a severe collapse may develop. As soon as a state of debility (intermittent pulse, slow and irregular respiration, colliquative diarrhœas, severe vomiting) threatens to appear, the perfect development of the same must be prevented. If the patient formerly was in the habit of using very large doses of

morphine ($1\frac{1}{2}$ —2 gram), one-thirtieth of the amount subcutaneously will be sufficient to produce, if not an agreeable, then an endurable condition.

By large doses (0.5 to 1.0) one-fifteenth, by small doses (less than 0.5) one-tenth of the amount subcutaneously will be sufficient. It is best to commence the cure in the evening. The patient has then very trifling symptoms during the first night, but they increase during the following day and reach their highest point in the evening. A subcutaneous injection of morphine will then produce a tolerable night. Next morning the symptoms of abstinence commence again, increase continually till evening; the patient gets then another, but smaller injection, respectively one-fortieth, one-twentieth, one-fifteenth of the habitual dosis. The same treatment with continually decreasing doses is used on the third, fourth and fifth day and so long, till the patient gets along with a dose of 0.03 to 0.01. The amount of morphine a patient with a chronic disease will have to use afterwards, can only approximatively be determined; the author believes that it will seldom be necessary to increase the last mentioned doses (0.1 to 0.3). The author has used the same modified treatment with very sensitive and weak patients. After 24 hours he gave by injection one-thirtieth, one-fifteenth, one-tenth of the former dose, according to its size, after 48 hours one-fortieth, one-twentieth, one-fifteenth; very seldom injections are necessary on the third and fourth day. We have learned by this modified treatment, that a small dose of morphine will be sufficient to prevent severe symptoms from developing, and will make the treatment endurable. The indications for the different forms of treatment are therefore the following:

Absolute and sudden discontinuance may be used by strong persons; the modified treatment with the intention to discontinue its use at last, by women and sensitive men; the modified treatment with the intention to diminish the habitual dose as much as possible by patients with chronic, incurable and pain-

ful diseases. Although the modified treatment is without danger, the author advises the same attention as by the sudden discontinuance.

The author mentions that there are morphine-eaters, who are unable to discontinue its use for a long time or always. They have been using large doses (1.5 to 2 gram) for a long time (10 to 15 years). They do not feel satisfied after the treatment is finished. They had regained their appetite and were able to sleep, looked healthy, but they felt sick. In the course of five to six months they lost their appetite again, became sleepless, looked miserable and commenced to decline in health, although the objective examination revealed nothing. Morphine has become a necessity in these rare cases, and they are easily cured by morphine in small doses, 5 to 10 milligram two to three times a day. Old persons may always safely discontinue its use for 6 months; persons in middle age, for one year.

The author has treated 110 morphine-eaters, of which 82 were men, 28 woman. The sex has no influence, but the social position and business of the male has great influence. Physicians furnish the largest proportion. Of the 110 morphine-eaters, 32 were physicians; eight, wives of physicians; one, a son of a doctor; two sisters of charity, two nurses, one midwife, one medical student; in all 47 persons, belonging to the medical profession. After them the military furnishes the largest proportion; eighteen being officers, and one the wife of an officer. Six were druggists, one the wife of a druggist, eleven merchants, five wives of merchants, four wives of officials, two unmarried ladies, etc. The youngest was 21 years, the oldest 65 years. Twenty men and women had become accustomed to the use of morphine on account of acute diseases, one man used it as antaphrodisiacum. 15 men and women took to its use on account of troubles in the house, etc.; 12 men became drunkards during its use. Of the 82 men 61 relapsed, of 28 women 10, of the 32 physicians 28. The easier the opportunity of getting and handling morphine, the more probable the relapse. It is almost impossible to prevent

relapse in druggists. We must take great care not to give patients, who have been morphine-eaters, subcutaneous injections of morphine, when they complain of pain. The author has observed several relapses from this cause. Four physicians died from its use; three of them had gradually increased the dose, till they reached a fatal one. They were found dying in their beds with symptoms of acute morphine-poisoning. The fourth died during the cure of abstinence from an overdose of morphine he had procured ($\frac{1}{3}$ of his habitual dose) and which, at that state, was fatal.—*Berliner Klinische Wochenschrift*. 1880. No. 6.

Selections.

COITION IN PREGNANCY.

By Theophilus Parvin, M. D.

Popilia, when reminded that pregnant animals did not permit the approaches of the male, frankly replied, "It is because they are brutes."

Undoubtedly abstinence from coition, once the design of this function has been accomplished, is the law of nature. Ought the human race to accept this law as governing its action?

Recent obstetric writers are generally silent upon the question; occasionally some half-breed—borrowing a term from Albany—writing medicine for the mass, sustains the negative, often qualifying the permission to indulge with certain cautions; but upon the whole there seems a tacit consent for the laity to settle the question as, guided by wise reason and kind sympathy on the one hand or by blind instinct and ungoverned passion on the other, they choose, just as my good friend the late Dr. M. B. Wright once said to me, "We must leave these matters to regulate themselves."

Yet our great master Hippocrates thought that pregnant women who abstained from coition had easier labors; Galen dwelt upon the liability to abortion from this cause at certain periods of pregnancy, the fruit more easily detached when more tender and when approaching maturity, so that the Christian Fathers had good authority for their injunction of continence in the early part and toward the end of pregnancy.

The older obstetricians of modern times did not think the matter unworthy of or improper for their consideration. Thus Mauriceau forbade intercourse in the first few days following conception and in the last two months of pregnancy. Dionis, the frank, honest fellow, criticised his reasons and condemned his rules, concluding in these words: "I shall add that Mauriceau made his observations from himself, for though married forty-six years, he did not have a single child. For my part, I have a wife who has been pregnant twenty times and has given me twenty children born favorably at term, and I am persuaded the caresses of the husband do no harm." Gardien, whose contribution to obstetric literature is one of the most valuable and interesting of the century, devotes considerable space to the subject, and in the course of his remarks says: "It probably would be more prudent to abstain from using the rights of marriage from the time that pregnancy is certain up to the end of the lying-in."

The fact that abstinence from sexual congress in pregnancy is the common rule of animals is certainly a strong argument in favor of urging similar abstinence on the part of men. In addition it may be truthfully asserted that the pregnant woman has as little desire for coition as pregnant females of lower orders; nay, oftentimes utterly abhors while submitting, for she is less protected by power of escape.

Furthermore, practitioners are sometimes told by innocent husbands—more rarely by wives who so often suffer in silence—that intercourse causes the latter great pain.

Finally, this is a frequent cause of abortion ; at least one-half of the cases of what is termed spontaneous abortion probably are thus produced. Summing up the arguments* in the affirmative of the question, it may be stated that coition in pregnancy is unnatural ; so far as woman is concerned, it is generally odious, often painful ; and in regard to the newly-created being, frequently murderous.

What can be alleged on the other side ? The peace of families and the chastity of husbands are secured by the indulgence. But suppose men were trained to believe that such indulgence is wrong, injurious to others and to themselves, would their amiability and chastity require to be purchased by a momentary pleasure ? Would they not rather learn to subdue and rule this otherwise imperious passion ? If Newton, Kant, Fontanelle, and Beethoven could live their many honored years with no indulgence of sexual passion, surely other men might abstain a few months without injury !

This ungoverned passion of man is prolific of evil, and, like producing like, the father who never has learned self-control may give his son not only form and feature, but the germ of the same fierce, clamorous desire, which in its full development will prove a heritage of woe to that son and others. That which polite language veils under the designation *social evil*, and which desolates so many happy homes and brings its quick, black harvest of misery, remorse, disease and death, chiefly lives because man does not know aright, does not duly reverence and honor woman, and keep in subjection that which may become one of the master-passions in his heart, and is thus continued from generation to generation.

Surely prospective motherhood, woman within whom proceeds the evolution of the marvelous mysteries of creation,

*It is highly probable that in many instances both the leucorrhœa and nausea and vomiting of the early months of pregnancy are greatly increased by coition. Cases have been observed where the nausea and vomiting did not occur at all, or only in a slight degree, if the husband was absent during the pregnancy ; while in other pregnancies, he being at home, these symptoms were most distressing.

should be revered, is worthy of all kind and thoughtful consideration, and ought to have thrown around her all protective care. The woman who has conceived is *enceinte*; that is, ungirdled—in allusion to the ancient custom of laying aside the girdle when pregnant and placing it in the temple of the gods—at once a preparation for the enlargement of the abdomen and a seeking divine protection. Let her not fail of all human care while in this condition. Nature then offers unto man invitation and opportunity to subordinate passion to reason, to conscience, to will, to a higher love, and thus raise himself above himself. A sensual age claims for coition facilitating parturition; and the most sensual of husbands, finding their wives pregnant very much against their wishes and in spite of the devices of conjugal onanism, will claim that they can now indulge freely and without fear, for matters can be no worse.

We do believe that intercourse in pregnancy has nothing to commend, nothing to excuse itself unto wise men, and that virtuous abstinence on the part of the husband will be a blessing both to him and to his wife and to their posterity.

It may be objected that the abstinence here advocated contradicts almost universal practice—a practice that frequently brings no evil. But how do we know it has no injurious results? Admitting that the wife may, in the majority of cases, not patently suffer—have no miscarriage, no pain, no nausea and vomiting increased or excited thereby—is there no violence done to the finer elements of a refined womanly nature? Does such a woman cheerfully accept it as the way of all, like Hiero's wife, who never perceived her husband's offensive breath, imagining that it was common to all men? It seems that there might follow some lessening of mutual love, respect, reverence.

So far as the husband is concerned, he learns no lessons of self-control, attains no self-mastery in this regard, and mars that ideal manhood which in better hours and with nobler aspirations he seeks to attain. He will be quite ready in such hours to adopt, as applicable to the act, the concluding clause, while he

may reject the first, of the following extract from Sir Thomas Brown's *Religio Medici*: "I could be content that we might procreate like trees, without conjunction, or that there were any way to perpetuate the world without this trivial and vulgar way of coition. It is the foolishness of a wise man commits in all his life, nor is there anything that will more deject his cooled imagination when he shall consider what an unworthy piece of folly he hath committed."

As to the other objection, no matter how universal a practice is, if it be wrong, at least endeavor to point out the wrong. Whether I judge from observation, from the great doctrine of evolution which so fascinates the age, or from the power of divinely-revealed truth, the conclusion always is that the world grows better, and that a wiser, higher, happier, nobler generation will one day possess the earth. Each evil pointed out, each wrong discovered, helps the progress to that day, although it may be long before the evil and the wrong cease. Meantime it is a great mistake to accept a popular vote as the criterion of wisdom and right.

Possibly physicians are too reticent in regard to sexual relations, do not consider as fully as they ought the connection of these with human health and happiness, and give that instruction to the people which is so much needed in regard to such relations. Believing this, I can say in the words of Montaigne, "I know very well that few will quarrel with the license of my writings who have not more to quarrel with in the license of their own thoughts."

This may be the voice of one crying in the wilderness, but even in the wilderness many heard. If only truth be uttered, it one day will be heard and heeded by some, and when heard and heeded, will multiply itself a thousand-fold.—*American Practitioner*.

THE TONGUE.

By J. Milner Fothergill, M. D.

Much may be learned from accurate observation of the tongue; how much, a few old practitioners almost alone can tell. In the treatment of phthisis, inspection, minute and scrutinizing, of the tongue is far more important than the wielding of the stethoscope, however skillfully. The one tells much of the amount and nature of the disease, the latter gives information, often priceless, as to the precise line of treatment to be adopted; for the tongue is the index of the state of the intestinal canal, and if the *primæ viæ* are disordered, they must be put right before any other therapeutic measure can be safely adopted.

Tell the patient to put out his tongue fully, so that the circumvillate papillæ can be clearly seen; it is no use to study the tip. If the patient is an infant, Sir William Jenner's plan of placing a drop of fluid, especially if viscid as syrup, upon the chin, is well worth following. A tickling sensation is produced, and the little patient tries to remove the cause of irritation with its tongue. The condition of the tongue can thus be studied without much disturbance to the child. The manner of protrusion is instructive. In the typhoid condition of fevers, and in some cerebral affections, the request to put out the tongue has to be repeated, and loudly, before the patient does as is requested; and similar reiteration is requisite to induce its withdrawal. "It is a curious fact that patients will frequently protrude the tongue when they cannot be made to do aught else, owing to the state of their mental faculties" (Flint). Then tremulousness of the tongue indicates alcoholism; and less frequently lead or mercurial poisoning. Tremulousness of the tongue may denote muscular weakness. When seen in the early stages of typhus, or typhoid fever, it indicates a grave condition of bad prognostic omen. In advanced stages the tongue is protruded slowly and with difficulty, indicating impaired power over the muscles. In hemiplegia the tongue, when protruded, turns its apex to the paralyzed side, from diminution of power in the genio-hyoglos-

sus muscles of the affected side. In bulbar, otherwise glosso-labial paralysis, the capacity to protrude the tongue is impaired or lost. In facial paralysis, without hemiplegia, this loss of power to protrude the tongue tells that the mischief is central, and within the skull; and not peripheral, or Bell's palsy.

Dryness of the tongue is found in pyrexia, whether the fever be specific or symptomatic. It is also dry in diabetes, and other conditions of polyuria, and in some of the functional disorders of digestion. It becomes dry and hard, as well as brown, from the accumulation of dead epithelium cells upon it in the typhoid condition and in uræmia. When the mouth is kept open, it becomes dried, as is seen in some forms of dyspnœa. Then it is edentated; and marked by the teeth in conditions of debility, from menorrhagia, chronic diarrhœa, or acute prostration, however induced. Then as to the state of the tongue known as "coated" or "furred." This is constant with some individuals who are well and strong; and a furred tongue, especially in the morning, is common with heavy smokers. But usually a furred tongue denotes disturbance of the digestive organs, or the on-com of acute disease, especially the specific fevers. When found with shivering fits, this condition of the tongue tells of coming trouble. When the coating has a distinctly yellow or brownish hue, there is usually a bad taste in the mouth in the morning when awakening; the taste and the color are both due to tauro-cholic acid. This is denied by some authorities, who say there is no connection betwixt the state of the tongue and the condition of the liver; but the great bulk of medical experience is dead against them. The fur on the tongue consists mainly of dead epithelium cells, mucus, particles of food, and dust inhaled by the breath. As the rude index of the condition of the gastro-intestinal canal, the state of the tongue furnishes valuable information. Where the coat is thick, it is evident that absorption of food from the intestines must be very imperfect through the layer of epithelial cells; and our efforts are directed to remove this obstructive layer. Consequently we inspect the

tongue in acute disease, and in convalescence, in order to ascertain, with such an approach to accuracy as the tongue can tell us, whether the state of the intestinal canal is such as will permit of the assimilation of the injesta. When the tongue cleans, then we know assimilation is going on satisfactorily. When the tongue remains coated, we aid the natural efforts to remove the fur by a mercurial laxative. Repeated free purgation without a mercurial often leaves the tongue as thickly coated as before; and a few grains of calomel produce a clean tongue in a few hours. At other times a dose of calomel may get the credit of cleaning the tongue, when it is due to a natural process. I remember well the case of a boy who had been threatened with enteritis. He was progressing nicely, but the tongue did not clean; I spoke of giving him a powder, but counter-ordered it. Next day he had two free semi-fluid motions, and the tongue was quite clean. Had the powder, which would have consisted of three grains of calomel, been given, it would unquestionably have got the credit of producing the change. This was years ago, in the early days of general practice, but the lesson has never been forgotten. It is always well to see the tongue clean; and in private practice more attention is, and has to be, paid to the state of the tongue than is given to it in hospital practice usually. In acute disease the mucous membrane commonly is unequal to shedding its dead epithelium, and when the shedding occurs, it is a good omen of returning vigor. In protracted illness the fur may be shed and reproduced again several times. After acute disease, and especially fevers, the fur may disappear bit by bit, commencing at the tip, and creeping along the edges; leaving a thick coat up the mesial line and upon the base, which in time also disappears. Such clearing up of the tongue is of the best prognostic omen, and tells of uninterrupted convalescence. In scarlet fever the tongue assumes a "strawberry" appearance; sometimes the red papillæ stand out on a red surface like a ripe, red strawberry, at other times the red papillæ stand out upon a coat of fur, like the seeds on an unripe white

strawberry. A furred tongue is manifested in many cases of dyspepsia, especially when many "by-products" of digestion are formed in the digestive act. Both in indigestion and artificial digestion there are by-products formed as well as peptones, and these "by-products" are offensive and objectionable. In some cases of acid heartburn the chief offending agent is butyric acid. In almost every case of indigestion with a furred tongue constipation is present, and must be considered in the therapeutic plan. Here nothing but a continuous course of laxatives, and occasionally acute purgation at intervals, will be of any service; and the treatment must be continued, no matter how long, until the system rights itself. In some cases the patience of doctor and patient becomes severely tried, but perseverance brings with it at last its reward. All mechanical means of cleaning the tongue, as scraping it, or rubbing it with lemon-juice or vinegar, are well enough for the local sense of cleanliness and comfort, especially in pyretic states; but they are utter rubbish and nonsense as to cure, which depends upon other measures altogether.

Then the tongue may be furred along one side only, or may be raw and irritated, or even ulcerated, by a decayed tooth with a jagged edge. At other times the epithelium of the tongue is stained, as by drinking elder wine, sucking a piece of licorice, or chewing tobacco; or it may be discolored by some preparation of iron. These modifications of its appearance are more distracting and puzzling when the tongue is coated with fur pretty thickly.

The "raw" or "bare" tongue. This condition of the tongue has not, in my experience, received from medical writers a tithe of the attention it deserves to have paid to it. Here the superficial structures of the tongue are denuded, more or less completely, of the natural epithelium. In convalescence from acute conditions, where the tongue has been coated, sometimes the tongue is abnormally red and imperfectly covered with epithelium, and here a coat is apt to form again (Flint). Both in acute or chronic conditions, the absence of the normal epithelial cov-

ering, whether slight or considerable, should receive the keenest attention of the practitioner. As long as the tongue is "raw" or "bare," the line of treatment to be followed is that of bland food, with sedatives to the gastro-intestinal tract, as bismuth, with alkalis, or opium, or both. So long as this condition remains, tonics are useless, and are not digested. At the risk of being charged with dogmatism, I venture to insist upon this. Perhaps it is in phthisis, of all diseases, where this rawness of the tongue excites one's apprehensions; at least, it is of all semeia the one I personally dislike most. It is not usually complete over the whole tongue, but lies as a large patch in the middle of the tongue, the irregular edge usually extending further on one side of the mesial line than on the other. We have every reason for supposing that this condition of tongue is significant of the state of the unseen portion of the gastro-intestinal canal; and the absence of epithelium interferes with assimilation. This it is which excites one's apprehension in all wasting diseases.

"After a meal the epithelium cells of the villus are found crowded with fat. Since the stiration of the hyaline border of the cells is not due to pores, as was once thought, the particles must have entered into the cells very much as foreign particles enter the body of an amœba. The epithelium may, in fact, be said to eat the fat" (Michael Foster). If, then, the epithelial layer be defective from absence of epithelium, or from the epithelial cells being imperfectly developed, and therefore functionally defective, fat cannot be properly absorbed; and that absorption of fat is of all things what we especially desire in wasting disease. Not only is the epithelial layer important in the absorption of nutritive material from the food in the intestines, but it is essential to secretion. "The food, in passing along the alimentary canal, is subjected to the action of certain juices which are the products of the secretory activity of the epithelium cells of the alimentary mucous membrane itself, or of the glands which belong to it. These juices (*vis.*, saliva, gastric juice, bile, pancreatic juice, succus entericus, and the secretion of the large

intestine,) poured upon and mingling with the food, produce in it such changes, that from being largely insoluble it becomes largely soluble in an alkaline fluid such as blood, or otherwise modify it in such a way that the larger portion of what is eaten passes into the blood, either directly by means of the capillaries of the alimentary canal, or indirectly by means of the lacteal system, while the smaller part is discharged as excrement" (Foster). Now, if "the epithelium cells of the alimentary canal play this important part in the digestive act, it is quite obvious and abundantly clear that deficiency in number or perfection of these epithelium cells must exercise a deep and profound influence upon digestion, absorption, and nutrition." That all the practitioner's energies should be bent towards the restoration of the epithelial layer to normal perfection, or the best approach thereto, is intelligible enough; and the attention paid to the *primæ viæ* by our predecessors was amply justified by its importance. It is, too, comparatively easy to get rid of the layer of dead epithelium cells of the coated tongue; but it often taxes all our resources to restore the epithelial coat to its integrity where the tongue is "raw" or "bare." Yes, and sadly, too often our best efforts are futile and unproductive of good result! When the "bare" tongue is the index of a deficient epithelial layer in the alimentary canal—and no other index do we possess—the first duty of the practitioner is to do his utmost to restore it to the normal condition. How this is to be achieved will be considered hereafter. When, then, under appropriate treatment the tongue assumes its normal appearance, and the epithelium once more grows freely upon it, then we know the digestive powers are returning, and that we may venture on tonics, and more food of a less restricted character. A shrewd practitioner, young or old, will always study the condition of the epithelial layer of the tongue carefully, sagaciously, with a full knowledge of what is revealed by the condition of that part only of the alimentary canal which is open to our vision. So long as the condition of "raw" or "bare" tongue continues, so long must our therapeutic

measures be directed to the restoration of the epithelial layer of the alimentary canal to its integrity—or the nearest attainable approach thereto. Then the tongue may present a “beefsteak” appearance when it is denuded of epithelium, as it is apt to do when the brown fur of the typhoid, or uræmic condition has been shed. The system is equal to shedding the dead epithelium, but it is not quite equal to the production of a new layer of perfect epithelium.

The epithelium layer of the tongue is often suggestive of other conditions than those of the alimentary canal. There is a peculiar silvery sheen of the epithelial covering of the tongue in many cases of menorrhagia; especially when the tongue looks swollen and shows the indentation of the teeth. I have nothing to say as to the “how” of this association; but it is certainly sufficiently common to give this condition of the tongue a distinct diagnostic value.

In relapsing fever there is often a small triangle on the tip of the tongue, much cleaner, or “rawer,” than the rest of it. Each side of this equilateral triangle is about half an inch in length. I have seen it both here and in Germany.

Then the surface of the tongue may be altered. The mucous membrane may be ulcerated, as in stomatitis. Glossitis it is not my province to describe. Or it may be fissured. Deep rugour fissures are very suggestive of syphilis. So is a large bare patch with or without fissures, without acute disturbance of the health; while patches of syphilitic psoriasis where the affected epithelial scales are shed and a bare patch is left, are not at all uncommon. The tongue may^s be the seat of a chancre, which must be discriminated from cancer; this is done by the history, the age, and the conditions of the glands of the neck. When inspecting the tongue, other evidences of syphilis may be furnished by the state of the pharynx, or soft palate. Then the tongue may be indented by the teeth. “Indentations on the margins may be produced by the pressure of the teeth. These occur if the organ be swollen; otherwise they simply show that it has remained in

contact with the teeth for a considerable time. In health, during wakeful hours, it is frequently moved, not remaining, except momentarily, in the same place. The indentations due to diminished movements denote mental hebetude. The tongue occasionally presents fissures or cracks in the course of fevers, and these sometimes continue into convalescence. Cicatrices are observed in persons subject to epilepsy, as the result of wounds inflicted by the teeth during the paroxysms. These may be useful in determining that paroxysms which a patient has experienced were epileptic in character. Coldness of the tongue belongs to the moribund condition, without reference to the disease, and it is a striking symptom in the algid stages of epidemic cholera" (Flint).

A tongue fissured not deeply, but with many little fissures over its surface, I have very commonly noted in persons who drink their tea very hot; but it is not invariably, though commonly, so associated.—*Leonard's Illus. Med. Journal.*

THE ALKALINITY OF THE BLOOD.

M. J. Garel having made a large number of careful observations with reference to the alkalinity of the blood in different conditions, finds that the results of different observations are not always concurrent, probably due, he says, to imperfections in the process of examination. The following conclusions, however, he feels warranted in advancing with some degree of assurance: The most incontestable fact is the slight alkalinity of the venous blood. I have verified this not only in man, but also in animals. In these last I made parallel analyses of the blood from the femoral artery and vein. The experiment was the more conclusive, as I operated upon a much larger quantity of blood. It is readily perceived, then, how we have noted with M. Lepine that the blood is less alkaline in cyanosed subjects than in the natural state. It is to the increased quantity of carbonic acid that it is necessary to attribute the diminished

alkalinity of the blood. In febrile diseases the results obtained are contradictory. There is sometimes increase, sometimes diminution of alkalinity. We are reduced to simple hypotheses to explain these facts. If the alkalinity diminishes, it may be admitted that the globules are more fully charged with carbonic acid. If, on the contrary, there is increase of alkalinity, we suppose that it is in relation to the destruction of discs; the red discs in their destruction yield up potassa to the plasma of the blood. We know, in fact, that the alkalinity of the discs is much greater than that of the serum. This last fact explains how, in the anemic and the cachetic, whose blood is poor in red discs, the alkalinity of the blood is very slight. It accounts, also, for the almost insignificant alkalinity, which I have observed, either in the serum from clots or in different pathological serosities.—*Lyon Med.—St. Louis Courier of Medicine.*

RELATION OF FOUL AIR TO CONSUMPTION.

“Experiment has shown that if an animal be kept confined in a narrow, closed apartment, so that the air supplied is always more or less vitiated by the carbonic acid which it expires, however well fed that animal may be, tubercle (consumption) will be developed in about three months.” If this be the case, a large percentage of cases of consumption should be met with among the inmates of badly ventilated schools. But, fortunately, the disease is comparatively infrequent under the age of fifteen, and added to this is the protecting influence of the active exercise in the open air usually indulged in by school-children. It is upon the teachers that its blighting effects are most apparent, as they are predisposed by age, they neglect exercise in the open air, and *their mental labor is severe, and worry of mind exhausting.* Of eleven teachers who died during the last eight years within the limits of one county in Pennsylvania, two died of acute disease, one of an overdose of an habitual narcotic, and

of nine attacked by consumption, eight died—six ladies and one gentleman; the other, a gentleman, will recover, at least for a time.—From “*Schoolroom-Ventilation*,” by DR. P. J. HIGGINS, in *Popular Science Monthly* for August.

HYGIENIC VALUE OF MIRTH.

But, aside from all this, mirth has an hygienic value that can hardly be overrated while our social life remains what the slavery of vices and dogmas has made it. Joy has been called the sunshine of the heart, yet the same sun that calls forth the flowers of a plant is also needed to expand its leaves and ripen its fruits; and without the stimulus of exhilarating pastimes perfect bodily health is as impossible as moral and mental vigor. And, as sure as a succession of uniform crops will exhaust the best soil, the daily repetition of a monotonous occupation will wear out the best man. Body and mind require an occasional change of employment, or else a liberal supply of fertilizing recreations, and this requirement is a factor whose omission often foils the arithmetic of our political economists.

To the creatures of the wildness affliction comes generally in the forms of impending danger—famine or persistent persecution; and under such circumstances the modifications of the vital process seem to operate against its long continuance; well-wishing Nature sees her purpose defeated, and the vital energy flags, the sap of life runs to seed. On the same principal an existence of joyless drudgery seems to drain the springs of health, even at an age when they can draw upon the largest inner resources; hope, too often baffled, at last withdraws her aid; the tongue may be attuned to canting hymns of consolation, but the heart can not be deceived, and with its sinking pulse the strength of life ebbs away. Nine tenths of our city children are literally starving for lack of recreation; not the means of life, but its object, civilization has defrauded them of; they feel a want which bread can only aggravate, for only hunger helps them to forget

the misery *ennui*. Their pallor is the sallow hue of a cellar-plant; they would be healthier if they were happier. I would undertake to cure a sickly child with fun and rye-bread sooner than with tidbits and tedium.—DR. FELIX L. OSWALD, in *Popular Science Monthly for August*.

HOW MILK SHOULD BE TAKEN.

Again, milk is a food that should not be taken in copious draughts like beer, or other fluids, which differ from it chemically. If we consider the use of milk in infancy, the physiological ingestion, that is, of it, we find that the sucking babe imbibes little by little the natural food provided for it. Each small mouthful is secured by effort, and slowly presented to the gastric mucous surface for the primal digestive stages. It is thus regularly and gradually reduced to curd, and the stomach is not oppressed with a lump of half-coagulated milk. The same principle should be regarded in the case of the adult. Milk should be slowly taken in mouthfuls, at short intervals, and thus it is rightly dealt with by the gastric juice. If milk be taken after other food, it is almost sure to burden the stomach, and to cause discomfort and prolonged indigestion, and this, for the obvious reason that there is insufficient digestive agency to dispose of it. And, the better the quality of the milk, the more severe the discomfort will be under these conditions.

Milk is insufficiently used in making simple puddings of such farinaceous foods as rice, tapioca, and sago. Distaste for these is engendered very often, I believe, because the milk is stinted in making them, or poor, skimmed milk is used. Abundance of new milk should be employed, and more milk, or cream, should be added when they are taken. In Scottish households this matter is well understood, and a distinct pudding-plate, like a small soup-plate, is used for this course. The dry messes commonly served as milky puddings in England are exactly fitted to create disgust for what should be a most excellent and

delicious part of a wholesome dinner for both children and adults.—DR. DYCE DUCKWORTH, in *Popular Science Monthly* for August.

MYCOSIS OF THE TRACHEA.

A German physician, Dr. Hertenrich, has lately cured a case of this rare affection by iodine inhalations used thrice daily for two weeks. Carbolic inhalations totally failed to do good. Parasitic affections of the ear and nose are of more frequent occurrence than of the air-passages. In all these cases the questions arise: Is the parasite a cause or a consequence of disease? or is it first a consequence and next an aggravation? or is it of itself the sole source of the morbid phenomena?

CASE OF REMARKABLY LOW TEMPERATURE.

Dr. Walter Mendelson (*New York Medical Record*, June 4, p. 627) gives the case of a man brought into New York Hospital in a starving condition, extremely emaciated, weak, and almost voiceless. The surface was cool, the hands and feet being cold; the heart-sounds were almost inaudible, and the pulse beat forty-three in the minute; the temperature, taken several times and with two different thermometers, in the rectum, was 90.6° F. He was ordered stimulants by the stomach, with a hypodermic injection of equal parts of brandy and ether. Food was given gradually, and the patient slowly recovered strength, the thermometer showing a progressive increase in temperature almost hourly until the normal was reached in about twenty hours. There was a tendency to fall, however, which persisted for some days, the thermometer showing 97.5° in the morning, but always rising to the normal in the afternoon. There was no febrile reaction, the highest temperature being 99.6° on the third day after admission. The digestion seemed in no way disturbed, for three days after admission the patient was eating heartily of

everything, and was taking cod-liver oil and iron. He soon regained strength, but appeared to be in a state of mild dementia, which persisted during the two or three weeks of his stay in the hospital. His previous history in respect to mental condition could not be ascertained.

OVARIOTOMY AND PAROTITIS.

It is an established fact that orchitis and inflammation of the parotid may mutually complicate each other. Moreover, there has been observed a relation between inflammation of the salivary gland in question and that of the external genital organs and the ovaries. Facts in support of this opinion are found in the works of Bouteiller, Meynet, Peter, and Billroth. Schroeder, who had never met parotitis as a complication of operations on the female genital organs, has just seen it as a sequel of five ovariectomies, two of which proved fatal (*Il Morgagni*). He comes to the conclusion that parotitis is a grave complication of gynæcological operations.—*Medical Press and Circular*.

ARTIFICIAL NOURISHMENT OF INFANTS.

IN this contribution to the study of the artificial nourishment of infants, Dr. Monti reports a series of observations upon the use of Biedert's artificial food (cream mixture). He says that even diluted cow's milk contains so much casein as to make it hard for the child to digest; further, that a certain amount of fat is essential to the digestion of bovine casein, and in diluting the milk the proper proportion between the casein and the fat is disturbed. Biedert's artificial food consists of white of egg, sugar of milk, cane sugar, butter and salts. Of this one teaspoonful is dissolved in sixteen teaspoonsful of warm water and given to the infant, cow's milk being added by the teaspoonful as the child grows, the amount of it to be added being determined by the child's ability to digest it. The author has tried this mixture in thirty-three cases, and under the following conditions: 1.

As the exclusive food of new-born infants, to test its quality as nourishment. 2. In cases where infants have been artificially nourished, and have lost flesh on account of intestinal troubles, to test its nourishing quality in sick children. 3. As a dietetic means to overcome some intestinal trouble. 4. In children nursed at the breast, but not thriving, in which case it was administered with the breast milk. 5. Given to recently weaned children, who did not readily digest cow's milk. The following results were reached: In the first series of five cases, an increase of body weight was found in all, but in two infants it was not well borne. In the second series, of six cases, all the children were under three months old, with acute and chronic intestinal troubles and emaciation. Within from six to seventeen days after administering the mixture all the intestinal troubles were overcome, and the children gained in weight; but on continuing the mixture for some months together, in two of the cases slight enteritis occurred, but did not end fatally. In the third series, of fifteen children, eleven were less than four months old, and of the whole number thirteen recovered and two died. In the fourth series, of three cases, the results were most satisfactory, the children gaining in weight, though in two cases transitory dyspepsias were observed. In the fifth series, of four cases, all showed the best results.

SUCCESSFUL CASE OF RESECTION OF CANCEROUS STOMACH.

On April 8th, Dr. Wölfler, assistant to Dr. Billroth, performed resection of a cancerous pylorus on a woman aged 52. The case was regarded as favorable for the proceeding, on account of the mobility of the tumor, which was apparently about the size of a hen's egg. The operation, which lasted two hours, was not followed by fever, nor by vomiting, and the patient was able to take fluid food two days later. On the tenth day, she ate, with good appetite, a veal cutlet, and a fortnight after the operation, was in a most satisfactory condition. The wound in the abdom-

inal wall had healed by first intention, and without any constitutional disturbance. — *Wiener Medizinische Wochenschrift*. Billroth has repeated the operation twice since his first successful case, reported in the *Md. Med. Journ.*, May 1st. Both patients died, the first on the 8th day, the second in about 12 hours.

CORROSIVE SUBLIMATE IN DYSENTERY.

This remedy, in half-minim doses of the liquor hydrargyri bichloridi of the British Pharmacopeia, administered hourly, speedily and infallibly cures dysentery (barring the tropical and infantile forms), according to Dr. March in the *London Med. Times and Gazette*.

TREATMENT OF FREQUENTLY RECURRING "ERYSIPELAS" OF THE FACE.

Dr. James Braithwaite (*British Medical Journal*, vol. i., 1881, p. 681) says that for many years his father and himself have used with entire success a strong solution of tannin (four to eight grains to the drachm of alcohol and water). This application, which is not disagreeable to the patient, should be painted over the parts affected with a soft brush every two or three hours, and allowed to dry, the patient being careful to keep the face from the fire. If there is a tendency to frequently recurring "erysipelas," it is well to keep the tannin at hand, as it always arrest a threatened attack.

FOREIGN SUBSTANCES INTRODUCED INTO THE BRAIN WITH IMPUNITY.

At a recent meeting of the St. Louis Medical Society (*St. Louis Medical and Surgical Journal*, May, 1881, p. 566) a curious case was described of an insane convict who was in the habit of inserting wires, nails, etc., into his brain through an

opening made in the skull by means of an awl. One of the wires was so long that it penetrated the brain-substance completely and struck against the skull on the other side. After the discharge of this convict from prison, he procured some morphia for the purpose of overcoming sleeplessness, and, taking an overdose, died.

A post-mortem examination was made by Dr. Carpenter, assisted by Dr. Sayer, of Leavenworth. In the substance of the brain the following foreign bodies were found: first, a wire four and three-fourths inches in length; second, a wire three and seven-eighths inches long; third, a wire six and three-fourths inches in length; a wire was removed from the middle lobe two and one-sixth inches long; one in the anterior lobe two and three-eighths inches long; a nail removed from the anterior lobe two and one-quarter inches in length; a needle removed from the middle lobe one and five-eighths inches in length. These were encysted in a manner in the substance of the brain, and apparently gave him no trouble whatever.

The patient had shown no psychical peculiarities during life which could be attributed to the presence of foreign bodies in the brain.

PSYCHICAL IMPOTENCE.

The only case of psychical impotence that I have ever met with is the following: A widower, 52 years of age, was engaged to be married, and, despite the fact that he had erections in the presence of the object of his affections, he was so fearful that he would disgrace himself on the night of his wedding, that he made the experiment with another woman and failed utterly. As a consequence of this unfortunate test, he constantly brooded over his imaginary trouble, for which he sought my opinion. I found that his genital organs and prostatic urethra were perfectly normal, and succeeded in obtaining his confidence by assuring him that I had met with many cases of a similar nature, and that

they had always yielded readily to teaspoonful doses of fl. ext. damiana, taken every eight hours, for three days before marriage. As a result of this ruse, he subsequently wrote me that the remedy had acted like a charm.—S. W. GROSS, in *Maryland Medical Journal*.

THREE VIEWS OF A CONSULTATION.

Bulwer says in one of his novels, in defining a medical consultation, that a consultation is a meeting of physicians in which the counselors agree with the attending physician, and change the treatment.—*Cincinnati Lancet and Clinic*.

A single Doctor like a sculler plies,
The patient lingers and by inches dies.
But two physicians, like a pair of oars,
Waft him with swiftness to the Stygian shores.

—*Jefferson's Book About Doctors*.

A consultation means that two persons, holding views in some way comparable, adopting principles assimilable, and acting upon lines which may somewhere be made to converge, meet together for the purpose of deciding what is best to be done, under the circumstance, in a case to which these laws and this practice are applicable.—*British Medical Journal*.

Editorial.

VOLUME XXI.

With this number commences another year of the JOURNAL, and our subscribers will find inclosed their bills for the ensuing year. This begins the third year of the present management. The price of the JOURNAL during this time has been, and for the present will continue to be, two dollars, one-third less than at any previous time. It will readily be seen that at this price there can be but one way to make ends meet—to see that all dues are promptly collected. This being the case, we feel free

to call the attention of our friends to the necessity for early remittances. During the past year we have on the whole had no reason to complain; while a few have been somewhat dilatory or have perhaps entirely neglected to respond, of the large majority we have only the request to make that they do as well in the future.

BUFFALO STATE INSANE ASYLUM.

RESIGNATION OF PROF. JAMES P. WHITE AS PRESIDENT OF THE BOARD OF MANAGERS.

At the annual meeting of the Board the following communication was read :

To the Board of Managers of the Buffalo State Asylum for the Insane:

More than twelve years since the first petition addressed to the Legislature, asking for the appointment of a commission to locate an Asylum for the Insane in the Eighth Judicial District, was printed and circulated among the medical practitioners in Western New York by myself. This petition was upon application of the physicians in this part of the State numerously signed, and on presentation to the Legislature, then in session, favorably acted upon, and five commissioners appointed by Governor Hoffman to recommend a suitable location for the institution. Five medical men were appointed—Drs. Gray, Eaker, Wm. B. Gould, Strong and White—who reported in favor of selecting Buffalo after a sharp competition, in which very liberal offers were made on the part of Lockport, Westfield, Warsaw and Batavia.

After hearing the arguments presented by the advocates of the different places, the Legislature decided to adopt the report of the commissioners recommending Buffalo

The late Mr Joseph Warren had by this time joined me in the undertaking, and upon our representation a bill was passed appropriating fifty thousand dollars to commence the erection of a building, and ten managers were appointed for its care and construction

In May, 1870, the gentlemen appointed organized, electing me to the presidency, to which position your partiality has annually unanimously re-elected me.

During this entire period the success of this great humanitarian institution has been with me paramount in importance to all other considerations. To advance its interests I have at my own expense made ten or twelve journeys to represent to the legislative committees its importance and requirements.

Although the plan of the building may be unnecessarily elaborate and expensive, it is pleasant to believe that for perfection in arrangement, for the classification of

patients, for ventilation, and in all the essential requisites of a hospital for the insane it has no superior in any country.

With many delays and embarrassments from various sources, the structure has been in part completed, and is now occupied by the suffering insane. The competent and excellent Superintendent and the able corps of assistants, nominated by myself, are successfully carrying forward the good work.

Satisfied that my individual efforts are no longer required to accomplish success, I beg to tender my resignation of the presidency of the Board.

In retiring from the Board and its presidency, I cannot do less than thank you for the many courtesies extended to me during the long period we have been thus associated.

Together we have achieved success and given to Buffalo a most imposing structure for the most benevolent of all purposes—the amelioration of the condition of the helpless insane.

Although admonished by my multifarious duties and occupations that I must diminish my cares, I yet retire from your association with sincere regret, and from a conviction of duty to myself, to other duties and my private engagements.

Respectfully,

JAMES P. WHITE.

On motion a committee was appointed by the Chairman to express the sense of the Board in relation to the resignation of Dr. White. They submitted the following:

Resolved, That in accepting the resignation of Dr. James P. White as president of the Board of Managers of the Buffalo State Asylum for the Insane, we desire to place on record our sincere regret for the necessity that prompts the step on his part.

Resolved, That in thus severing his relations with this Board as the president, he will bear with him our continued confidence and respect for the ability, cheerfulness and devotion with which he has during the past twelve years performed the duties of the office.

The resolutions were unanimously adopted.

Francis H. Root was unanimously elected to the position of president, but at first declined to accept. He, however, finally consented to accept for the remainder of the term.

The JOURNAL has ever taken the greatest interest in the progress and success of the Buffalo State Asylum, and we can only join with the managers in expressing “our sincere regret for the necessity that prompts this resignation.” It will be received with unfeigned regret by any friend of the institution. More than twelve years ago Dr. White recognized the necessity of an asylum at this end of the State for the unfortunate insane, and

the benefits which would accrue to this city by its establishment here. From that day to this he has labored unceasingly with rare tact, ability and judgment to accomplish this purpose. From the first organization of the Board he has been its president, and to-day he points with pride to an asylum of which he can say "for perfection of arrangement, for the classification of patients, for ventilation, and in all the essential requirements of a hospital for the insane, it has no superior in any country." It has now reached a stage when its success is assured, and urged by his friends of the duty which he owes to himself, of to some degree curtailing his labors, and perhaps more strongly by an indisposition, which, we sincerely trust, a much-needed rest from professional and other labors will entirely relieve, "Dr. White retires from the active direction of Asylum affairs." In the words of one of our great city dailies, "If it be true that the culture and christianity of a community are best gauged by the character of the humane institutions, then this city as well as the State of New York owes something to Dr. White, the father and for eleven years president of the Buffalo State Asylum for the Insane."

A WORD ABOUT BOOK AGENTS.

It is a well known and generally admitted fact that in the history of civilization, while progress and improvement are the rule, yet occasionally mistakes are made and steps have to be retraced. It is a natural consequence upon our increasing attempts at new methods that now and then a change fails to be an improvement, but on the contrary soon proves to have been an error; and this notwithstanding the best intentions. We believe such a mistake to have been made by certain publishers of medical works in their employment of traveling agents whose business is to solicit subscriptions in person. Admitting for the present that their professed object is the only one—zeal in the cause of medical education—we shall consider the subject simply from the standpoint of the physician.

Book agents, like other people, admit of classification in the good and bad, or, as some might have it, into bad and worst. While we do not deny that now and then an agent presents himself who is satisfied to wait his turn, satisfied with a few minutes of a physician's busy time, and is willing to accept an adverse decision; still, we all know these to be rare exceptions. The rule is self-assertion, arrogance and persistence. In the morning, perhaps, possibly before you have arisen, he rings and awakes you from your much-needed repose; or later in the day, during the morning hours, the office filled with waiting patients, your time more than fully occupied, he takes his place in the row. If with unusual condescension he waits his turn, you have a comparatively mild case to deal with. His story—he has taken special pains to see you, as Dr. ——— has informed him that you are one of the leading physicians, a prominent member of the profession, etc., who, unlike so many, is determined that money-getting shall not interfere with his duty to his books. He has no doubt from your reputation that you will be more than pleased with the opportunity which his firm with such great sacrifice to themselves now offer you. While you are looking at the book, the names of all the prominent physicians who have already subscribed or perhaps have had the book given them, are read to you, and you begin to think that the neglect to purchase the work would be equivalent to excommunication. You buy, and with Ziemsen's *Cyclopædia* or some similar work on your library shelves to gather dust from year to year, you feel that you have done what was necessary to maintain your standing in the profession.

If, however, you should happen to be one of the obstinate and self-opinionated few who prefer to buy only after deliberate consideration, our obliging agent promises to call again in a day or two, and sometimes, in consideration of this dreaded alternative, you conclude that with peace thrown in the volume is after all very cheap. There may be an occasional medical man who has sufficient knowledge of what he wants and does not

want that he can refuse and continue to refuse. But what is life to such a man ; what self-reproach does he not feel when he thinks of the feelings which, according to our agent, the whole medical world must have toward such an anomaly. You are exhorted by your sense of right and duty, by the respect you owe to the publishers, by your duty to yourself and your honored profession. But all in vain ; you prefer to lose an hour or two of time, with prospects of many more in the future, simply to prove yourself a stubborn, unreasoning man, with no object higher than to make a trade of your profession, with money-making and keeping its end.

We fail to see in this condition of things any of the so-called advantages which are proclaimed. On the contrary, the annoyances are self-evident. It is not long that we have had this evil, and it is not too late to remedy it. Let the publishers advertise by pamphlet, as formerly, and have the books in stock at the larger book stores, where they can be seen at times of leisure and convenience. Let physicians refuse to submit to the loss of time and other impositions of book agents, and the good days of our fathers, when not only book agents but those of all other classes were unknown, will once more return to this oppressed generation.

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.

We would earnestly call the attention of every Alumnus of Albany Medical College to the following announcement :

At the meeting of the executive committee of the Alumni, held June 16, 1881, the president stated that he had given considerable thought to the matter of prize essays to increase the interest in and efficiency of the Association.

He had concluded to offer an annual prize of \$100, to be called "A Surgical Prize," and would announce as the subject for this year, "An Essay on Colles Fractures, its Pathology and Treatment," to be accompanied with a pathological specimen

illustrating the fracture, with or without dislocation of the ulna, or a careful dissection of the hand, wrist and fore-arm.

After favorable remarks by members of the committee, on motion of Dr. L. Hale, Dr. Van Deveer, the president, was appointed a committee of one to give the matter further consideration. Subsequently he reported that the heirs of the late Prof. Alden Marsh, M. D., L.L. D., desired to give the sum of \$100 as an annual "Marsh Memorial Prize," the essay for the coming year to be on the "Pathology and Treatment of Morbus Coxarius."

Also, that Mr. A. McClure, a governor of the Albany Hospital, had decided to give the sum of \$100 annually as an "Armsby Memorial Prize," the essay to be on some anatomical subject. That for the coming year will consist of a minute description of the genito-urinary organs of the male, together with a carefully dissected specimen of the same.

The president further reported that the heirs of the late Prof. James MacNaughton, M. D., had offered the sum of \$100 as a "MacNaughton Memorial Prize." The subject of the essay for the current year to be "Antisepsis in the Treatment of Diseases," and Mr. Joseph Russell, a trustee of the College, offers for this year a second surgical prize of \$100 for the second best essay on "Colles Fractures."

Essays and specimens designated by a motto and accompanied by a sealed envelope inclosed with the same motto, and containing the name and address of the author, must be sent to the secretary, Dr. W. G. Tucker, by the 14th day of February, 1882.

The committee to examine the essays for this year will consist of Drs. A. Van Deveer, J. Murher and Lorenzo Hale, and they reserve the right to reject any or all the essays if not deemed worthy.

All specimens are to be deposited in the new museum of the College, properly labeled.

Reviews.

An Introduction to Pathology and Morbid Anatomy. By F. HENRY GREEN, M. D., Fellow of the College of Physicians, London; Lecturer on Pathology and Morbid Anatomy, at Charing Cross Hospital Medical School, etc., etc. Fourth American from fifth revised and enlarged English edition, with one hundred and thirty-eight fine engravings. Philadelphia: H. C. Lea's Son & Co. 1880.

Those who have studied and worked with Dr. Green's treatise will be glad to get this new edition. It has been carefully revised by the author with the view of making it include the most recent advances in pathology, and we believe that it will now be more popular than ever as a text book. For practical, ordinary daily use, we consider it the best work that is to be had for students of pathology and morbid anatomy.

Cyclopædia of the Practice of Medicine; edited by Dr. VON ZIEMSEN, Professor of Clinical Medicine in München, Bavaria. Vol. IX. Diseases of the Liver and Portal Vein, with the chapter relating to Interstitial Pneumonia, by Prof. Ponfick, of Rostock; Prof. Thierfelder, of Rostock; Prof. Von-Schnepffel, of Tuebingen; Prof. Heeler, of Kiel, and Professors Leichtenstern and Tuer-gensen, of Tuebingen. New York: Wm. Wood & Co. 1880.

The ninth volume of this great work is fully equal to the other volumes and the completion of the work will be gratifying to every subscriber.

The Principles and Practice of Surgery; being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely illustrated. Vol. II. Philadelphia: J. B. Lippincott & Co. 1881.

The first volume of this work made its appearance, if we remember right, several years ago, and the work was to be completed in two volumes, but the author has been obliged to add a third. The second volume contains more than a thousand pages and treats in an exhaustive and complete manner of dis-

locations, diseases of joints, excisions, amputations, diseases of the genito-urinary organs, surgical diseases of women, etc., etc. This work will be of use especially as a book of reference; but, also, as a text book in the medical colleges, especially in the pure surgical subjects; it is unsurpassed in the English literature. We have, indeed, larger works as Holmes' (shortly to be re-edited and revised by an American corps of surgeons), but we doubt that any single man has undertaken and as successfully carried out his purpose to write a book on general surgery, as has Dr. Agnew.

Hernia, Strangulated and Reducible; with Cure by Subcutaneous Injection; together with Suggested and Improved Methods for Kelatomy, etc. By JOSEPH H. WARREN, M. D. With illustrations. Boston: Charles N. Thomas, 215 Tremont street. 1881.

This book gives an account of the operation, by subcutaneous injection, for the cure of hernia, as practiced by the late Dr. Heaton, and improved by the author. It is especially as a record of this operation that the work is of interest. Most of the chapters contain scarcely anything which is not to be found in the surgical manuals.

Easy Lessons in Sanitary Science. By JOSEPH WILSON, M. D., Med. Director U. S. Navy. Philadelphia: Presley Blackiston 1881.

This little book gives some needed lessons specially on the subject of drainage. It is written in so pleasant a style, and free from all technicalities that it may well be entitled *Easy Lessons*—but as there is no royal road to learning, the greatest success which we can wish for the book, is, that its perusal may put ideas into the heads of some, who are in blissful ignorance of their violations of sanitary laws, so that they may either study proper works, or consult those who have made a study of the broad subject of hygiene and thus be able intelligently to correct dangerous surroundings of their homes.

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Original Communications.

DECISION OF THE HON. GEORGE BARKER, JUDGE OF THE
SUPREME COURT, REGARDING THE LEGALITY OF THE
CHARTER OF THE COLLEGE OF PHYSICIANS
AND SURGEONS OF BUFFALO.

In the suit brought to test the validity of the charter under which the College of Physicians and Surgeons of Buffalo is conducted, Hon. George Barker of the Supreme Court, before whom the matter was argued at Special Term, has overruled the demurrer of the defendants and gives leave to answer the complaint in twenty days, on payment of costs; otherwise absolute judgment will be awarded to the plaintiff. The Judge hands down an elaborate opinion, of which the following is the full text:

SUPREME COURT.—The People of the State of New York *vs.* George W. Cothran, Zebulon Ferris, Henry Childs, Jerome F. Fargo, Stephen O. Barnum, Alfred B. Southwick, Samuel W. Wetmore, Garrett C. Daboll, Thomas P. Sears, George W. Cutter and Samuel N. Brayton.

ERIE COUNTY SPECIAL TERM.—June, 1881.

Hamilton Ward, Attorney-General, and Lewis & Rice for the People.

Tracy C. Becker and George W. Clinton for the defendants.

BARKER, J.—The Attorney-General, upon his own information, prosecutes this action against the defendants, charging them with acts of usurpation, in seeking to create and maintain a body corporate, without due authorization from the legislative authority of the State. The Attorney-General, in prosecuting the action, stands upon the provisions of section 948 of the Code of Civil Procedure, which provide that “the Attorney-General may maintain an action, upon his own information, against one or more persons who act as a corporation within the State without being duly incorporated, or exercise within the State any corporate rights, privileges or franchises not granted to them by the law of the State.”

In March, 1879, the defendants filed a certificate which in form is a compliance with chapter 319 of the laws of 1848, entitled “An act for the incorporation of benevolent, charitable, scientific, and missionary societies,” was the same amended at that time. They were named in the certificate as the trustees of the corporation, and have ever since acted in that capacity, and as the officers and agents of the corporation intended to be created.

The name of the society as mentioned in the articles of association is “The Buffalo College of Rational Medicine.” The objects and purposes of the society, as mentioned therein, are to create, establish, maintain and conduct in the city of Buffalo a college for instruction in medicine, surgery and dentistry, and in all science connected therewith, and ancillary thereto, and when deemed expedient to establish, maintain and conduct in connection therewith a free medical dispensary.

This certificate was endorsed and approved by one of the Justices of the Supreme Court.

It is alleged in the complaint “that on or about the 20th day of March, 1879, the defendants associated themselves together under the name of ‘The Buffalo College of Rational Medicine,’ and gave out and pretended to be incorporated as a medical col-

lege, and assumed and did act as a corporation and performed pretended corporate acts; that they established a pretended medical college in the city of Buffalo, and pretended to give instruction in the art of medicine and surgery, for which they demanded and received compensation, and issued and granted diplomas to graduates, and pretended to do all other acts pertaining to and ordinarily done by incorporated medical colleges."

The complaint also contains an averment that the defendants did not claim to have any other authority for maintaining a corporation of the character mentioned, except such as is contained in the act of 1848, and the several acts amendatory thereof.

To this complaint the defendants have interposed a general demurrer, claiming that the complaint does not state facts sufficient to constitute a cause of action.

The legal proposition presented by this demurrer is whether a corporation with the powers, functions and attributes of a medical college proper can be created and brought into existence under the provisions of the act already mentioned, and as such body corporate confer the degrees of learning usually bestowed by incorporated colleges, and in testimony of such grant to give suitable diplomas, which shall entitle the possessor to all the immunities and privileges which the laws and customs of the country confer on such persons.

Intermediate the passage of the original act and the time of filing the certificate of organization by the defendants, the first section of the act of 1848 was several times amended, changing and enlarging the powers and purposes of such corporations as should be organized under the act. The last amendment was in 1872, chapter 649, when the text of the first section was rewritten, and as amended reads as follows: "That five or more persons may associate themselves together for benevolent, charitable, literary, scientific, missionary or mission and other Sunday-school purposes, or for the purpose of mutual improvement in religious knowledge, or the furtherance of religious opinion, or for any two or more of such objects combined."

Societies organized under this statute possess the general powers conferred by, and are made subject to, the provisions and restrictions of title 3 of the 18th chapter of the third part of the Revised Statutes.

In considering the legal proposition, I shall only discuss the merits of the question, disregarding all mere technical criticisms which have been made as to the sufficiency of the complaint, as the learned counsel for the respective parties upon the argument expressed a desire to reach and have adjudicated upon the trial of this demurrer the vital question in issue, so important to the defendants as individuals as well as to the public at large, whether a corporation with the powers claimed by the defendants has been lawfully brought into existence.

After an examination of the provisions of the general act in question, together with concurrent legislation authorizing the creation of literary and medical colleges, I am well satisfied that the legislature did not intend by the provisions of the act of 1848 to allow the formation of corporations with the powers and functions possessing the rank and dignity of literary or medical colleges proper; that corporations formed under the act of 1848 were intended to serve a less important and different purpose, and for that reason they have been exempted from many of the restraints, obligations and duties imposed upon institutions of the other and higher grades.

In considering the question, and in examining the acts referred, it will be useful and to some extent necessary to refer to the history of legislation in this State in regulating the practice of physic and surgery, and the purpose and policy of the laws relating thereto.

The science of medicine and surgery has been to some extent fostered by the State from its earliest history, and institutions of learning have been organized to teach and instruct persons who intend to practice the profession of medicine as a vocation in life that the public may enjoy the services of learned and skillful physicians. Prohibitory statutes were also at the same time

passed declaring that no person should practice physic or surgery without having a license therefor, emanating from some institution or board of examination well qualified to determine who were suitable persons to engage in the important and delicate duty of visiting individuals and families in the professional capacity of a physician. The unauthorized practice of physic and surgery was made a misdemeanor, punishable by fine or imprisonment, or both.

Later in the history of legislation upon this subject, and I believe in the year 1844, an act was passed which swept away all criminal and penal laws against the unlicensed practice of physic and surgery and abolished all laws which prohibited any person from receiving a compensation for services as a physician or surgeon, whether licensed or not. Notwithstanding the radical change the statutes continued to provide for a system of granting licenses and issuing diplomas as heretofore had been the custom, and but few men were bold enough to offer themselves to the public as medical practitioners and surgeons who did not have one or the other of the certificates of fitness granted to them by public authorities.

In 1880, chapter 513, the policy of free license in the practice of medicine was completely terminated, and a return to the former system was inaugurated, and by the terms of this last mentioned act it is provided that no person shall practice physic or surgery within the State unless he is twenty-one years of age, and has been authorized in the manner required by law regulating the granting of licenses and diplomas. Any person violating these requirements and engaging in the practice of medicine without license or a diploma is made guilty of a misdemeanor, and may be punished by fine or imprisonment, or both. It is also provided by the fifth section of the act of 1880, that the degree of Doctor of Medicine, lawfully conferred by any incorporated medical college or university, shall be a license to practice physic and surgery. The only other authorized mode of securing a license authorizing the practice of medicine, is by complying with the requirements of the law of 1872, chapter 746.

By this act it is provided that the Regents of the University shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven persons, who shall have been licensed to practice physic and surgery in this State. Such examiners shall faithfully examine all candidates referred to them for that purpose by the Chancellor of the University, and furnish him a detailed report in writing of all questions and answers of each examination, together with a separate written opinion of each examiner as to the requirements and merits of the candidate in each case. "Such examination shall be in anatomy, physiology, materia medica, pathology, histology, clinical medicine, chemistry, surgery, midwifery and in therapeutics, according to each of the systems of practice represented by the several medical societies of this State." No person is entitled to be so examined before such board unless he is over twenty-one years of age, of good moral character, and is able to produce proofs satisfactory to the Chancellor of the University that he is of competent knowledge in all the branches of learning taught in the common schools of this State and of the Latin language, and that he diligently studied medicine, not less than three years, under the direction of one or more physicians duly qualified to practice medicine, or has himself been duly licensed on examination by some medical society or college legally empowered to issue licenses or degrees in medicine, and upon paying to the treasurer of the university the fees mentioned in the fifth section of the act.

By the general law of the State authorizing the formation of medical colleges (chapter 184 of the Laws of 1853), the trustees of such medical colleges are given power to grant and confer the degree of Doctor in Medicine upon the recommendation of the board of professors of such college, and at least three curators of the medical profession appointed by said trustees, but no person shall receive a diploma conferring such degree unless he be of good moral character, and of the age of twenty-one years, and shall have received a good English education, and shall

have pursued the study of medicine and the science connected therewith for at least three years after the age of sixteen, and have received instruction from some physician and surgeon fully qualified to practice his profession until he is qualified to enter a medical college and shall also after that age have attended two complete courses of lectures, delivered in some incorporated medical college.

This brief statement of the nature and character of the past and present laws on the subject of licensing persons to practice medicine, and of the attainment and qualifications which are required of persons who may receive such permit, and the pains and penalties that follow from a non-observance of these particular requirements, will present to every intelligent mind at once the importance of the subject under consideration, that it is a question of both public and private concern.

The history and course of legislation in passing general laws for the formation of corporations of various kinds and character which are required, and are necessary in a populous, commercial, trading, manufacturing and intelligent people, indicates very clearly, if it does not altogether demonstrate, that it was not the intention of the Legislature by the provisions of the act of 1848 to authorize the formation of a medical college as such institutions are known to the law and customs of the State.

Since the constitution of 1846 it is the policy of the State that all corporations of every grade and character, except municipal, should be organized under general laws, and that special legislation was not to be resorted to for such purposes, although not in terms prohibited by the constitution.

In pursuance of the spirit of the fundamental law of the State, many general laws have been passed authorizing the formation of corporations of the various classes, such as banking business and trading, commercial and manufacturing, with such powers and functions, obligations and restrictions as in the wisdom of the Legislature should be given and imposed upon such corporations.

By the laws of 1853, chapter 184, entitled "An act relative to the incorporation of colleges and academies," the regents of the university by general rules and regulations were required to prescribe the requisites and conditions of the incorporation of colleges, universities and academies, or other institutions of learning, pursuant to the power vested in said regents by an act relative to the university, passed April 5, 1813, as amended by the Revised Statutes of this State.

In this same act special and particular conditions were exacted on organizing medical colleges, and such institutions were required to have an endowment of fifty thousand dollars before a charter would be given them. Special provision was made as to the amount of property such corporations might take and hold, and limiting the uses and purposes to which the funds and moneys of the corporation could be used, and making them subject to the general provision of the Revised Statutes, so far as the same was applicable to regulating the practice of physic and surgery within this State, and giving them the power to confer a degree of medicine, and to issue diplomas to the class of persons possessing the qualifications which have been hereinbefore mentioned.

By a general provision of the Revised Statutes, there is conferred upon every college, besides the general powers and privileges given it by the law of its incorporation, the right and function to grant such literary honors as are usually granted by any university, or college or seminary of learning within the United States, and in testimony thereof to give suitable diplomas, under seal and the signature of such officers of the college as they shall deem expedient, and every diploma granted by such college shall entitle the possessor to all the immunities, which by usage or statute are allowed to possessors of a similar diploma granted by any university, college, or seminary of learning in the United States.

Reading the act of 1848 and the amendments thereto, in connection with these other general laws, it is obvious that the

intention of the legislature was to authorize the formation of corporations for purposes distinct from that of literary or medical colleges proper.

By giving to the act of 1848 an interpretation limiting the powers of corporations created under it, so as not to embrace a medical college proper with the powers, functions and attributes bestowed upon such institutions, the system of general laws relating to the creation of colleges is made harmonious, each act consistent with the other, and gives to the legislation of the State a rational and intelligent meaning. To hold to the contrary, that medical and literary colleges to be known as such can be organized under the act of 1848 as well as under the act of 1853, would make the system of laws on the subject inharmonious, confused and misleading. I am convinced that it was not the intention of the Legislature to suffer and permit medical colleges to be organized and maintained, possessing the powers which are bestowed upon such institutions, without at the same time placing them under any other obligation and restraint than is imposed by the act of 1848.

If the position of the defendant is maintained, then the Medical College of Rational Medicine at Buffalo, of which the defendants are trustees and officers, can graduate students, confer degrees, issue diplomas, without the graduate having any other qualifications than such as may be imposed by the defendants themselves. I think that all persons who may give to this subject a thorough examination, study the history of the State relating to such matters, and examine the laws which have been referred to, will readily reach the conclusion that it would not be wise and safe to bestow upon individuals who may voluntarily associate themselves together under the act of 1848 the right of establishing the degree of qualifications which graduates of medical colleges shall possess, and without being required to inquire into their moral character and fitness to practice medicine.

In the best interests of the public and families it is required that all graduates from medical colleges organized under the

law of 1853, or applicants who may receive a license to practice medicine from the Board of Regents should possess the qualifications which are in the acts themselves especially enumerated.

Within the last fifty years there have been created many literary and medical colleges by special enactment; and as bearing up the proposition that a corporation organized under the act of 1848 has no power to organize a college proper, either literary or medical, it will be found instructive to consider the provisions of these several special enactments, as indicating the policy of the State to be as already stated; and it will be found that in instances where the college so incorporated is of a literary character it has been clothed with the power to grant diplomas, and when a medical college proper has been organized, the power is given to grant a diploma conferring the degree of Doctor of Medicine, but in every instance requiring as a prerequisite that the possessor shall have pursued a course of medical studies such as are prescribed in the several acts of incorporation. I quote from the charter of the University of Buffalo, which institution has the power of granting diplomas conferring the degree of Doctor of Medicine. Most of the special charters contain side provisions: "No person shall receive such diploma unless he shall have pursued the study of medical science for at least three years after he attains the age of sixteen years with some physician and surgeon duly authorized by law to practice his profession, and shall also after that age have attended two complete courses of all the lectures delivered in some incorporated medical college, the last of which courses shall have been delivered by the medical faculty of such university."

Reference is also made to the charters of the New York Medical Society, chapter 206 of the laws of 1850; the New York College of Dental Surgery, the laws of 1852, chapter 261; the charter of the People's College, laws of 1853, page 193; the Metropolitan Medical College of the City of New York, laws of 1854, chapter 192; the New York College of Veterinary Sur-

geons, chapter 267 of the laws of 1859; the Excelsior Medical College in the City of New York, chapter 160 of the laws of 1858; the American College of Medical Science, chapter 85 of the laws of 1858.

The defendants have cited chapter 51 of the laws of 1870, which is an amendment of the act of 1848, and argue that under the provisions of the first section of this act authorization is given to incorporate any society for the purpose of establishing and maintaining any educational institution, and that by its terms power is given in terms broad enough to authorize the organization of a college proper.

I do not concur in the interpretation which the learned counsel for the defendants have placed upon this first section, but am of the opinion that the true interpretation is to limit this provision to religious societies entirely.

I am also of the opinion that this section is repealed by chapter 647 of the laws of 1872, hereinbefore referred to, when the first section of the act of 1848 was re-written and re-enacted providing for the formation of societies of the character mentioned in the act of 1870, and to ascertain the powers which corporations possess organized since 1872. Reference must be had to the first section of the act as last amended, and be determined thereby. The act of 1870 was not amended to stand independent of the act of 1848 in all its provisions, for by the title of the act it is declared to be an amendment to the act passed April 12th, 1848.

It is further argued and maintained by the defendants' counsel that the same act of 1870 gives the legislative interpretation as to the right to organize colleges and universities under the act of 1848. It must be held in view of the previous and concurrent legislation which has been hereinbefore alluded to, that the words "university" and "college," as used in this section, are used in a limited and modified sense, and that it was not the purpose by the use of these terms to signify the intention that a university or college proper could be created in the easy and

unceremonious way in which a charitable and benevolent society could be organized under the general act of 1848.

The act of 1870 can have full significance and effect given to all its provisions without yielding to such liberal interpretation.

Beyond all doubt a corporation may be organized under the act of 1848, for the purpose and object stated in the certificate made and filed by the defendants, that is to say, to establish, maintain and conduct a society for instruction in medicine, surgery and dentistry, and in all sciences connected therewith and ancillary thereto, and to maintain and conduct a free medical dispensary. Such purposes are in their character benevolent, charitable and scientific, as well as useful and beneficial to the community. Such an institution, properly organized and conducted, would be a school with praiseworthy and commendable objects and purposes.

But the defendants, by their demurrer, have admitted that their object and purpose in seeking to organize this corporation, is to create and maintain a medical college as such institutions are known to the laws of the State, and to confer honorary degrees and grant diplomas to its graduates.

The demurrer is overruled, with leave to answer on payment of costs within twenty days; if costs not paid and answer made within this time, then judgment absolute for the plaintiff.

THE RELATION OF DISEASES.*

By P. W. Van Peyma.

As nuclei for the development of the subject to which your attention is called, I shall make use of two quotations, both from earlier papers of mine. The subject of one is "Inflammation," that of the other "Malignancy in Tumors." The first was read January 9, 1877; from it we take the following: "It has been my object to give a rational explanation of the phenomena of inflammation. I have not attempted to determine

*Read before the Medical Club, July 20, 1881.

when, in the process which we have been considering, inflammation really and exactly begins, or when it as precisely ends. Believing the transition from one condition to another gradual, and the lines separating inflammation from simple hyperæmia on either side arbitrary, this would have been inconsistent. And in conclusion I will say that to my mind inflammation is not alone in the fact of its gradual transition into other conditions. My conviction is settled that as we progress in our knowledge of the general principles of disease, the application of this law of transition will be found to approach the universal."

The second, from a paper read two years later, in 1879, is to the same effect: "In the study of malignancy we are again reminded that in nature there are no sudden jumps from one extreme to another, but always a gradual transition. One kind of morbid action gradually merges into another."

From these quotations and the dates at which the papers containing them were read, it will be seen that this idea of transition is not simply a temporary or ephemeral hobby, but a fixed belief, which, I may add, time has but strengthened. For this reason and also because, although a theoretical subject, it treats, as I believe, of principles and has a direct and important practical bearing, I have considered it worthy of the attention which you may give it. It cannot be denied that the truth or falsity of the views brought forward must have a serious practical bearing. None the less is it true that the positions must stand or fall by what we shall in the future learn or unlearn touching many practical points, such as the causes and relations of diseases.

The purpose of this paper is to show that the classification of diseases and, in many instances, the conceptions of their nature are surely and entirely arbitrary matters, depending upon individual notions—the individual and collective personal equations. This thought will be developed to show that pathological processes show transitions into those of similar character, and that where we draw the lines of separation, in fact, that we draw the lines

at all, indicates a wrong conception of the laws of nature in general and of pathology in particular. This subject, like all of its class, admits of two methods of examination.

First, then, we may commence with our knowledge of diseases as they present themselves in our time, and secondly, commencing at what we assume to have been the primitive condition, we may by reasoning attempt to fill in the intervening condition of things. If by these means we should fail to make the lines of reasoning meet, we shall still expect to approximate them with perhaps here and there a missing link. Has not the attention of every one here present been forcibly called to the difference between the descriptions in text-books of typical cases and the anything but typical cases we meet with in daily practice? Were text-books our only guide, we must come to the belief that each disease is a sharply-defined entity, abruptly separated from all others. And this is apparently the view adopted, perhaps without more reflection, by the profession generally. We should, according to this view, naturally expect, for example, erythematous and follicular pharyngitis, quinsy or tonsilitis, malignant or putrid sore throat, and diphtheria, all to be diseases entirely distinct and presenting each a morbid process peculiar and pathognomonic. Again, that hyperæmia and inflammation are to be looked upon as essentially distinct; that malignancy is something specific. In the sphere of the germ theory of disease each particular form of bacteria to be the source of its own characteristic pathology. If this be the correct view, leucorrhœa can have no connection with gonorrhœa; no more can dumb ague, remittent, intermittent, typho-malarial and pernicious intermittent fevers have any relation to each other.

Is this a true picture of what we see at the bedside? I think not. That typical cases of different diseases bear but slight, if any, resemblance to each other, we of course do not dispute; but many, perhaps the majority, of cases are not typical, and it is in these that we think to find the steps of transition. That

there is more contrast than comparison between diphtheria and erythematous pharyngitis, for example, is obvious; but when between these two extremes we place the other inflammations of the pharynx, we are enabled to follow the pathological variations step by step. Cases of fever with the mixed rash of measles and scarlatina, and with one or more of the usual concomitant symptoms of either, are equally suggestive.

To bring the subject within the scope of this paper, we must here limit our first line of argument to take up the second. This latter we open with the proposition that disease must of necessity depend upon one or both of two causes, or rather groups of causes; the one those of heredity, the other those of active circumstances, such as air, temperature, food, etc. This being admitted, the converse follows that a perfect man in a perfect environment must enjoy undisturbed and perfect health. Like the "one-hoss shay," he would perhaps live "an hundred years to a day," and then like that would go, nothing first, but all at once. Like a candle when burned to its socket, he would "go out" for the reason that the tissues are oxidized and blown away. Such a man might Adam have been in Paradise—a perfect man in perfect surroundings.

Now it is evident that, although the cell is originally perfect, circumstances may, during its growth, result in aberration from the normal, and this is what we call disease. Authors have apparently found great difficulty in defining health. The reason for this is found in the fact that the line must be drawn at the first moment of aberration, or else it becomes an entirely arbitrary matter. This point, although very important, does not appear ever to have received much attention. Of course it follows, as we well know, that no human being, since the ideal and mythical Adam, has ever enjoyed perfect health. We are all sick; we are all insane. How much discussion might have been avoided if this unavoidable truth had been acknowledged? Who can tell exactly where eccentricity ends and insanity begins? The answer is, every doctor, and it might be added, "every old

woman," but let it also be added no two alike. Where does benignancy end and malignancy begin? Both the answer and the apparent criticism are the same. Examples could be multiplied indefinitely. Does not the thought suggest itself that classification is arbitrary and that transition is the explanation? Is it not evident that a gradual, almost if not quite insensible, transition exists between the various forms of disease? This we maintain and shall endeavor to prove. For this purpose we shall adopt the mode of reasoning employed in the demonstration of the non-existence of a so-called free will. Three factors require consideration: first, perfect man; second, natural man; and third, the circumstances in which he lives.

A human being is the sum of what he was when born plus the effects of influences which have acted upon him during his life-time. Every human being is the sum of a perfect man plus the effects of influences which have acted upon him and his ancestors.

We begin, therefore, with a perfect man, and shall endeavor to follow the changes to which he is subject as a result of external causes acting upon him. These are of course manifold. The food he eats may be improper in quantity for quality, the water he drinks either too cold, or hot, or impure in character, and so on. As one of the simplest in its consequences let us follow the results of an abnormally increased temperature of the atmosphere. The heart increases in rapidity, the skin becomes more active, in short, all the vital functions are hastened. The man is simply unhealthy in that he lives too fast; he will run down before the hundred years have run their course.

We now add another abnormal condition—the atmosphere contains an abnormal amount of vapor. The result is clear. The skin and the organs no longer act as safety valves; the temperature of the person increases. He has fever. These are still comparatively elementary conditions, and before following them further it will be well to add one or more additional illustrations.

Our man submits different portions of his body to unequal temperature, or gives them unequal opportunity for retaining or radiating the animal heat. He sits in a draft of cold air. The parts abnormally cooled contract, be this contraction physical or through the influence of the nervous system, the result is an approach to localized anemia. This, if continued, or becoming intense, results in appreciable diminution of nutrition. On the other hand the irritation of a foreign body results in increased localized vital activity, the assimilation and disassimilation no longer corresponding, and a local hyperplasia or tumor is formed. Usually, however, the irritation of a foreign body is more violent, the hyperæmia continues to increase, the serum of the blood is transuded, followed, perhaps, by albumen and blood, the proliferation becomes more and more rapid, the cells are hastily and imperfectly formed, they infiltrate the tissues interfering with the circulation, fatty degeneration takes place, the part becomes disorganized, breaks down, and we all call it inflammation. Are we not right in calling this a progressive, a transitional process?

At present we are much inclined to explain many morbid conditions, by referring them to disease germs, just as years ago everything was explained by recourse to the theory of reflex action. In both instances physicians, in their eagerness to profit by the latest researches in physiology and pathology, have undoubtedly gone too far towards one extreme, as they will surely in turn go to the other. Still, evidence is accumulating, tending to prove that bacteria and kindred forms of the lower organisms are in numerous instances active causes of disease. The varieties of bacteria (using the word in its broadest sense) and the character of their activities, chemical or vital, are as yet too little understood for us to enter deeply into the subject. But from what is known it seems probable that their action may be compared to that of other irritants. The collection of symptoms, which we designate as febrile, is almost invariably present in diseases attributed to their agency. If, as is probable, varia-

tions of the character of germs—that is of the cause—result in variations in the effect—that is in the disease—then we may rightly assume that if the cause is transitional, so will be the disease. Our knowledge of animal and vegetable life, both the higher and lower forms, leaves no doubt that such transition actually has taken place during the ages of the past. We infer, then, that such has been the case in this group of diseases. We further conclude that as animal and vegetable life tends constantly to differentiation from conditions of uniformity to those of variety, that the same is true with this group of diseases. At this stage of the world's history we would expect, as we in fact find, that many diseases have assumed a form quite characteristic and peculiar. But here and there we still find the links which connect them with other forms less developed and differentiated. That new forms of disease have in the past and will in the future continue to make their appearance, is in perfect accordance with this view of their origin and course. That the limited number of pathological processes, such as inflammation, degenerations, etc., into which all others may be analyzed, involve a universal law, I firmly believe. Were this otherwise, it would be in contradiction with all we know of the laws of nature of anthropology, biology, and all the kindred departments of knowledge.

This thought can perhaps be made clearer by imagining a sphere whose center is health and whose circumference is death, with lines radiating from the center to various points of the surface. These lines to be considered as lines of disease. The graver forms approaching the surface, while the milder scarcely leave the center of health. At the center the lines are closely approximated, while at the circumference they are widely divergent. So with disease: first closely resembling each other, afterward by a process of gradual differentiation they have become to a great degree dissimilar.

The arguments drawn from our daily clinical observation and those founded on the nature of things both point, then, in the

same direction, towards establishing the truth of the proposition that all forms of disease are transitional.

For want of time this simple outline of the argument must suffice.

In conclusion we will add a few words touching the practical bearing of the subject.

The results of a general adoption of these views as the truth must incline in the first place to a broader and more scientific conception of health and disease. While we recognize the classification of disease in some such way as the present, as an advantage in description and for the purpose of calling attention to incidental complications, we shall bear in mind the facts of its arbitrary character.

As a result we see in the future that treatment is more and more based on general principles, generally applicable, and varied only as demanded by special circumstances. Specifics are less prized and sought for, and when found, are more generally applicable. Less stress is laid upon the name and inversely more upon the essential nature of the difficulty. As our conception of the nature of diseases improves, so will our treatment, and this being the ultimate object of all medical art and science, we can clearly see the practical importance of the views which we have endeavored to maintain.

Clinical Reports.

URETHROTOMIA EXTERNA.

By Herman Mynter, M. D.

Mr. P. T. consulted me in August, 1881, for difficulties in passing his water. He is 52 years of age, a strong man, who, with the exception of the local difficulty, always has enjoyed good health. In his younger days he had two attacks of gonorrhœa. For 15 years he has passed his urine in a very small stream, and twice, respectively 8 and 6 years ago, had

perfect retention of urine, which was relieved by hot baths. Instruments of moderate size have been introduced occasionally, but with difficulty, and the introduction was always followed by attacks of chills, fever and great prostration. He has twice (1 and 3 years ago) had abscesses form in the perineum, and the last abscess resulted in the formation of a urinary fistula. For months he has been unable to do any work, the water passing almost continually, both through the urethra and the fistula, drop by drop; his health had failed, he complains of pain over the kidneys and increasing weakness.

At the examination a hard callous fistula was seen behind the testicles in the scrotum, which could be followed about one inch upward toward the membranous part of the urethra. By examination through the urethra a stricture was found in the anterior part of the membranous urethra, hard and cicatrized, but no instrument could be passed through. The examination was followed by a severe attack of urethral fever. The patient was advised to submit to operative treatment, urethrotomia interna, if possible, if not urethrotomia externa. For some days he took grain doses of sulphate quinine three times a day and drop doses of tincture aconite. The operation was performed August 11th, Drs. Lothrop, Diehl, Storck, Cary and Davidson being present and assisting. The patient was put under the influence of ether, placed in the position for lithotomy, and hands and ankles securely fastened together. With a large metal syringe the urethra was injected with sweet oil with considerable power, and different-formed small bougies, belonging to Meissonenoe's instrument for internal urethrotomia, introduced, but in spite of all trials no one would pass the stricture. At last I succeeded in passing a very fine whale-bone bougie. A grooved sound for lithotomy was introduced down to the stricture, and held immovably against it. The end of it could be distinctly felt in the perineum. The scrotum was drawn well forward, the perineum divided in the middle line, and the urethra opened on to the sound in part of the stricture.

Two sutures were inserted in the walls of the urethra, and with sharp hooks the opening in the urethra made as wide as possible; but in the deep wound it was impossible to see anything, although the whale-bone bougie could be felt with a sound. The middle part of the bougie was therefore hooked with a strabismus hook and brought out through the wound, and with this as a guide, it was extremely easy to pass a brass grooved sound through the stricture and freely rinse the stricture. A large steel sound (No. 23, French scale) could then with ease be introduced into the bladder. The patient was put to bed, quinine in 10-grain doses and tincture aconite in 5-drop doses administered four times a day, and an injection of morphine (grain $\frac{1}{4}$) given subcutaneously. The wound was covered with towels dipped in warm carbolic acid lotion. The patient did not get any chill after the operation, and felt perfectly well. He was kept quiet in bed, the large steel sound was introduced once with ease every third day. The water passed partly through the wound for six days, but after that time only through the urethra, and the wound is now, fourteen days after the operation, almost healed, and the patient dismissed with the injunction to introduce the sound twice a week for years to come.

Translations.

A SUCCESSFUL CASE OF RESECTION OF THE BOWELS.—REPORTED BY DR. ROGGENBON FROM PROF. TREUDELENBURG'S CLINIC IN ROSTOCK.

Translated from the German.

The operation of resection of the bowels has formerly been considered as a very bold undertaking, partly on account of the difficulty of uniting the ends of the bowels so perfectly that no fecal matter can come out through the wound (on the suture-holes), while at the same time the lumen of the bowels must be maintained in its size, partly on account of the danger of periton-

itis. Although the first mentioned difficulty may be considered overcome since Lembert invented his suture, resection of the bowels can only be counted among rational operations, since we have learned to prevent septic peritonitis by the use of antiseptic precautions. We see, therefore, that this operation, which formerly was performed very exceptionally, has suddenly become recognized as justifiable in the case of malignant newgrowths on the bowels, and commences in cases of gangrenous herniæ to rival the operation for formation of artificial anus.

But nobody doubts that this operation first will gain its greatest practical value, when we, in cases of strangulated hernia, in which the bowels have suffered considerably by the incarceration, but are not distinctly gangrenous, have the choice between resection and reposition of a suspicious hernia. The cause of death after herniotomy is, according to the author, in the majority of cases secondary gangrene of the bowels, or peritonitis, on account of lesions of the bowels.

Considering the results of resection of the bowels since Czerny's paper on the subject, in 1877, the author would think the operation advisable in cases in which the bowels were found in a state of intense congestion. To draw the line distinctly, is difficult. We might, in such cases, let the bowels remain out for a time (as Graefe has advocated in *Berliner Klinische Wochenschrift*, No. 8, 1881), although the chance of a successful operation surely would not improve by it.

The author thereafter reports a case of resection. The patient, a lady, 74 years of age, entered the hospital February 8th, 1881, on account of a strangulated femoral hernia on the right side. She had suffered from rupture for 30 years, but had kept it back with a truss. She had been treated in the hospital several times for gall-stone colic. Eight days previously she had again an attack of colic, combined with icterus. The day before she entered the hospital the rupture came out during difficult defecation, but was brought back again. In the evening it came out

again, and soon became strangulated. Taxis was not successful, and permatomy was, therefore, performed 24 hours after the accident.

The bowels had a dark-blue color, with many ecchymoses in the walls, but no gangrene was discovered. It was decided to reposit the bowels, partly on account of the age of the patient; but during this act, which was rather difficult, the bowels tore next to the mesentery. The canal was immediately compressed so that none of the fluid entered the peritoneal cavity, and it was decided to resect the strangulated part of the bowels. The section was done in the healthy part of the bowels and a piece, 32 centimeters long, removed with a wedge of the mesentery. The sutures were applied first to the part of the bowels adjacent to the mesentery (as it is difficult to secure a good union here, if we apply the sutures to the mesentery first); Czerny's modification of Lembert's suture was used, which consists of two rows of sutures, of which the first only passes through the serous covering of the bowels, next to the wound, while the second row consists of Lembert's sutures, applied alternately with the first ones. Eleven and ten sutures were applied in the different rows, and fine silk, dipped in a 4 per cent. solution of carbolic acid, used.

The canal having been thoroughly incised to prevent any tearing of the sutures, the reposition was effected. The sac and omentum were ligated and cut off; the wound was closed with five sutures and a drain tube left in the lower angle. Recovery took place without any unfavorable symptoms. The bowels moved on the fifth day after using castor oil. In the course of eight days a circumscribed tumor appeared in the ileo-cæcal region, which disappeared slowly from pressure under symptoms of borborygmi. The wound in the bowels united by first intention, which does not always take place. In a case of resection by Polano, fœcal discharge took place from the wound on the ninth day; in a case reported by Dittel, on the fifth day; in one by Kacher and two by Hageborn, respectively on the eighth and

fifth days, but all five cases recovered at last. As these cases show that gangrene may occur of the wound, the author advises not to tie the sutures of the second row too firmly. To close the abdominal cavities during the operation and prevent entrance of fœcal matter, compression with a sponge over the canal showed itself to be amply sufficient.—*Berliner Klinische Wochenschrift*, July 18, 1881.

Selections.

RAPID BREATHING.

By Addinell Hewson, Senior, A. M., M. D.,

My pursuit of Bonwill's method of producing "*insensibility to pain*," ever since he first directed my attention to the subject, some ten years ago, has afforded me a collection of very curious as well as interesting experiences, from which I now propose to communicate those of most practical value to the profession.

The process itself consists essentially of rapid—excessively rapid—respirations, kept up continuously for some minutes, say from three to five or seven, to induce the desired state, while the patient's face is covered by a handkerchief or towel hanging from the forehead, so that there may be no diversion of attention by what may be in the room or going on there. This breathing must be kept up at as high a rate of speed as possible; this is often easiest accomplished by directing the patient to blow out his breath as fast as he can. The effect of this is soon manifest by the patient's manner, his seeming weary, and his needing urging on more constantly. A pinch in the flesh now, say on the hand, arm, neck, or elsewhere most accessible, will provoke a sigh, a lament, or a positive exclamation, either of which will have its definite signification, easily recognized; the last showing perfect *sensibility to pain*; the first, the loss of it; the second, only its impairment. These different states may also be determined by directly asking the patient, not "whether

he feels it" (the pinch), for he never loses his *sense of touch*, and will, therefore, always say "yes" to that question, but "whether it hurts him," and if he says "yes," he is not yet "insensible to pain;" if, on the contrary, he says "no," then the state of "*insensibility to pain*" has been brought about, and needs only the continuance of the "rapid breathing" to keep it on the patient as long as you need it for the purpose of your resorting to it.

In communications which I have before made to the profession on this subject I have occasion to refer to the advantages of this mode of provoking "insensibility to pain," in certain instances, over those of ether, or chloroform—where true anæsthesia is induced but not necessary. My communication now will also be relative to the same, and I will proceed, without further preliminary remark, to make that for to-day in a sketch of a single case, that of Mr. —, aged —, over — feet high, who had been a fine looking and a vigorous man in his day. I found him on one occasion, in my front office, waiting his turn, a picture of decrepitude and woe, his tall figure doubled up in a heap on a sofa—his head, with its thin covering of perfectly white hair, projecting forward, with agony marked in his countenance, and his hands shaking violently.

I had seen him often in the past ten years—when I was attending some of his family at his home, and had there acquired the impression that he suffered with senile cystic trouble. This time he was before me, evidently the victim of severe cramp, and as soon as I could get him into my back office—for I had to help him there—he walked around it all doubled up, wringing his hands, and saying he was suffering with too great pain in his bladder to talk to me.

I immediately made him sit down on a chair, threw a napkin over his face, and directed him to blow out his breath as fast as he could. This he did without any hesitation, and—by my watch—in four minutes' time he said, "Oh! (with a deep inspiration) it is gone now, let me go to your water-closet." There

he emptied his bladder promptly, and returning to my room expressing himself perfectly delighted, said, "My God! what a blessing that rapid breathing is."

I saw him frequently after this, and he always gave vent to the same sentiment, saying, also, that he never failed to resort to this breathing as soon as he felt cramps coming on, and so succeeded in checking the pain.

"Rapid Breathing" has been shown, also, by the discoverer of its effects on pain, to leave the will and consciousness untrammelled; so that one under it knows what is going on around, and can be induced to co-operate in the matter of changing position, and other muscular exertions that may be desirable in many instances, and the want of which co-operation is often seriously felt by the surgeon with his patient under the influence of ether or chloroform. Thus, in the use of the catheter—male, or female—in the examinations of the rectum, or vagina, either *per digitum*, or *per speculum*, and even in actual cutting operations of those parts, as for stricture, fistula, or the like—in the latter, the knowledge of the fact that a vast majority of fatal results from chloroform have occurred from its use in them—gives a surgeon extreme satisfaction from security against such with the "Rapid Breathing."

So, in labor itself, one has not only the advantages cited above as belonging to rapid breathing, but is secured against the after-effects even of ether in it, and which have been shown to increase the mortality of normal labors. Here I will introduce my "clinical fact" for this communication.

Mrs. —, aged thirty-four, had been, in girl and early womanhood, a wild and independent creature in the country, riding bareback and the like. Her menses came on at about thirteen, with great suffering, and recurred regularly in the same manner, but grew worse until the reflex irritations and hysteria were attended with convulsion and even extreme opisthotonos during the immediate antecedents of the flux—then they came on more or less constantly, until at the end of about

six years from the beginning of this extreme state, when they were positively constant. I then saw her for the first time, promptly recognized the source of her trouble in the womb, and succeeded, after some persuasion, in getting her and her parents' consent to my examining her there. An elongated neck and contracted os, with displacement, great hyperæsthesia, and the examination provoking one of her most violent spasms of the erector spinæ mass, confirmed me in my notion, and I was not very long in bringing about a cure of those troubles, and that, too, chiefly by local treatment. This cure was a permanent one, and three years after it was effected the lady married, promptly became pregnant, and was delivered by me, exactly nine calendar months and twenty-one days from the date of her marriage, of a fine, healthy, ten-pound boy. This delivery was by means of ether and the forceps, just three hours after the first pain was felt. I began the use of the ether as soon as I got to the house, which was but half an hour after the labor began. The patient, her husband and her mother, all unacquainted with ether, opposed very much my resorting to it so early. They were afraid of some bad effects; none, however, followed, save the ordinary sequences of headache, nausea, etc., extending through the next day. Great care was taken in her getting up. Her milk came without any trouble, and she nursed her baby for over eight months, when his failing condition led to the recognition of the pregnant state in the mother. Conception had taken place without any preceding menstrual show. About the time of its occurrence, as was determined afterward, the mother showed some disposition to nervousness, which she had never done before during the whole time of her lactation. She went through this second pregnancy to its full term without any nervous spells or any kind of annoyance whatever, and when I was called to her, on the setting in of the labor, I was asked to try some other means than ether, so that she might escape its after annoyances as experienced before.

Her folks speaking of having heard that the use of chloroform was not followed by such, I promised to use something better than even chloroform in that respect. I at once determined, by a digital exploration of the os, that the labor had actively begun, desired my patient to remain on her left side, and, covering her face with a towel, directed her to breathe, or blow out, as rapidly as she could. Then, turning to an attendant, I asked for a pitcher of warm water, and in it I placed a pair of long forceps. This act on my part was noticed by the patient, and yet, notwithstanding this circumstance, in eight minutes' time from my doing this act of putting the forceps in the pitcher, as was shown by a large clock on the mantel, I had my patient not only insensible to pain, and her os fully dilatable, but the instrument applied in the upper strait, the baby born, and the after-birth away, so that there was then no longer any need for the rapid breathing, and I left the room, forbidding all talking or explanation about what had taken place. At my next visit she was enthusiastic about *rapid breathing*, but was not prepared to believe that she had been delivered by instrument, and, that too, in so short a time.

She was even more fortunate with this child than with the first. She got him through two summers without having to wean him, and did not have her next (her third) conception until two years and three months after this second one's birth.

This was also carried to full term, and when the labor for it set in, I was, as usual, summoned early, and went armed with my instruments. When I got into her chamber I found the patient hard at work, as she said, "blowing away all suffering from the pains." I said, "go on!" and made my digital examination of the os at once, before the paroxysm then on was over, and so determined the head with vertex to the right, merely held up by the anterior lip of the os. When this paroxysm ceased, my patient exclaimed "Oh, what a luxury this breathing is." I said "you must not talk now, but go on with the breathing," and as soon as she became insensible to

pain again I found the head readily disengaged and expelled from the uterus. I then let the labor go, without further interference, simply urging the patient constantly on with the rapid breathing; and in twenty minutes, by the same clock, it was all over, and we had another well-developed boy.

As soon as the mother was told to take a good deep breath, that it was all over, and had done so, she exclaimed, "My! how much more sensible it is for you always to use the instruments at once without any waiting!" I said, "what, I did not use the instruments this time!" "Oh yes!" she said, "I felt them just as plain this time as before; however, they never gave me pain, this or any other time."—*The College and Clinical Record.*

FEMALE DOCTORS.

The London *Lantern* is by no means a rival of the *Lancet* as an authority on strictly medical questions. This fact, however, does not prevent it from having views. Its opinion on the question of woman in medicine is based on a view of the question not much dwelt on by more eminent medical and medico-ethical authorities. We present it as a piece of pleasant reading:

"This is a subject we approach with great trepidation. We admit that; but the programme we announced in the first issue of the *Lantern* must be fulfilled. We, therefore, characterize the steady increase in the number of female doctors as an alarming sign of the times. We set our face against female doctors, and shall continue to do so until age compels us to resign our functions. If the female doctors were limited to one or two, we should not feel so much exacerbated, but as they are multiplying in all parts of the kingdom, duty impels us to come forward and protest against the innovation, and in so doing we will give a few reasons why female doctoring is not likely to prove a paying business.

"In the first place, if female doctors are to seriously doctor anybody, it must be women, and we strongly suspect that, as a

rule, women prefer male doctors. On the other hand, a man, if there was nothing the matter with him, might call in a female doctor; but if he was sick as a horse—and when a man is sick, he *is* sick as a horse—the last thing he would have about would be a female doctor. And why? Because, when a man wants a female fumbling around him, he wants to feel well. He doesn't want to be bilious, or feverish, with his mouth like a furnace and his eyes bloodshot, when a female is looking him over and taking an account of stock. Of course, the coming female doctors will be all young and good looking, and if one of them came into a sick-room where a man was in bed, and he had chills, and was as cold as a frog, and she should sit up close to the side of the bed and take hold of his hand, his pulse would run up to a hundred and fifty, and she would prescribe for a fever when he had chilblains. Then if he died she could be arrested for malpractice. A man who has been ill and had male doctors, knows just how he would feel to have a female doctor come tripping in and throw her fur-lined cloak over a chair, take off her hat and gloves and throw them on a lounge, and come up to the bed with a pair of marine-blue eyes, with a twinkle in the corner, and look him in the face and ask him to exhibit his tongue. Suppose he knew his tongue looked like a Turkish towel, do you suppose he would want to run out five or six inches of the lower end of it and let that female doctor examine it? Not much. He would put that tongue up into his cheek and wouldn't let her see it for half a guinea admission.

“Then again, we are under the impression that male doctors sometimes put their hands under the bed clothes and feel of a man's feet, to see if they are cold. If a female doctor should do that it would give a man the cramps in the legs. It would make a man worse—much worse, and he would want to get up and kick himself for employing a female doctor. Or, suppose a man had heart disease, and a female doctor should want to listen to the beating of his heart. She would lay her left ear on his left breast, so her eyes and rosebud mouth would be looking right

in his face, and her wavy hair would be scattered all around there, getting tangled in the buttons of his night-shirt. Don't you suppose his heart would get in about twenty extra beats to the minute? Rather! And she would smile—we bet a fiver she would smile—and show her pearly teeth, and her ripe lips would be working as though she were counting the beats, and he would think she were trying to whisper to him, and—. Well, what would *he* be doing all this time? If he was not dead yet, which would be a wonder, his left hand would brush the hair away from her temple, and just stay there to keep the hair away, and his right hand would get sort of nervous and move around to the back of her head, and when she had counted the heart beats a few minutes and was raising her head, he would draw the head up to him and kiss her once for luck, if he was as bilious as a boiled owl, and have her charge it in the bill. And then a reaction would set in, and she would have to fan him, and rub his head till he got over being nervous, and then make out her prescription after he got asleep. No; a man's symptoms change completely when a female doctor is practicing on him, and she would kill him dead.

“The *Lantern* is a woman's rights paper, and believes in allowing women to do anything that they can do as well as men, and is in favor of paying them as well as men are paid for the same work, taking all things into consideration, but it is opposed to their trifling with human life by trying to doctor a total stranger.

“That is why we are sternly opposed to the innovation, and, as we said before, we will set our face against female doctors until we are old and toothless.”—*Michigan Medical News*.

CREMATION.

A large meeting was recently held at Bologna to advocate the introduction of cremation instead of burial as a means of disposal of the dead of the town. Many physicians are reported to have been present, and to have taken an active interest in furthering

the proposition. It seems probable that Bologna will before long be provided with a public crematory, as Milan and Lodi in the north of Italy now are.

In the cremation hall just outside the city of Gotha in Germany, which is one of the best arranged of those thus far established, fifty-two bodies, five being those of women, have, since its erection, less than three years ago, been subjected to the process; of these bodies one was sent from so great a distance as New York, and one, at least, from England.

We have not at hand the exact number of bodies which have been reduced in the furnace at Washington, Pa., but believe it to be still quite small. To overcome existing prejudices against such an innovation upon old habits and customs it is essential, not only that the scientific process of combustion should be as complete, as rapid, and as imperceptible as possible, but also that the building and its surroundings should be attractive and in keeping with a solemn ceremony. The buildings at Milan and Gotha answer these requirements, the latter place, however, has the additional advantage of being provided with a Siemens' incineration apparatus in which the process of reduction takes place in superheated air, the body not being brought at any time in direct contact with the flames. Outside the cremation hall is an open portico in which the cinerary urns are arranged. Within is a hall where the religious ceremony, when such is desired, may be performed, and where the body awaits its removal to the furnace. For this nine hours of preliminary preparation are required. The air in the receptacle where the body undergoes incineration is heated to 600° Reamur, and two hours elapse from the commencement to the completion of the process before the ashes are collected. Of these the average body of a man yields about six pounds, that of a woman about four. Only the officials and one or two of the nearest relatives are admitted to the chamber underground in which the furnace is situated. The cost of the process at Gotha is about twenty-five dollars.

At Milan the entire process may be watched through a small window; and the cost of conversion by the Gorini furnace, the one there in use, is only about one dollar; in this apparatus, however, the body is subjected to direct contact with the flames. Venini's furnace has the same disadvantage, and is besides quite complicated, but it performs its work with rapidity and thoroughness.

A furnace constructed by Dr. C. W. Siemens was referred to by Sir Henry Thompson in his article on Cremation, in the *Contemporary Review*, which converted a body weighing two hundred and twenty-seven pounds, placed in a cylindrical vessel seven feet long, by five or six in diameter, the interior being heated to 2000° F., into five pounds of ashes in fifty-five minutes.

It is evident from the progress already made that the question of the best methods of cremation will receive a pretty definite and satisfactory solution long before the sentimental considerations involved are appreciably affected by argument or example.
—*Boston Medical and Surgical Journal*.

REMARKABLE CASE OF EARLY MATERNITY.

On August 8th, 1871, I attended Mrs. F. M——, a joiner's wife, during confinement, and delivered her of a female child. There was nothing remarkable about the infant until it was twelve months old, when it commenced to menstruate, not very regularly at first, varying from one month to six weeks between the periods; the last two years the catamenia have been very regular indeed, never more than three weeks elapsing between the periods. They ceased on June 22d, 1880 (her mother's statement), when she became pregnant. There is nothing very remarkable in appearance about the child. The hirsute growth over the pubes and in the axilla is profuse, the breasts are large, and at present gorged with milk. She is a very active, hard-working girl, and has for the last year done all her mother's washing; in fact, the night before she was confined I saw her

myself hanging the day's washing on the clothes-line in her father's garden. Her labor pains did not continue over six hours from first to last. I administered chloroform, and kept the body well supported with bandages during labor.

The child was a large one, and weighed 7 lbs. It has since died in convulsions; its left foot had only three toes on it. This young mother is now nine years and eight months old, and must have been pregnant two months before she reached the age of nine.—*Henry Dodd, M. R. C. S., in London Lancet.*

“FOOLED BY TEMPERATURE.”

In his little book on Semiology, lately published, Dr. J. Milner Fothergill has this passage: Often a rise or fall in the temperature heralds a coming change, of which it may be the first outward sign. On the other hand, the student must know that at times rapid rises of temperature are nervous in origin, are, in fact, “true neuroses.” In one case which came under my notice, in a very nervous girl, for months the temperature, when taken, was over 103° . This rise was accompanied by increased rapidity in the respiration and the pulse. Yet she was sinking of inanition, and never approached the typhoid condition which is the consequence of a sustained high temperature, nor gave any indication of persisting fever. Once the temperature, when taken, was 104° , yet she was not at all “feverish;” it was just excitement, and too evanescent to produce any distinct consequences. Further, listen to what Austin Flint says: “The physician is liable to be misled by placing too much reliance on the laws of temperature. They are not infrequently interfered with by complications and accidental events. As an illustration, a young girl had passed through typhoid fever, convalescence being declared, in connection with other symptoms, by the laws of thermometry belonging to the decline of fever or defervescence in this disease. Suddenly hysterical symptoms were manifested, and the temperature rose to 105° . The physician,

a man of learning and large experience, was naturally alarmed. In a few hours, however, the temperature declined, and recovery took place without further impediment. The expressive comment made by the physician was: "This is not the first time I have been fooled by temperature!" With regard to the information furnished by the thermometer, as well as other diagnostic symptoms, it is to be borne in mind that there are exceptions to rules which are generally applicable. It is in the female sex that these neurosal disturbances are usually manifested. At the catamenial week of the menstrual cycle, temperature perturbations are common, and a pyrexia, for which there is no apparent cause, may at these times cause unnecessary alarm. *Experte credo!*—*Pacific Medical and Surgical Journal.*

DISCOVERY OF THE MICROCOCCUS OF SYPHILIS.

Dr. Aufrecht, of Magdeburg, (*Centralblatt fuer die Med. Wiss.*, No. 13, 1881), announces that he has discovered in syphilitic condylomata a micrococcus, which may be recognized by the following characters. The single cocci are of rather coarse grain; they are generally of the form of diplococci, or two joined together, and the number of these is greater than of the single cocci. They are very seldom in threes. They are stained deeply by fuchsin. He has found them in six cases; but in one, where the condyloma was ulcerated, and, in another, where it had been painted with corrosive sublimate, they were very scarce. He, therefore, excludes ulcerated condylomata, or those which have been treated specifically. To obtain the micrococci, the condyloma should be incised with a lancet, and the blood sponged away; then a drop of the serous fluid that follows should be collected on a cover-glass, which is put under a bell-jar for twenty-four hours, to dry. At the end of that time, a drop of a half per mille solution of fuchsin is placed on an object-glass, and the cover-glass is laid on it. The excess of

fuchsin is wiped away after two or three minutes, and the object examined with Hartnack's 9A immersion-lens. To preserve the object, he puts a little damar varnish around the edge of the cover-glass.—*London Med. Record, June 15, 1881.*

QUACK ADVERTISEMENTS.

The most despicable of all literary frauds and liars are those employes of nostrum mongers who assume the character of physicians and write down the profession for the purpose of writing up quackery. Of course this is done anonymously, for no respectable physician could make such a fool of himself. It is a part of the quack-medicine machinery. The inventor of a preparation to be put on the market as a new and valuable discovery, employs some smart scribbler who is otherwise a miserable hack, to puff it. For this purpose no fiction is too gross and mendacious. Assuming the character of a respectable physician of great experience, the hired penman throws himself soul and body into the service of his master and stops at no falsehood which his skill in that line may suggest. Nor has he any difficulty to get a hearing before the public. He knows that newspapers in general have their price, and that "religious" periodicals are not above the captivating influence of money. We have just observed in a weekly religious journal published in the East, a long article of the kind referred to, in which the writer represents himself as a "reporter" giving the experience of an old and well-known doctor, who was cured of some disease (not of lying) by a certain quack "kidney cure," when his professional brethren had failed to relieve him. Of course the "Doctor" was manufactured in the brain of the reporter, and yet the story will gain credence with a large per cent. of readers, particularly as it appears in a religious paper, and not in the usual form of an advertisement.

There is greatly needed a sense of personal responsibility on the part of journalists in regard to the advertisements which

they publish. At present this is entirely wanting. There is no one to stand between the conductors of a journal and the public. Not only are editors and managers irresponsible in this respect, but their direct endorsement of the most palpable falsehoods is often purchasable with money. The agent of some unprincipled nostrum-monger or abortionist goes to the newspaper manager with a proposition substantially as follows: "I want you to publish for me this budget of lies—forged certificates of cure, disguised abortion notices, and so forth. I want it inserted, not as an advertisement, but under another head, so that people will think the editors have written or indorsed it. I want to buy, not only the use of your columns, but, for the time being, that of the names, character and souls of all the editors and others concerned with your paper. What is your charge?" The representative of the press answers: "Our people don't much like to father such a job as that. One of them is a preacher, you know, and they are nearly all strictly religious. We shall have to charge you just double price for putting that stuff in as you want it. Our men can't sell their consciences for nothing." And so the bargain is made.

We do not pretend to say that this is the literal method of transacting the business, nor that every journalist is guilty of it. But the picture is not much overdrawn, and the practice is injurious and disgraceful, and ought to be abandoned.—*Pacific Medical and Surgical Journal*.

ANTISEPTIC OSTEOTOMY OF THE TIBIA; RAPIDLY FATAL CARBOLIC INTOXICATION.

Mr. Pearce Gould, at a recent meeting of the Clinical Society of London (*Lancet*, May 21, 1881), read a paper on a Case of Antiseptic Osteotomy of the Tibia, in which rapidly fatal carbolic intoxication occurred. A lad, eight years of age, of robust appearance, was admitted, under his care, into Westminster Hospital in Oct., 1880, with rickety deformity of the legs, especially of the left tibia. Other treatment had been persever-

ingly tried at the National Orthopædic Hospital for some time without avail, and he was sent in for the purpose of having osteotomy performed. His general health was very good. On Oct. 30th chloroform was administered, and the left tibia divided with McEwen's chisel, with a careful observance of the details of Listerism. He quickly recovered from the effects of the chloroform, and slept well through the night; next morning (Oct. 31st) he took his breakfast and appeared quite well; temperature 98.4° . At 11 A. M. (twenty-four hours after the operation) he vomited; and vomited a watery fluid repeatedly up till 9.30 P. M. He also passed two orange-colored loose stools. At 7 P. M. he was rigid, and at 8 P. M. very restless; at 9 P. M. he was almost unconscious; he was breathing hurriedly; pulse almost imperceptible at the wrist. At 10 P. M. Mr. Gould saw him; he was then conscious; lying quiet and quite flat; respiration 44 per minute; air entered lungs freely; pulse very small and rapid, pupils small. He died, asphyxiated, at 2.30 A. M., Nov. 1st, thirty-six hours and three-quarters after the operation. There was complete suppression of urine after 11 A. M. Temperature rose to 100.2° , and fell to 99.6° at 2 A. M. on Nov. 1st. The treatment consisted in the application of warmth and stimulants to the surface, and brandy internally. At the autopsy all the viscera were apparently healthy, with the exception of congestion of the tracheal and bronchial mucous membrane, and excess of mucous in these tubes, and slight congestion of the lungs. The left side of the heart was empty, the right side contained partly-clotted blood; blood in smaller veins all fluid, in the larger partly in soft clots, all of it black. No petechiæ; no staining of endocardium or intima; no sign of fat embolism; bladder empty. A small bloodclot in the wound; no crushing of the medulla; no thrombosis of tibial vessels. Microscopic preparations of the organs were made for Mr. Gould by Dr. Heneage Gibbes, some of which were shown at the meeting. From these it was seen that there was thrombosis of the capillaries and smaller vessels of the lungs with minute spots of round-cell inflammatory exudation. Similar minute inflamma-

tory foci were also found in the kidneys, while sections of the stomach showed intense inflammation of its mucous surface, only traces of its glands being visible, and at places the process was evidently advancing to suppuration. No sign of fat embolism.

In discussing the cause of death Mr. Gould pointed out that shock, chloroform, the acute specifics, erysipelas, septicæmia, pyæmia, and fat embolism might be excluded, as was also the ingestion of any irritant matter, but yet both the symptoms and pathological changes showed evidence of the circulation of some irritant in the blood. The symptoms were individually considered, and it was shown that the vomiting, diarrhœa with orange stools, collapse, rigidity, restlessness, loss of consciousness, very hurried respiration, slight rise of temperature, and death from asphyxia, were the symptoms observed in cases of undoubted carbolic intoxication. The urine passed before the onset of vomiting appeared to be normal, and was not preserved; the suppression of urine later on was a new fact in such cases. The softly coagulated and black blood had been noted before, but there was no record of any microscopical examination of the apparently healthy organs usually found. The quantity of acid absorbed was no doubt small, and the great susceptibility of the patient to its toxic effect must at present be spoken of as an idiosyncrasy; but from the absence of other cause, and of any facts to negative the supposition, as well as the agreement of the symptoms and post-mortem pathological changes in the main with those observed in cases of carbolic intoxication, he was forced to the conclusion that such poisoning was the cause of death. Prof. Lister remarked upon the interest attaching to the suppression of urine, which he had not met with before. He had no doubt that Mr. Gould's view must be accepted, that this patient was one of those who had an unfortunate susceptibility to the toxic effects of carbolic acid. He had met with cases of such susceptibility, and one he called to mind was a lady whose breast he removed and dressed in his usual manner; intense symptoms of carbolic poisoning came on, and boracic lint was

substituted for the gauze dressing, but the spray was used when the lint was changed, and this was sufficient to keep up the symptoms, which only abated when its use was discontinued. As an instance of the special local susceptibility of some patients, he mentioned a case of chronic synovitis of the knee-joint, which he opened and dressed antiseptically, and next day he found all the skin under the gauze intensely red and irritated. It had been stated that there was no antiseptic that could with safety replace carbolic acid, though several had been tried; but he was in a position to say that the oil of *Eucalyptus globulus*, if used properly, is a powerful and perfectly reliable antiseptic, and is also quite unirritating and without toxic effects. If the oil be made into an emulsion with spirit and water, and then used, it very quickly evaporates; but he had found that gum damar holds it exceedingly well, and the mixture remains soft and strongly odorous of the oil even at the end of several weeks. He had used a gauze prepared with a mixture of one part of the oil, three of damar, and three of paraffine, and he was able to assert that it might be thoroughly trusted as an antiseptic where carbolic acid was inadvisable.—*Medical Abstract*.

SPECIAL REPORT ON THE INTERNATIONAL MEDICAL AND SANITARY
EXHIBITION, SOUTH KENSINGTON.

“Messrs. Schieffelin & Co., New York.—The articles intended for exhibition by this well-known firm were, unfortunately, lost in the wreck of the steamship “*Britannic*,” so that any complete account of them is impossible as yet. A duplicate series, however, is, we are informed, on the way from America, and it is hoped that by the end of the week the case will be completely filled. The specialty on which Messrs. Schieffelin base their claim to attention is *soluble pills and granules*, samples of which were shown on the opening day of the exhibition. These are most beautifully made pills, coated with an inert, soluble compound, which may be found by trial, to dissolve almost immediately on the tongue, thereby bringing their coated pills on a

level, as to efficacy, with the best uncoated articles. In addition, the envelope is perfectly transparent, whence the exact color and appearance of the pill-masses are at once disclosed to the eye, and it becomes an easy matter to distinguish the different pills from one another, and thus prevent mistakes arising, such as may occur when the outside of all the pills employed is the same. By careful manipulation the exact equality of the pills of a kind is maintained, and the materials employed in their manufacture are the best obtainable. Remembering the many pills claiming the approbation of the profession, and the bases on which the claims made depend, it is almost impossible to avoid the conclusion that those of Messrs. Schieffelin combine all the qualities sought in a good pill, while in appearance they yield to none for elegance and shape. They are, moreover, permanently protected, and retain their qualities for years. They are made in four hundred varieties. We hope to speak further, bye-and-by, of the other exhibits prepared by Schieffelin & Co."—*From the London Medical Press and Circular*, July 20, 1881.

Editorial.

BUFFALO COLLEGE OF PHYSICIANS AND SURGEONS.

As most of our readers are probably aware, there has been in operation within this city for some time past, an institution calling itself the "Buffalo College of Physicians and Surgeons." We have from time to time observed, in our various exchanges, notices of this college, which have been anything but complimentary to it, or to the fair city of Buffalo, within whose confines it is situated. Some have gone so far as to compare it to the notorious Buchanan College of Philadelphia. Certain developments in connection with the granting of diplomas to those manifestly unqualified, and which the College has since

been constrained to revoke, add to the unenviable reputation of the institution. We have, therefore, deemed it proper to give the present facts in the case as we understand them.

In March 1879 a number of gentlemen formed a corporation under the title of the Buffalo College of Rational Medicine, basing their authority upon the well-known law of 1848, for the incorporation of benevolent, charitable and missionary societies. In less than three months thereafter a new charter was obtained and the name changed to the "Buffalo Homœopathic College of Physicians and Surgeons." Still again, about a year later, the name was once more changed and the word "Homœopathic" stricken off, leaving simply the title as it now stands, "The College of Physicians and Surgeons." The last change did not, it seems, require a new charter, but was made in accordance with an order obtained from the Supreme Court.

Under its latest name the College last winter gave one course of lectures, and in the spring furnished diplomas to a number of its graduates.

The Board of Censors of the Medical Society of the County of Erie having been instructed by said society to prosecute all persons practicing in violation of the new law, decided this to be a "useless task" so long as the college in question should be allowed unlimited and unrestricted power to grant diplomas. The attention of the Attorney-General was therefore called to the matter, and an order was issued by him directing the determination of the question at issue—the legality of the charter founded upon the law of 1848 and its amendments. The question was argued and submitted and the decision of the Hon. George Barker, Judge of the Supreme Court, is given as the leading article of the Journal.

INTERNATIONAL MEDICAL CONGRESS.

From our London Correspondent.

Of the many letters which will go to American medical journals in regard to professional matters here, I doubt if any will contain more than the most superficial summary of the past week's doings. As soon as the ponderous volume of Transactions is issued, there will doubtless be enough in quantity and quality to satisfy the mental appetite of the most greedy student; perhaps, also, enough to surfeit any one who attempts to digest the whole. Not that the proceedings of the Congress are of an inferior order. Too many precautions were taken by the various committees, and too much interest has been manifested by leading medical men the world over, to make its success at all doubtful. It is only the quantity of matter which the volume of the transactions must contain, which will terrify the reader; but, after all, it will only be in proportion to the number of those present. For there have been 3,210 members inscribed, and the different sections have held 119 meetings, at which there were presented 464 written and 362 verbal communications. This record is not surprising to any one who witnessed the first general meeting at St. James Hall, in Piccadilly. Only members of the Congress and special foreign representatives were admitted, and yet every part of the house was packed, even to the topmost galleries. Medical men had gathered there from all parts of the globe, and many of them the best that their countries could produce. Among the foreigners there were such as Virchow, Esmarch, Langenbeck, Pasteur, Charcot, Flint, Da Costa, and a host of other authorities; while England was represented by her foremost men. The rows of seats flanking the stage were occupied by vice-presidents and members of the various committees, while in front sat the president, Sir James Paget, with the Prince of Wales on one side and the Crown Prince of Germany on the other. After formally organizing, the Congress as usual divided into sections, there being

fifteen this time—an illustration of a remark of the president that “if the field of any specialty is narrow, it can be dug deeply.”

In each section there was an abundance of papers, as the figures just given would lead one to suppose, and indeed there were occasionally so many on a certain phase of a subject as to monopolize time which might have been devoted to its discussion. And when a debate did take place, it was not always easy to follow the speaker unless the listener was fortunate enough to be a sort of walking polyglot. It frequently happened that one would open the discussion in English, another would reply in German, and still another follow in French. Generally, however, the speaker was asked to repeat briefly in English what he may have said in his own language—and these attempts were sometimes more amusing than instructive. Like children learning to talk, we can all understand the words of another before we can make use of them ourselves. The difficulties which might have resulted in this instance were to a great extent obviated by a precaution of the committee in printing a “brief” of every paper in English, in German, and in French. This list of abstracts alone made rather a cumbersome volume of over seven hundred pages, but it frequently proved exceedingly convenient to our following the different readers or speakers.

Besides the work in the sections we have had the pleasure of listening, each afternoon, to an address by some representative man upon a subject of general interest. Among these the paper of Prof. Virchow is deserving of special mention, and in dealing as he did with “The value of pathological experiment,” he took occasion to give the anti-vivisectionists several hearty raps. Dr. Billings, who is in charge of the library at Washington, also quite distinguished himself by his address on “Our Medical Literature,” for he has a pleasant way of stating facts, and the frequent applause which followed his quaint and pithy sayings, showed that his effort was thoroughly appreciated. Others, equally well qualified to speak upon the subjects chosen,

entertained the Congress at its general meetings—all being physicians except Professor Huxley, who discussed the “Connection of the Biological Sciences with Medicine” in his usual clear and forcible style.

Nor should the social attractions of such a gathering be forgotten; indeed, these London folk offer their hospitalities in such an open-handed fashion as to give constant occupation to those who would accept even a part of the invitations received. The leading medical men of the city have vied with each other in the frequency of their “Luncheons” and other entertainments, while the more elaborate receptions of the Lord Mayor, Earl Granville, Baroness Burdett-Coutts, and similar social leaders, have given glimpses of English life which few of us foreigners could otherwise have obtained. On the whole, the Congress has seemed to prove a success professionally and socially, and the departing guests leave their English friends with only the most delightful impression of their short but enjoyable stay.

H.

BUFFALO, N. Y., August 25, 1881.

To the Editors of the Buffalo Medical and Surgical Journal:

At the semi-annual meeting of the Erie County Medical Society the Board of Censors presented a report regarding the worth, and believe they will be regarded as an important addition to the library of the practitioner.

Coulson on the Diseases of the Bladder and Prostate Gland. Sixth edition. Revised by WALTER J. COULSON, F. R. C. S., Surgeon to St. Peter's Hospital for Stone, etc. New York: William Wood & Co. 1881.

We acknowledge that we never saw a copy of this book before, but if the fifth edition, which appeared a quarter of a century ago, exhausted the subject as perfectly as this does, we have no doubt that our fathers read it with as much pleasure and advantage as we expect to do. Necessarily the book has been almost wholly rewritten and new chapters added. Especially we mention the chapter about the causes of stone in the

bladder, and the chapter about Bigelow's operation, litholapaxy, a method which rapidly has gained the acknowledgement of the profession, and may be considered as one of the greatest discoveries surgery has made in our days. The work will be found especially useful as a book of reference, and its moderate price as one of "Wood's Library of Standard Medical Authors," combined with its excellence, ought to ensure a large sale.

A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By SAMUEL W. GROSS, M. D., Lecturer on Venereal and Genito-Urinary Diseases in the Jefferson Medical College, etc. With sixteen illustrations. Philadelphia: Henry C. Lea's, Son & Co. 1881.

The importance of this subject cannot be overestimated, the more, as, according to the author, in sterile marriages the husband is at fault one instance in every six. The author maintains that these affections are not dependent, as generally has been believed, upon functional disorders of the testicles, but upon reflex disturbances of the genito-spinal centre, induced by lesions of the prostatic portion of the urethra. The book is divided into four chapters—impotence, sterility, spermatorrhœa, and prostaticorrhœa, and is a very valuable addition to the scanty literature on this subject. A great many young men suffer from these disorders, and often, or generally, fall into the hands of quacks, because physicians make slight of their complaints. A more thorough knowledge of the profession on this subject is greatly desired and would, in a great measure, tend to abate quackery in its most offensive form.

The Compend of Anatomy; for Use in the Dissecting Room and in Preparing for Examinations. By JOHN B. ROBERTS, M. D., etc. Second edition. Philadelphia: C. C. Roberts & Co., 1118 Arch street. 1881.

That the second edition of this little work has appeared, is proof enough that it has found the favor with the students which it deserves. Older members of the profession would find it a convenient little book, by aid of which to recapitulate the anatomy.

ERRATA IN THE SEPTEMBER NUMBER.

Page 68, sixteenth line from below, for "grain doses" read "five-grain doses."

Eighth line from below for "Meissonenoe's" read "Meissoneuve's."

First line from below, "on to the sound in part of the stricture," read "upon the sound in front of the stricture."

Page 69, eighth line from above, "brass grooved" read "fine grooved."

Eighth line from above, "rinse" read "incise."



THE
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No. 3.

Original Communications.

OTORRHŒA.*

Gentlemen of the Medical Club—A few days ago I received a note from the gentleman whose turn it is to read a paper to-night, in which he asked me to supply his place as he could not be here. I consented and have done what I could in the very brief time which I have had to spare. I have had no time to read upon the subject and can give you only a few practical points which experience has taught me.

In this familiar paper I shall not attempt to be logical, consistent or exhaustive, but shall consider the various topics in the order in which they happen to occur to me, using the English nomenclature by preference, but introducing the Latin whenever it will conduce to brevity, or euphony.

Otorrhœa means a running from the ear. It is a broad term and includes every appearance of fluid at the external auditory meatus. We will exclude, however, traumatic hæmorrhages as not coming within the category of true otorrhœas. The ordinary otorrhœas are purulent and muco-purulent, and these occasionally tinged with blood. As these discharges are always a sign of inflammatory action somewhere in the ear, whenever

* Read before the Buffalo Medical Club, Sept. 14th, by Dr. F. W. Abbott, and requested for publication by the Medical Journal Association.

they occur, we have an otitis either acute or chronic, and these may be located either in the external ear, giving us an otitis externa, acute or chronic, or in the middle ear, giving us an otitis media, acute or chronic. There are a few complications of these different forms of otitis which so frequently occur that they have almost attained the dignity of separate diseases in our nomenclature. Among these the secretion of pus is the most common perhaps, and this gives us purulent otitis externa, acute or chronic, and purulent otitis media, acute or chronic. With the chronic form of purulent inflammations polypi are often developed and the presence of these should be indicated in a careful diagnosis, and so we have as a common name chronic purulent otitis externa, or media, with polypi.

Some go so far as to mention the fact of a perforation of the tympanic membrane with chronic purulent inflammations of the middle ear, and give us chronic purulent otitis media with perforation, but perhaps this is an extra refinement, for if there is a formation of pus in the middle ear, it must, if it appears externally, come through a perforation in the drum membrane. Inflammations of the external ear may be either circumscribed or diffuse, giving us acute circumscribed otitis externa, acute diffuse otitis externa, chronic circumscribed otitis externa and chronic diffuse otitis externa. Any of these forms may produce a true otorrhœa, although it is temporary in the acute cases.

From this long list of different diseases, which are all accompanied by an aural discharge, we see at once the necessity of a careful inspection of each case, to learn the exact source of the discharge, before attempting to treat it.

In considering these affections in detail, we will commence with the external meatus and proceed inwards. The most common otorrhœas having their origin in the external meatus should be traumatic, being produced by the surgeon's knife. Circumscribed inflammations, alias boils, are very frequent in this locality, and the proper treatment for these is an early and free incision. If the boil is near the concha, reflected light is

not absolutely necessary, but if it is some ways within, direct illumination is unsatisfactory. When you see the point you want to cut, introduce a narrow-bladed knife, with its back to the wall of the meatus, and pierce the swelling and cut towards the centre. Of course, your patient will jump, but let him; you must pierce as deep as you want to go before he has time to jump, and as he gets away from you the knife cuts its way out of the apex of the boil. If you cut down onto it, your knife is apt to keep on in the same direction after it leaves the meatus and you gash the tragus or anti-tragus, and your patient objects to a slashed ear. If you produce a satisfactory otorrhœa by this means, cleanliness by means of warm water and a syringe completes the cure. A free and early incision is considered to be a good prophylactic against the recurrence of these boils, which is often one of the most troublesome features of these cases. Should they recur, however, sulphide of calcium in one-tenth grain doses, every four hours, is the thing to give. I prescribe it frequently and am satisfied empirically that it does have an effect in preventing recurrent boils.

There is a form of genuine otorrhœa dependent upon diffuse inflammation of the external meatus, which is sometimes quite profuse, and if its true source is not recognized and correctly treated, may run on for years. This inflammation is eczematous in character, and fostered by the warmth and moisture of its habits, and encouraged by various wet applications, and especially by the application of glycerine, which to some minds appears to be a specific for all kinds of ear trouble, it runs on and the ear itches and burns until life becomes a torment. The first thing to do with such an ear is to cleanse it thoroughly with warm water and syringe, and dry it with absorbent cotton. The whole meatus, from anti-tragus to membrane, is red and swollen with ridges, fissures and excoriations. The first direction to give is, that it must be kept perfectly dry. The surgeon must cleanse it with water, if necessary, and dry it as soon as possible, but the patient must not wet it at all. In my practice

the best results have followed the use of a .10 or .15 solution of nitrate of silver, thoroughly applied after the skin is dry and clean, using a saturated wisp of absorbent cotton on a cotton holder. After a few minutes I dry it carefully again, and follow this up every day, if it gets moist in one day. Very soon the discharge decreases, so that no moisture appears, but the discharge dries in flakes as fast as secreted. Then, after applying the nitrate of silver, I sometimes apply a thin coating of yellow oxide of mercury ointment, made with cosmoline. Occasionally a polypus is found hanging to the wall of the external meatus with a perfect drum membrane, although they are rare; so I will say what I have to say of the treatment of polypi here. A profuse otorrhœa often comes from a little polypus, which may be nothing apparently but a small granulating surface, so this is one of the first things to look for in a running ear. When found, it isn't always necessary to scare your patient to death by telling him he has a polypus. If he is nervous and imaginative, he will picture a many-rooted monster sending claws deep into his brain, or ask anxiously if it is a cancer. But at all events get rid of your polypus. If it is pediculated, pick it off with forceps or snare and touch its point of attachment with chromic acid. If it has a broad base, cover it with chromic acid and repeat the application from time to time. It may be necessary to scrape the exuberent granulation with a curette. If there is denuded carious bone, it is necessary to scrape this well until you reach sound tissue.

But by far the most abundant source of the discharge in otorrhœas is the mucous membrane lining the cavity of the middle ear. An acute inflammation of the pharyngeal mucous membrane, especially such as accompanies scarlatina, and after this a long-ways measles or an idiopathic pharyngitis extends by contiguity of tissue through the Eustachian tube to the middle ear. Mucus is secreted and fills the cavity, the inflammation grows more severe, pus is formed, and, having no means of exit, finally breaks through the drum membrane and shows

itself externally. But this bony cavity cannot empty itself completely through this orifice. Some pus stays, perhaps decomposes and becomes a source of irritation. More is secreted, which goes through the same processes, and finally we have lining the middle ear, a pyogenic membrane, and a continuous discharge. Complications soon ensue; the continued moisture and warmth encourage the growth of granulations, and polypi spring up. Perhaps the inflammation spreads to the mastoid cells, and here we have as a result ulceration, necrosis, finally an opening externally and relief from pain and fever with a sinus connecting the surface of the mastoid bone with the middle ear. Perhaps the ulceration and necrosis extend inwards, reach the meninges of the brain, setting up meningitis, acute, spreading, with death, or chronic meningitis with all its attendants, epilepsy, mania, dementia, etc. Perhaps ulceration begins in the middle ear; its cover is a thin lamella of bone, which separates it from the dura mater here. Necrosis often, sooner or later, destroys this lamella, and the dura mater becoming implicated, we have the same results of meningitis as mentioned before.

So a running ear is not simply a source of annoyance, as it is often considered, still less a sort of drainage tube, letting off foul humors, deleterious to the system, which must not be interfered with, as is still the belief in some quarters; but it is a sword of Damocles hanging continually over the head of its possessor and threatening life itself.

Since the results of a chronic purulent otitis media are or may be so appalling, the question of the proper treatment becomes a very urgent and important one, and it will not do for any physician into whose hands a family have entrusted themselves in good faith, relying upon his knowledge of disease, to say, as I have too often heard, "Well, I don't know anything about ear diseases, and I don't want to." This disease is usually very easily diagnosticated and the rationale of the treatment is very simple: cleanse the ear thoroughly with syringe and absorbent cotton, and inspect it through a speculum with reflected

light. A speculum may be bought for fifty cents, and in these days every physician should have a laryngoscopic mirror, but if you haven't, take a bit of looking glass and scrape a little hole through the silver. With this simple reflector you can light up the meatus so that you can tell whether its walls look healthy or not, and if they do, you can reason by exclusion that the middle ear is affected, even though you do not get a satisfactory view of the drum membrane.

Usually a hole in the ear drum can be seen and distinguished, but often it cannot. It may be in the lower anterior segment, out of sight, around the bend in the external meatus; or the drum membrane may be inflamed and discolored so that you are not sure whether it is drum membrane which you see or the internal wall covered with mucous membrane. Sometimes you can diagnosticate a perforation by listening closely while the patient inflates the Eustachian tube and middle ear by the Valsalvian method. If a perforation exists and the Eustachian tube is pervious, you will hear the whistle of the air as it passes through. I have read somewhere of putting a light bit of cotton in the ear in such cases and expecting to see it blown out, but this experiment has never succeeded under my observation. If you cannot hear the whistle of air, and are still in doubt, drop a little warm water into the ear and watch it through the speculum while the patient inflates the ear, and you may be rewarded by seeing bubbles of air break through the water. Of course, if you have a Politzer bag you wont linger over the Valsalvian method, and one pull through a Siemen's speculum settles the case, but I am not supposing that you have an Otologist's armament.

Having established your diagnosis, the treatment comes next. You want to restore that mucous membrane to its normal condition, where it is possible, and induce a cicatrization of ulcerated surfaces. The first need is cleanliness, and cleanliness without violence. For this you will need more tools. A mirror on a head band, which leaves both hands free, is absolutely

essential; no one has any business with a purulent otitis media without one. After syringing the ear long and carefully, dry it out with absorbent cotton, under your eye. You must always look and see where you are going, the structure of the ear is too delicate for blind poking. Patients and friends cannot cleanse an ear, you must do it yourself, or it won't be done. I know one man who after 15 or 20 years' practice can cleanse his own ear. He puts a piece of slender flexible rubber tubing on the nozzle of his syringe and inserts that into his ear; as he has no ear drum, the way is clear to the bottom of the hole. After pumping from a pint to a quart of water through this, he dries his ear with absorbent cotton on a cotton holder, and this he can insert clear into the middle ear. As he does this every day, no pus collects and hardens. This is the single exception that proves the rule that no man can cleanse his own ear. After the ear is clean, the question of what application to make comes up, and here a pretty wide choice presents itself, and the very variety of the remedies which have been mentioned only proves that no one has been found entirely satisfactory. I more frequently begin with blowing in finely-powdered alum than in any other way, and repeat this every other day. I often, when this fails or seems to have too little effect upon the inflamed membrane, use finely-powdered iodoform or iodoform and alum. The great objection to iodoform is its odor, and this becomes very disagreeable in using iodoform in this manner. When one puffs a cloud of iodoform into a patient's ear, the return blast loads his mustache with the powder and he carries it under his nose the rest of the day. Some Medical Journals, a few months ago, vaunted boracic acid as the application in purulent otitis media, but in my hands it has not proved a specific by any means, but a useful variation. These powders act better when the drum membrane is almost entirely destroyed, I think, and a puff applies them thoroughly to every part. When the perforation is small and in the upper part of the membrane, the case presents peculiar difficulties. It is very difficult to cleanse such

an ear, and here especially, after syringing thoroughly, it is beneficial to blow through the Eustachian tube by Valsalva's method, or the air bag, to force the middle ear fluids through the perforation in the external meatus, where they can be wiped out with cotton. In such cases I have had the best results from the use of strong solutions of nitrate of silver .10 to .15. After cleansing the ear by all ways as thoroughly as possible, I have the patient lie on the side, with the affected ear uppermost. Then with a pipette introduced well into the ear, I drop in 10 to 15 drops. I then pull and work the ear so as to churn it down clear into the middle ear, and be sure that it reaches every part. After leaving it a few minutes, I draw out what I can with the pipette, and put in a little pure warm water, then pump this out and put in some more, finally I drop in a solution of salt to decompose the nitrate of silver that may be left. The principal object of this procedure is cosmetic. Should the patient arise with an ear full of a .15 solution of nitrate of silver, a long, dirty-brown streak from ear to shirt collar would confront you at the next visit. Sometimes you have the good fortune to see a perforation close up, which is a consummation most devoutly to be wished, as this protects the mucous membrane of the middle ear from external irritants. If the drum membrane does not close up and the secretion stops, it is best to wear a loose fledge of cotton for a protection.

Dr. Howe spoke very highly of permanganate of potash in solution, for purulent otitis media, in a paper published some time ago. He gave it to the patients for ear drops. I used it some, but the patients objected to the stains left by this salt on everything it touched, and in my hands it did not prove as efficacious as I had hoped it might from the statistics given in its favor.

Where patients cannot come to the physician for treatment, they should provide themselves with a good ear syringe and keep the ear as clean as possible. If all the pus and mucus is not removed, it can be kept fluid and wholesome, so that none

will be blocked in behind dry hardened masses, and the penetrating odor, which makes so many running ears an offense to the whole household, will be prevented. Should mastoid-cell complications arise, an incision should be made into the mastoid at once with strong knife or trephine.

There is much more that might be said about otorrhœa, but I have occupied my half hour, and I don't think I ought to read any more to-night.

BUFFALO, Sept. 17th, 1881.

Gentlemen—My incomplete paper on otorrhœa, which you have kindly expressed a desire to publish, was supplemented, in some particulars, in the discussion upon it which followed its reading. Thinking that these questions might arise in the minds of some of your readers, I have taken the liberty of appending a few of them with their answers as well as I can remember them.

Dr. D. The doses of sulphide of calcium as given in the paper (1-10 grain) are entirely inert. Experiments have shown that 1-grain doses are required to produce any effect, and 5-grain doses may be given without ill effects.

Answer by Essayist. I have never failed in stopping recurrent boils in the ear by the use of 1-10-grain doses of this drug. When I do, I shall use larger doses, but shall recommend the smaller ones until they fail.

Ques. Is sulphide of calcium useful in boils occurring elsewhere than in the ear?

Dr. M. I was cured by it last spring of recurrent abscesses in different parts of the body.

Dr. G. I am disappointed that nothing was said in the paper about the treatment of the acute stages of otitis media, which occurs especially in the course of the exanthemata. Will you say something on this point.

Ans. This subject did not come strictly within the range of my subject, but I will say in all cases of acute otitis media I use first hot water, directing the patient to hold his head over a

bowl and continually instilling into the ear water as hot as can be borne, keeping the supply hot by adding boiling water. This to be continued 10 to 15 minutes or until the pain ceases. Repeat this every hour or two, using in the meantime ear drops of Majendie's solution of morphine. If the pain is not entirely relieved by this, apply some leeches to anti-tragus and tragus, putting some cotton into the ear to prevent them from going in and fastening onto the drum membrane.

Dr. H. Is there any means of telling whether there is a collection of fluid in the drum cavity in these cases, and if so, what is the remedy?

Ans. Yes; upon inspection the drum membrane appears to bulge outwards, and it has lost its translucent look. Then an incision should be made through its lower posterior part.

Ques. Is there any danger that this incision will not heal up?

Ans. No. It is extremely difficult to maintain a traumatic perforation of the drum membrane in cases where it is desirable.

Dr. M. Is not such an application of nitrate of silver, as you describe, very painful?

Ans. It is not. It causes no pain, if the cuticle lining the external meatus is intact.

Ques. Is not the chromic-acid application painful?

Ans. It is not, if the application is made only upon the polypus, and the acid is not allowed to touch any healthy tissue. I twist a little point of cotton on my cotton holder and dip just the tip into some chromic acid, which has deliquesced and become fluid without the addition of any solvent; with this I touch just where I want to. If it should run onto sound tissue and cause pain, this can be relieved by gently syringing with warm water.

Yours truly,

F. W. ABBOTT, M. D.

The Medical Journal Association.

Clinical Reports.

ELBOW FRACTURES.

FRACTURE OF THE CONDYLES OF THE HUMERUS—TREATMENT BY THE STRAIGHT POSITION.

Reported by Bernard Bartow, M. D.

Case 1. May 14, 1881, A. B., æt. 4, fell from a height of four feet, striking upon her left elbow. I saw the patient six hours afterward and found the left elbow much swollen, the fore-arm flexed at an angle of 30° , the olecranon projecting prominently, as in luxation, the lateral diameter of the joint increased, and movement of the fore-arm accompanied by pain. Further examination showed that the internal condyle was movable, crepitant and displaced. From the character of the crepitus it was evident that the fracture followed, in part, the line of the epiphysis. The attempt was made to crowd the condyle into its place, with the fore-arm extended; the fore-arm was then placed in the rectangular position, and the whole secured by a piece of belt leather moulded upon the back part and sides of the limb. After 48 hours the splint was removed to examine the joint. The swelling had subsided, but there was a recurrence of the displacement similar to that observed on my first visit. In addition, the muscles had contracted, fixing the parts as firmly as if it were purely a dislocation of the fore-arm.

The day following I examined the patient's elbow with the help of an anæsthetic, and then ascertained that both condyles were movable. Crepitus existed between them, as well as between the condyles and the end of the humerus. The diagnosis was, separation, and splitting, of the epiphysis. The spreading of the joint seemed to be due to the crowding apart of the condyles by the flexion of the fore-arm. Firm extension of the fore-arm permitted the easy replacement of the condyles—causing all deformity to disappear. While forced extension of the fore-arm was maintained by an assistant, a piece of moistened

belt leather was moulded upon the limb, investing it completely with the exception of a space one inch wide upon its anterior surface. This was secured with a bandage. The adaptation of the leather to the contour of the limb was perfect; becoming firm in fifteen minutes, all tendency to displacement of the fractured parts was wholly overcome. The limb was maintained in the straight position for two weeks. Strong union having taken place at the end of that time, the fore-arm was flexed to the right-angle position and secured with the same splint, altered to a rectangular one, by cutting a V-shaped piece of leather from its sides opposite the elbow-joint. During the two following weeks the degree of flexion was gradually increased, until the extreme point to which the forearm could be bent, was reached. At the end of four weeks the splint was removed, permitting the limb to straighten; a bandage was the only support worn after that time. Six weeks from date of injury the functional recovery of the joint was nearly complete; a loss of about one-fifth of the flexion power was the only impairment of motion. (At the time of writing,—four months after the injury—the extent of motion in the elbow-joint of the affected limb, is, in all respects, as perfect as that of its fellow.)

Case 2. June 21, 1881, R. F., æt. 5, fell from a gate upon which he had been swinging, injuring his left elbow. The point upon which the blow was received could not be ascertained. He was attended by Dr. R. H. Hopkins shortly afterward, who diagnosed: fracture of the external condyle, and fracture of the internal epicondyle of the humerus. The line of fracture of the external condyle was partly epiphysial; the epicondyle separation was wholly epiphysial. The displacement of the external condyle was outward and backward; the head of the radius was dislocated and followed the condyle. There was marked increase of the lateral diameter of the joint. The fractured parts were adjusted, the fore-arm flexed at a right angle, and the whole secured with lateral splints of binder's board. Upon examination the second day, the appearance of the joint

did not satisfy Dr. H., and he invited me to see the patient with him. The external condyle had become displaced, the head of the radius was prominent, the breadth of the joint was increased, and the fore-arm firmly fixed in its flexed position by the contraction of the muscles. I suggested dressing the fracture with the fore-arm in the straight position. After giving the patient ether, the fore-arm was forcibly extended. This allowed the condyle to be replaced, removing all deformity. While the fore-arm was extended, a leather splint was applied to the entire limb, as in *Case 1*; this secured the fracture perfectly against displacement. On the twelfth day, quite firm union having taken place, the fore-arm was flexed to a right-angle position, and the splint re-applied. The flexion was gradually increased, until the end of the fourth week, when the splint was removed, and a bandage substituted. The motions of the joint were wholly restored at the end of the sixth week. There was no displacement at the points of fracture. In both instances the "carrying function" of the limb was unimpaired.

In a recent paper* Dr. Allis, of Philadelphia, has shown, in a very able manner, why deformity and ankylosis follow the employment of rectangular splints in the treatment of fractures through the condyles of the humerus. He recommends that such fractures be treated with the forearm in the extended position, with a view to preventing displacement of the condyles. In the foregoing cases the treatment has been essentially in accordance with his views. The excellent results obtained in both instances is a good illustration of the correctness of his views.

In the matter of an appliance I prefer a leather splint to the "egg-paste" bandage, or adhesive strips, used by Dr. Allis. The leather can be moulded to fit the arm as perfectly as a paste bandage, requires less time and inconvenience, is stronger, and can be sprung off the arm with great ease for examination of the fracture.

*Trans. Anat. Soc., Jan., 1880.

In fracture through the condyles, firm union usually takes place in two weeks. It is unnecessary, therefore, to maintain the limb in the straight position beyond that time. (Dr. Allis recommends that the straight position be maintained for thirty days.) Flexion of the fore-arm at the end of two weeks causes no displacement of the condyles; and by loosening the tissues from adhesions, places the joint in a better condition to resume functional activity, when all restraint shall have been removed.

SEPARATION OF THE EPIPHYSIS OF THE LOWER END OF THE
HUMERUS.

M. H., aged 6, fell from a velocipede, striking upon the left elbow. She was attended at once by a homœopathic surgeon, who obscurely diagnosed an "elbow fracture" and dressed it with an anterior rectangular splint. The patient was seen by Dr. H. R. Hopkins and myself, eighteen hours after the accident. Then the appearance of the elbow closely resembled luxation of the bones of fore-arm, backward. The muscles had contracted, rendering the fore-arm almost immovable. The patient was etherized, and it was ascertained that there was complete separation of the lower epiphysis of the humerus. The fragment followed the movements of the fore-arm. Crepitus could not easily be obtained by flexion or extension of the fore-arm; but, with the fore-arm flexed, it could be produced easily, by grasping the condyles and moving the fragment from side to side. The tendency of the posterior projection to recur, when flexion was relaxed, and the complete disappearance of the signs of dislocation, when the fore-arm was extended and flexed, confirmed the diagnosis. The fore-arm was placed, semi-prone, in the right-angle position, and the limb dressed in a moulded leather splint embracing its posterior and lateral surfaces. After three days the angle was changed to that of extreme flexion, which angle was maintained until the eighth day, when the fore-arm was extended at an angle of 40° . On the fourteenth

day union was found to be quite firm, and the fore-arm was brought down to a position of full extension. Passive motion has been practiced up to the present time (thirty days from date of injury). There is no displacement of the epiphysis; flexion and extension are nearly perfect—the only obstacle to free motion being an abundance of inflammatory exudates.

The case is interesting when compared with *Case I*, in which the epiphysis was splint, necessitating a radically different mode of treatment.

CLINICAL REPORT OF SURGICAL CASES TREATED AT BUFFALO
GENERAL HOSPITAL.—SERVICE OF DR. C. C. F. GAY.

Reported by C. C. Fredericks, M. D., House Surgeon.

COMPOUND FRACTURE OF SKULL—TREPHING.

John Rick entered the Hospital March 21, 1881, aged 18; single; German; laborer. Two hours previous to entrance the patient, while attempting to jump aboard a train in motion, fell; the step of a car striking him on the back of the head. Patient complained of no pain, and showed no symptoms of concussion or compression. A slight scalp wound existed midway between the occipital protuberance and the mastoid process on the right side, and there was evident depression of the outer fragment of the occipital bone, the fracture extending downward toward the base of the skull.

Although there were no bad symptoms, Dr. Gay thought it advisable to elevate the depressed bone for fear of bad consequences in after-life. The fracture was found to be angular in form with one-eighth inch depression. A small button of bone was removed from the edge of the solid bone by the trephine, and the depressed fragment elevated. A spiculum of the inner table, half inch long, was found driven into the dura mater, and a small clot outside of the membrane at this point. Free drainage allowed. No brain symptoms supervened and April 25th patient was discharged well, the wound closed. Up to date

(June 1st) patient has been well and has returned to work. Pulse before and after the operation, 80; temperature, normal. Before operation patient protruded the tongue in a sluggish way. Pupils dilated. Result showed wisdom of not waiting for symptoms to develop.

COMPOUND FRACTURE OF SKULL—OPERATION FOR TREPHINING.

Charles Scully, aged 23; single; born in Ireland; sailor. Entered the Hospital May 29, 1881. Two hours previous to entrance he had fallen seventeen feet into a dry dock, fracturing the radius of the right fore-arm and also producing a fracture of the frontal bone in the left supra-orbital region, with depression. Small scalp wound. No symptoms of concussion or compression appeared. June 3d, Dr. Gay cut down upon it and found the bone fractured in two directions, namely, one fracture in a vertical and the other a horizontal direction. The principal line of fracture being downward toward the eye. The trephine was used, a button of bone removed, and the slightly depressed bone was elevated, finding a small clot upon the membranes. Closed the wound partly, allowing free drainage; keeping the wound open by a tube; discharged well July 19. No bad symptoms followed the operation. The day before the operation the pulse was 60 per minute; left pupil fully dilated; the right pupil slightly dilated. The following table gives the record of pulse and temperature on the day of and subsequent to the operation:

| | Pulse. | Temperature. |
|-------------|---------|-------------------|
| June 3..... | 56..... | 100 $\frac{3}{4}$ |
| “ 4..... | 68..... | 99 $\frac{1}{4}$ |
| “ 5..... | 62..... | 99 $\frac{3}{4}$ |
| “ 6..... | 74..... | 101 $\frac{1}{2}$ |
| “ 7..... | 72..... | 99 $\frac{1}{4}$ |

FRACTURE OF THE LUMBAR VERTEBRÆ—DEATH—AUTOPSY.

George Henshaw, aged 40; married; born in England; laborer. Entered the Hospital March 23d, 1881. Three hours previous he was thrown backward by a falling partition against

the edge of the wall of a fire pit, striking the wall across his lumbar region. On entrance only a slight displacement, a prominence of the third lumbar spinous process, was noticed. Patient complained wholly of pain in his back; had no power over his legs and only a little sensation; being able to tell when pricked or touched only. Patient was placed upon his back and extension applied, 25 lbs. to each leg, making counter-extension by raising the foot of the bed. Patient had from the first no control of bladder or bowels, requiring catheterization three times daily and warm salt water injections into the bladder. Cystitis soon developed, with not much pain, but ammoniacal urine and great quantities of mucous. A large slough found at the point of injury over sacrum and lower vertebræ, to which applied poultices. At the end of a week he was hung up and a plaster-jacket applied, which gave him a great support and consequent relief from pain, but, of course, no restoration of the power of sensation or motion. Patient gradually failed, and died April 19, 5.40 A. M.

AUTOPSY ON SAME DAY.—Found the spinous process and articular processes of the third lumbar vertebra broken, with some displacement of the body forward, the inter-vertebral cartilage being torn between it and the second lumbar vertebræ. The cord disorganized at the point of fracture and softened above and below.

SYPHILITIC PARALYSIS—DEATH—AUTOPSY.

Myra Bell, entered the Hospital April 12, 1881; aged 20; single; American. Three weeks before entrance patient had an attack of partial paralysis, but under iodide of pot. gr. xx *ter die* she got better and was up. Two days before entrance she was again seized with a more severe paralysis of the right side, unable to speak or swallow without great difficulty, and insensible to pain. Patient's friend gave her a syphilitic history, she having had a venereal sore three years, before followed by cutaneous eruption, sore throat, periosteal pain, etc.

Ordered by Dr. Gay, iodide of pot. gr. xxx, three times daily; protoiodide of mercury gr. $\frac{1}{2}$ every six hours, all the milk and beef-tea she could take. April 15, unable to swallow at all, hence, ordered enemata every four hours of egg-nog, beef-extract and iodide pot. gr. xxx. Patient sank gradually and died April 18, 4.30 A. M. At no time had the patient a temperature above normal. Autopsy same day, 4.30 P. M. Heart, lungs, liver, kidneys, etc., all normal. Brain and membranes congested, with a deposit of lymph beneath the pia mater over the whole superior curved surface of the hemispheres, also a large clot of blood on the left side into the substance and between the convolutions of the greater part of the posterior lobe of the cerebrum. No effusion into the ventricles.

Selections.

INTRODUCTORY REMARKS.

DELIVERED UPON THE OPENING OF THE SECTION ON PATHOLOGY.

By Samuel Wilkes, M. D., F. R. S.

* * * * *

Our subject, in a word, is Pathology. Pathology has received various definitions, the most common being that which contrasts it with Physiology; for as the latter is regarded as the science of healthy organic life, so the former has been held to be the science of the unhealthy or of the abnormal course of life contrasted with the norm l. This division of vital action into normal and abnormal is true in a superficial sense, and might be made theoretically to stand as a definition, but it is by no means applicable to our practical science of pathology, nor can it be made of any value as an expression of diagnostic knowledge in treating the thousand ills to which flesh is heir.

In the first place, it must be admitted that the changes which occur in every organic structure, as years roll on, are to be regarded as normal, unless we take an imaginary or ideal stand-

ard of a being living in some former golden age, where nought was known but perpetual youth, and regard every departure from this as morbid. Although we do not frame such a picture to ourselves, but know that the various changes in the bones, the cartilages, the lungs, the brain, and other parts which take place in age are in harmony with the dictates of Nature, yet how often are we called upon to treat these changes as forms of disease? They are, however, no more unnatural or pathological than the sere and yellow leaf which falls from the oak in autumn.

If, however, these senile changes occur prematurely, they will then be abnormal, and may be strictly regarded as morbid. Herein is one form of a pathological condition with which we have to deal—a premature decay arising from the various causes which bring the organism to an end, either from their operating with unusual force or from some inherent weakness in the body, which is unable to moderate their action. Now, if all these potent influences, instead of driving the mechanism too quickly, and so bringing it prematurely to an end, concentrate their forces upon one organ only, that organ would become, in ordinary parlance, diseased; but the process there set up may be of exactly the same nature as time would otherwise have produced. In comparatively young persons, for instance we meet with fibroid and fatty changes in the heart and vessels, distention of the air-cells, alterations in the structure of bones and joints, which resemble in every respect those which age would have ordinarily induced. Therefore many of the conditions which we call disease seem nothing more than the result of the concentration on a particular organ of all those agencies which, under ordinary circumstances, bring about senile changes. These changes, therefore, although senile in character, are abnormal, and therefore may be rightly regarded as pathological.

The pathologist, therefore, cannot but regard the body in the first place in its physiological relations with its surroundings, and mark the alterations which time produces. The physiologist is aware that the production of force must be accompanied

by loss elsewhere, seeing that gain and loss are equal, and therefore in observing organic life he must regard the destructive processes as well as the formative. Life seems to depend upon changes continually going on in relation with the atmosphere in which all living bodies are steeped. The burning of the fuel in oxygen supplies the forces necessary for living processes; we therefore, although alive, are constantly being consumed. During so many years the body is undergoing combustion, or, we might say, slow destruction, and this process occurs much more rapidly in some persons and in some animals than in others. Why one creature should live longer or burn out sooner than another is not clear; why, for example, should a dog be worn out in ten or twelve years, its limbs be stiff, its sight and hearing impaired, its intellect obtuse, and senile changes be discoverable in its brain and elsewhere, when a parrot may take a century for the production of the same destructive changes? Why tissues of the same composition should wear out in one animal after ten revolutions of the earth when it takes a hundred revolutions to destroy similar ones in another, is by no means apparent. In man, if the destructive and reproductive changes are normally counterbalanced, the ordinary duration of life is reached. If the balance be not kept, the destructive agencies may be in the ascendancy, and life be shortened. If any of the ordinary surroundings which are always exerting their influences upon us, as various kinds of air, food, moral and mental moods, be in any way noxious, they may in time tend to premature death; and if they should act in such a manner as to cause localized organic changes, we should style these changes disease. There can be little doubt that a large number of maladies in England, as gout, Bright's disease, etc., are induced by mere excesses or inequalities in a mode of life which is considered ordinarily correct. It ought to be one of our studies to consider the relations of the human race to the soil, and observe all the circumstances which centuries have induced to bring about this normal or healthy relation between them. We might then ob-

serve the effects of the concentration of some of the more untoward of the influences which ordinarily environ it, as well as inquire into the effects of transplantation into another country. It seems that all the usual surroundings of life in civilized society, acting in undue proportion or in a more determined manner, induce a very large number of the diseases which we are called upon to treat.

In considering all these agencies working for what we call evil, and leading to destruction, we must not overlook an opposing law—that of reparation. Not only do we observe a production of living force in necessary association with a dissolution of material, but an ever-existing tendency towards the remaking of the injured tissues. We can scarcely think of a morbid change in the body which is not attended by another which has an opposite tendency. Every phthisical lung showing destruction of the tissue exhibits at the same time the attempt to limit the process and to save life by shutting off the escape of air from the lung or sealing the ulcerated blood-vessels.

Then, again, in considering the definition of disease, after having observed how large a number of maladies are produced by the influences of all our ordinary surroundings, we have to recognize those external causes of an extraordinary or specific character which prey upon the human frame, and often bring its machinery to an end. Now, if these causes are obviously parasitic, we are not witnessing so much the case of disease as the spectacle of one animal preying upon another. As regards the parasite, it is pursuing its normal life history, and as regards the patient or the host, he is simply being destroyed; the difference in his mode of death from that which would result from the onslaught of a wild animal would consist merely in time. If a man fall a victim to the bite of a cobra, he is not said to die of disease; but the term is applicable if he die of glanders. There is this difference, however, in the latter case—the poison is not a natural one even in the infecting animal. If, however, in these infectious diseases the morbid cause be an animal or vegetable

organism, although microscopic, then we really have to deal with the operation of one living being acting upon another, and the so-called specific malady exhibits nothing more than the natural course of life of certain specific organisms. The term disease, according to the definition, is here again scarcely applicable.

All these abnormalities of the human organism, under whatever conditions they may arise, suggest that as every branch of biological science is being studied in relation to the lower organizations, and according to the law of evolution, so must pathology become the subject of a large field of inquiry, and be made to embrace the diseases of all animal and vegetable life. The comparison of disease in man and animals may throw much light upon its nature, and it is remarkable that so few persons have been stimulated to the work, by considering the long controversy which has taken place as to the relation between *vaccina* and *variola*, or *hydrophobia* and *rabies*. A true human pathology should have its basis in comparative pathology. Here lies a mine of wealth but little worked. As at the present time every structure and function of the human body is being studied in reference to its antecedents in the lower animals, so there can be no doubt that the various morbid changes to which it is liable may be also profitably discussed in reference to similar actions in more simple forms of life. The truth of this has been clearly seen by philosophers who have had no special acquaintance with our department of science. Thus Buckle, in his *History of Civilization in England*, says: "The best Physiologists distinctly recognize that the basis of their science must include not only the animals below man, but also the entire vegetable kingdom, and that without this commanding survey of the whole realm of organic nature we cannot possibly understand even human physiology, still less general physiology. The Pathologists, on the other hand, are so much in arrear, that the diseases of the lower animals rarely form parts of their plan, while the diseases of plants are almost entirely neglected, although it is

certain that until all these have been studied, and some steps taken to generalize them, every pathological condition will be eminently empirical on account of the narrowness of the field from which it is collected." This is almost as true now as when written, several years ago; but we are pleased to think that our countryman, Sir James Paget, has already removed this slur upon our scientific procedure by his lecture on "Elemental Pathology," in which he shows the importance of observing the resemblances between the changes in the various tissues of man and the vegetable world, and also the deductions to be drawn therefrom.

Again, if the specific diseases be due to organisms, and the hypothetical *contagium vivum* be a reality, it must be subject to the same laws as other organic matter; and if the doctrine of evolution be true, it must have numerous relations with families of its own kind, and perhaps with others which are now obsolete. This idea has occupied the minds of several medical men in this country, and it will no doubt further fructify in their hands.

A highly contagious disease prevailing in a particular locality may be exhibiting the differentiation of some more simple, less virulent, and wide-spread disorder. For example, a slightly contagious epidemic sore-throat might in course of time develop into a more virulent one until it culminated in diphtheria; and if this disease be due to an organism, the latter might have found a more genial soil for its development, or be altered by propagation and time, so that new properties might at last have been added to it. There may be a progressive development of infectiveness. Then, again, the doctrine of natural selection might obtain in the fact of some specific diseases remaining amongst us, while others have become obsolete. The same law, too, if allowed its full operation, might tend still more than it does to the subjugation of many hereditary diseases; for as these appear in youth, and often cause death, they would fade away by a process of self-destruction. As regards the specific diseases, we see again how the most susceptible persons would be struck

out by the poison and the least susceptible remain, so that the poison would be modified in its virulence. We witness this fact in the more moderate characters of the exanthemata in all civilized nations, in comparison with the more profound effects produced by them in nations where the diseases had been hitherto unknown, as, for example, the fatality in the Pacific Islands of our comparatively mild British measles.

Besides the maladies which are induced by the evil influences of our ordinary surroundings, and those due to specific causes just named, there is a class of diseases styled new-growths, which take a very large share in adding to man's mortality. The advance made in our knowledge of these structures is very considerable, and is still rapidly progressing towards a determination of their origin and the discovery of their relation to the normal tissues. These investigations are assisting us in discarding some of our older notions regarding their constitutional and malignant nature, and proving that many are accidental in their origin, and therefore may possibly be averted.

In these brief remarks we see how the simple definition of pathology as a deviation from the healthy standard fails in its application, and how wide is the range of subjects included in its domain. What these are, you, gentlemen, are about to illustrate in the different subjects which you will bring before the section.—*Boston Medical and Surgical Journal*.

THE DIAGNOSIS AND TREATMENT OF WHOOPING COUGH.

By Robert Lee, M. D.

The history of whooping cough, or chin cough, would almost lead to the belief that the disease must have existed long before it was recognized as a specific malady and designated by a special name.

I do not propose to enter fully into the historical narrative, but there are two or three facts which I shall briefly state, the explanation of which is worthy of consideration.

In 1678, or about two hundred years ago, there was a mortality in London of 20,471, amongst which one case of whooping cough and two cases of chin cough are mentioned, this being the first entry in the returns. For fifty years after chin cough and whooping cough were registered separately, as though they were different in their nature, till in 1730 they were entered together, when the mortality was 152 in 27,000, or 1 death in 177. Gradually the mortality increased, till it reached an average of 1 in 29 for London; and during the last few years the whole country has suffered, and now there is a higher mortality in the total of deaths in Great Britain than has ever been registered before. Are we to explain these facts by supposing that the disease has actually increased, or that we have been slow to recognize it? I shall say no more in detail on this point, except that it is a far more important one than might be imagined, and has a distinctly practical bearing on the questions of diagnosis and treatment.

It is now about nine years ago since I began to observe, with the opportunities afforded by the practice of a large children's hospital, the various features of whooping cough, noting any facts which appeared to be important, as they occurred from time to time. It is probable that those who have been occupied in similar practice will agree with me that among the poorer classes of a large city the average of whooping cough cases may be estimated at nearly 10 per cent. of all cases under treatment.

The first point which forces itself on the attention is that whooping cough is far more prevalent in infancy than is generally supposed. Sir Thomas Watson's opinion that the disease is rare in very early life is certainly not confirmed by my experience; and as this opinion has been evidently received and restated in works on medicine—as, for example, in one of the most recent and popular in America, which says that the disease rarely affects children before weaning—it is well to direct attention to a possible source of error in diagnosis. I am quite satisfied that if an infant of only a few days old be in the same

apartment with another child suffering from whooping cough, whether it be weaned or not, it will in all probability take the disease ; at least, its age will not protect it. And just as the mortality is greater among children from whooping cough before the age of twelve months than later, so the occurrence of the disease is more general.

The next point of interest is the degree to which whooping cough is infectious. Of late the possibility has been discussed of the principle of imitation being involved in the symptoms, and there has been a tendency to refer them to nervous derangements, much in the same way that the disease found its place in the nosology of Cullen, along with asthma, in the class of spasmodic diseases. But when it is clearly shown that whooping cough is very infectious, and that it must be regarded properly to belong to the class of which scarlatina and measles are typical members, I need hardly remark on the little practical use of discussing how far a child may control the cough by effort, or what is the precise physiological explanation of the nervous symptoms. It will be time for that when we have ascertained how to prevent the spread of the malady and have diminished its mortality.

The following are a few cases out of a large number of which I made notes at the time that the subject of the infectious character of the disease was under investigation, and here I may remark that every precaution is taken to separate the whooping-cough cases from others.

In 1876 a child aged eighteen months was brought, on May 11th, to be treated for convulsions, being otherwise well. On July 3, whooping cough was clearly diagnosed—that is, fifty-three days later.

On May 22, a child was brought with enlarged cervical glands. On June 12, the first symptoms of whooping cough showed themselves. On July 10th a brother of the child, not attending the hospital, had the disease.

A child (male, aged ten weeks) was brought to the hospital with eczema of the head and body on May 29th. Had whooping cough on July 10th. Another member of the same family was brought with it. A boy, aged thirty-seven months, was brought in for congestion of the brain on June 15th. On July 20th the disease was well marked. A child (male, and seven weeks), emaciated from ill-feeding, was brought in on May 11th. On June 19th the disease first showed itself. The mother would not allow that it had whooping cough till four weeks after this. Another child was brought for rickets on May 22nd, and on July 14th the disease was well marked.

In my note-book for 1878 there are the following instances : A child (female, aged four weeks) was brought with congenital syphilis on May 30th ; the disease was well marked on June 20th. Another on the same day with eczema, and after the same period showed symptoms of the disease. Another child (nine months old) was brought with eczema on Oct. 19th, and on Nov. 24th there was well-marked whooping cough. Another child (aged three weeks) was brought with obstinate constipation on Nov. 3, and on Nov. 20th symptoms of whooping cough first showed themselves. There are eleven more cases, of the respective ages of eighteen months, fourteen months, three months, six weeks, three months, eight months, seven months, four months, thirteen months, thirteen months, and eighteen months, none showing any symptoms of the disease when they were first brought, and suffering from rickets, eczema, improper food, or other causes of illness.

Taking an average from these twenty-one cases, we have thirty-two days as the period which may elapse between exposure to infection and well-marked symptoms of the malady. Very frequently I have noted in cases the first symptoms of whooping cough from a week to a fortnight before the mother would admit the fact, and in stating the average at thirty-two days, I should deduct ten days or more for the obscure symptoms of the early stage of the malady, thus making the period of incubation generally three weeks.

It is singular to notice how obstinate most women are in denying that their children have whooping cough, so that their evidence or opinion is of little value. Among these cases there was one of a mother who caught the disease. She lost her infant, and had two other children ill with it. In another family two others at home caught it, one an infant five weeks old. In another the infant caught it, aged seven months.

Without dwelling long on the law of infection as regards adults, to judge from seven cases in hospital practice, and an equal number in private life, in which the father, mother, or nurse caught whooping cough a second time, I think we may conclude that close and constant exposure to the influence of infection is the almost invariable cause of such an occurrence.

The fact of all others which has appeared to me most singular, and certainly the most important in diagnosis, is the frequency with which whooping cough in very young children is mistaken for some other disorder, and this is entirely due to the belief that the symptom of the whoop must be present in order to satisfy the demands of diagnosis. Without the least hesitation, and without the least fear of exaggeration, I venture to express the opinion that infants whoop but rarely. Instead of expecting such a symptom, I am surprised when it occurs in a very young child, and, on reflection, am still more surprised that we should expect it to do so.

Many medical practitioners must have remarked this fact after some experience of family practice, though I could mention instances of personal friends who have been astonished that they had not noticed it till their own children were the subjects of their observation. That it was well known, and carefully noted years ago, is quite evident, since it was stated and taught by Dr. Cullen. "I have had instances," he says, "of a disease which, though evidently arising from the chin-cough contagion, never put on any other form than that of a common catarrh." And again, "when the disease beginning in the form of a catarrh is attended with fever and difficult breathing, and with little ex-

peccoration, it often proves fatal, without taking on the form of the whooping cough."

Now this is the form which the disease does assume in very young children, and which quite accounts for its being so dangerous in early life. It is not quite correct to say that it begins in the form of a catarrh. The disturbance of the system is more serious, and, if the question is asked of the parent whether the child has been exposed to cold, it is generally answered in the negative. The symptoms are those which more or less characterize the contagious maladies in their early though rather indefinite stage. The most marked certainly are refusal of food, prostration, restlessness, and loss of flesh, with more or less increase of temperature and quickness of respiration. We are inclined at one time to suspect pneumonia or capillary bronchitis, at another that the cause of the symptoms is dentition, or, if they are not severe, that they are due to some error in feeding. Sir Thomas Watson has followed Cullen when he says that "it begins with the symptoms of an ordinary catarrh arising from cold;" and, to show to what extent he considered the cough diagnostic of the malady, he says, "I should be slow to consider any case a genuine case of pertussis unless the characteristic paroxysms of whooping cough and the stridulous respiration were present."

There is a symptom which is a serious and frequent one in infants, and that is the occurrence of active diarrhœa. It is true that the diarrhœa is often preceded by vomiting, but, as a rule, when the diarrhœa begins the other symptoms abate, and one of the two events occurs: either the infant succumbs, in spite of all treatment, or the disease appears to exhaust itself and the symptoms do not return. The active treatment with purgatives, recommended by Sydenham, appears thus to be indicated to some extent by the natural course which the disease takes in such cases.

Sir Henry Holland pointed out the probable relation between whooping cough and what used to be called infantile remittent

fever, and distinctly expressed the opinion that they would be found to depend on the same active cause.

Before passing on to the subject of treatment, there are one or two points which are deserving of notice. One, the most important, that in a family of two or three children, when circumstances compel them to be kept in the same room, and the conditions of ventilation are deficient, the duration and severity of the symptoms appear to increase, and the nurse or parent is liable to suffer, from which it would seem that the atmosphere of a close apartment may become more or less highly charged or saturated with the fomites of contagion. Another point is the usual increase of fever, difficulty of breathing, and cough during the night, and it is reasonable to inquire whether this may be due to somewhat similar causes to those which mark the stages of an attack of ague or to some difference in the conditions of the nervous system during the usual hours of sleep.

One point seems worthy of mention, and that is the probable explanation of the fact that sometimes all the symptoms of whooping cough will suddenly subside, and, after an interval of several months, reappear without any very definite reason, such as exposure to a second infection.

The subject of the treatment of this malady appears to me to be pre-eminently deserving of most serious attention. The infant mortality it has lately caused has grown to surprising importance, as the Registrar-General's Returns have made most evident. The remedies which have from time to time been recommended have been so numerous, that it is probable most practitioners would agree with Sydenham that, with some one exception, which in his case was active purging, they "have tried remedies of almost every other kind, and tried them in vain."

Failing any specific remedy, we are naturally compelled to treat symptoms, making use of such agents as are generally recognized as proper for the different morbid conditions of the patient. The sensible practitioner would regard any one remedy

with considerable doubt, and, while admitting the value of some few in relieving the frequency and violence of the cough, would combine with them either a febrifuge, a purgative, or a tonic, as the state of the case demanded. Thus in the early stages we might prescribe, as is often done, a combination of belladonna, bromide of potassium, and squills or ipecacuanha; later, hydrocyanic acid or alum, or external applications, such as camphor, turpentine, or Roche's embrocation; and finally, when the cough seemed to resist all treatment, we should order with confidence a change of air. I recollect, some years ago, one evening a German merchant called upon me to inquire what remedy we used at the Children's Hospital, as some poor neighbors of his had told him of the good effects obtained by themselves and several others from the treatment. I informed him that we had no special remedies; but as he had come from some distance, and seemed much disappointed, I ventured to inquire what was the nature of the medicine prescribed. He said it was a mixture of cod-liver oil and steel. Now, there is only one mixture of this kind contained in our Pharmacopœia, so I had no difficulty in satisfying his wishes. But it certainly surprised me to hear that this combination, by no means an agreeable one, had obtained a reputation in whooping cough cases quite unknown to us. Since then I have used it largely, and with as much benefit as some far more esteemed preparations.

There has been for some years a popular notion that a specific remedy does exist, though in a form which is difficult of application. I refer to the influence stated to be exerted by the exhalations from the waste chambers which form part of a gas factory. From abroad we have statements which show that it is usual for children to be taken to these places at convenient times, and that "this is encouraged" by medical advice. I was informed by one of the physicians resident in Amsterdam that special arrangements were made for children suffering from whooping cough; and in our own city, at some gas-works in Holloway, for example, on certain days when the waste cham-

bers are cleared, it is usual for many children to attend at the works with apparent benefit. The question which naturally suggests itself is this: What particular product of coal distillation would probably exert an influence on the contagion of whooping cough? I am not in a position to answer this question at present, nor do I see how to begin such an inquiry without the assistance of a scientific chemist who has made a special study of the subject. This I hope to obtain shortly. Applying, however, the general principles of the antiseptic treatment, and assuming that there are very likely several agents present in the waste products of coal distillation which would be more or less potent in this respect, I have used largely the common one, carbolic acid, combined with turpentine, benzoin, or one of the fragrant oils. This plan of treatment has become very general, and I have heard some go so far as to say that carbolic acid will cure whooping cough. This statement has come usually from those of limited experience, though sufficiently good results have been obtained to justify us in pursuing the line of reasoning which first suggested a trial of the remedy. Not long since I was assured by a distinguished member of our profession, who suffered severely from whooping cough, that the only remedy which afforded him relief was carbolic acid inhalation; that the favorite treatment with bromide of potassium and belladonna was tried with the result that for a few hours the cough was relieved after taking the first few doses, but in a short time the effect passed off, and was followed by increased violence of the cough and painful dryness of the throat. In adults the spasmodic cough is the most serious symptom of the disease, but in infants we have to fear the rapid wasting and frequent diarrhœa perhaps more than the cough. So that I am compelled to admit that the use of carbolic acid inhalation must be limited, but within those limits it may be said to have a special effect. I have no doubt that some have tried the administration of the acid internally in diluted solutions, but in my own experience the results have not been such as to warrant any definite opin-

ion. I have also tried sulphur in frequent and small doses, and have had fairly good results. There is no doubt that, as a general rule, the treatment recommended by Sydenham of purging actively is a wise one, for the distress in respiration and cough is certainly diminished when the mucous discharges from the bowels are encouraged. It may also be observed that a spontaneous diarrhœa in whooping cough is not to be controlled by opiates or astringents. It appears to me, then, that we have two distinct symptoms to deal with, and that to a certain extent they are under control. With regard to the laryngeal spasm, there is no doubt we can give relief by the inhalation of carbolic acid; with regard to the diarrhœa, I think the best results are obtained, not by attempting to check the discharges by opiates or astringents, but by the administration of quinine and iron in full doses, and by the application of such combinations as Roche's embrocation, a simple compound of the oils of turpentine and amber, to the surface of the abdomen. There is no doubt that infants at the breast are in less danger than those brought up by hand.

In conclusion, I would suggest a trial of other volatile agents for the purpose of inhalation, such as turpentine, creosote, oil of amber, benzoin, etc. The common plan of stirring some tar with a hot poker is certainly attended with benefit, and is largely used in my hospital practice. It is only necessary to observe that if we are to expect relief from this kind of treatment, it should be carried out on proper principles. It is of no practical use to order twenty or thirty drops of carbolic acid to be added to a pint of hot water, and the steam to be inhaled, for the quantity of acid which evaporates is only proportionate to the amount of water given off as steam, and under such conditions it is evident the amount would be infinitesimally small.

—*London Lancet.*

AN ACTION FOR MALPRAXIS IN BELGIUM.

The *Presse Medicale Belge* (April 24) refers to an action brought by the children of a person who had died after the in-

jection of five milligrammes of morphia for the relief of severe pain. The experts called proved that the accusation (brought, it is said, at the instigation of a rival practitioner) was wholly groundless, the individual having in reality died from the natural results of organic disease. The tribunal not only acquitted the accused, but adjudged the persons who brought the accusation to pay 1000 fr. damages to him. If this latter action were followed up in other countries these unfounded accusations would soon diminish—*Med. Times and Gazette, May 7, 1881.*

CROUP TREATED BY PASSING CATHETER INTO THE TRACHEA
BY THE MOUTH.

By J. Wilson Paton, M. D.

H. J., aged three years and ten months, had measles, the rash appearing Feb. 15, 1881. On the disappearance of the rash, a hard cough supervened, which gradually increased in severity till March 1st. I found him suffering from intense dyspnoea, quite unable to speak, and lips of a dark livid color. Cough was constant, brassy, and without expectoration. Respiration thirty-five per minute, cartilages of the ribs and sternum being drawn in at every effort to breathe, and crepitation existing over both lungs. Fauces healthy. Pulse 144, very weak. Having a No. 11 prostatic catheter, I determined to pass it into the trachea instead of performing tracheotomy. Watching an opportunity, while the tongue was depressed with a spoon, the catheter, curved a little more than usual, was passed into the trachea, during an attempted inspiration, and without the slightest difficulty. A severe struggle followed, lasting perhaps a minute or two, the face becoming purple, and the eyes staring with fully dilated pupils. The paroxysmal efforts to expel the tube being unsuccessful, a pretty full inspiration, partly through the tube and partly through the larynx, followed; about two ounces of frothy, bloody, and purulent mucus were ejected by the tube and the mouth; the livid color disappeared, and he lay down breathing easily through the tube. The presence of the tube did not prevent his swallowing milk, although sometimes

a little of this was ejected from it during a cough. The tube was retained *in situ* by a strip of plaster; and the teeth were prevented from closing on it by means of a pear-shaped piece of hard wood. Six hours afterwards, he was much easier. Cough continued at intervals of ten minutes, and did not seem altered by the tube. Crepitation still existed over both lungs, an abundant muco-purulent secretion being passed both by tube and mouth. Hitherto he had been kept in a warm room; but now a bronchitis kettle maintained a moist temperature of 70° . Tube was removed without inconvenience after it had been in the trachea for eleven hours, as he had bitten it, and no air was passing through it. Shortly after symptoms of obstruction gradually reappeared. During the same evening, another ordinary gum elastic catheter No. 12 was introduced, only a slight momentary struggle and cough supervening. The presence of the tube led again to a very free expectoration of mucus. In the course of a few hours, the respirations and pulse became lower, and crepitation and dyspnoea ceased. When the tube had been in for forty-eight and a half hours, it was removed, and not again introduced. March 8, voice and chest sounds normal. This case would soon have ended fatally. Tracheotomy seemed inadmissible. The introduction of a tube into the trachea of a child is extremely easy and simple, and does not take more than two or three seconds.—*British Medical Journal*.

CREMATION IN DENMARK.

A new impulse to cremation has recently been given by the organization and work of the society in Denmark. At a meeting held in Copenhagen, May 31, it was shown that the society counted fourteen hundred and nine members, among whom were eighty-three physicians and some prominent clergymen. Opposition and prejudice have to a large extent died away, even among clergymen. In the furnace projected by the Danish society corpses are to be reduced to ashes in a little over one

hour, and it is calculated that the cost of incineration will be reduced to the insignificant sum of from three to five crowns—between one and two dollars. This economical feature of the project has met with great favor among the poorer classes, who complain that it is expensive to live, but much more expensive to die in the Danish capital.

EFFECTS OF EXCISION OF THE SYPHILITIC CHANCRE.

M. Mauriac reports (*Gazette des Hopitaux*, 1881, No. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days after the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement; but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.—*London Med. Record*, June 15, 1881.

EDUCATION OF THE PEOPLE BY PHYSICIANS.

There might be written a long chapter on the duty which physicians owe to the public as well as to their profession, to educate their patients and others within the circle of their influence, in various matters involving the interests of both parties. A general knowledge of the conditions of the body in health and disease, and of the nature of medicinal agents, tends greatly to fortify the mind against the delusion and imposture. The deserving physician is always best appreciated among intelligent people. As educators on medical topics newspapers are failures, or something worse. Most of the education people receive from newspapers is contained in quack advertisements. The balance consists in such sensational stories as can be picked up regarding mad-stones and blood-stones and similar superstitions and marvels. As a rule, newspapers are practically hostile to

the profession. Physicians do not advertise, and quacks do. This determines the comparative value of the two classes in the estimation of newspapers. This is the reason why certain of the San Francisco newspapers are so opposed to the medical law. There are also certain quasi-medical journals, edited by half-educated men with lopsided brains, full of notions and whims, bent on gaining notoriety by what might be called scientific monkey-capers. In justice to themselves, if for no other reason, physicians should contract the errors of such false educators by teaching persons with whom they come in contact the rudiments of medical science—inoculating them, as it were, against infection from error.—*Pacific Medical and Surgical Journal.*

Correspondence.

Messrs. Editors:—In the number of your journal for August, 1871, appeared a letter of mine upon the subject of “Homœopathy and Regular Medicine,” in which views were advanced not in accordance with those generally esteemed orthodox. The drift of my communication is indicated by the following quotation :

“In view of these facts, what should the regular profession do in the matter? Shall we continue to call ourselves ‘the profession,’ and neither by public act or private word allow that there is any other? Shall we continue a line of treatment condemned by law and by experience, treatment which only makes homœopathy notorious and ourselves disgraceful; or shall we submit gracefully to the laws of the State and public opinion, and proffer to the homœopathic profession those amenities which should exist between professional equals? Invite them to their rights in our county medical societies; when called by their patrons, attend with them in consultation; when wished by our patients, ask them to attend in consultation with us. If they have any superior knowledge in the management of dis-

ease, or the protection of health, our duty to our patrons requires us to avail ourselves of that knowledge. If we possess the greater professional ability, they and their patrons will find it out. If we hold back from this, we may reasonably be charged with having little confidence in our doctrines. If we go into it, I rest my faith upon the survival of the fittest."

The reception of these views by the profession was, to say the least, not cordial. The men who found themselves called upon to make reply had, as usual, the option of answering the arguments or of abusing the writer, and because the task was easier, or more congenial, chose to do the latter.

Accordingly the next issue of the *JOURNAL* contained a letter selected from many others as a rejoinder, which made no allusion to the matter under discussion, but which was well filled with personal abuse of myself. Also an editorial containing the following reference to my letter :

"If our readers and correspondents will forgive us for publishing the paper for professional reading, and for suppressing their very complete and very satisfactory rejoinders, we will regard the unpardonable sins of editorial life blotted out and solemnly promise with penitence and prayer to never again thus trespass upon their indulgence."

Inasmuch as the letter was written under the impression that I had something to say to the profession, and having no desire for personal controversy, the above went unnoticed. This was ten years ago this month.

In the *Boston Medical and Surgical Journal* of August 25, 1881, there appears, reprinted from advance sheets, an address on Medicine before the British Medical Association at its late meeting, by John Syer Bristowe, M. D., upon the subject of "Homœopathy," of which the following is the conclusion :

"But it may be replied, if those men are honest and educated, and at the same time duly qualified practitioners in medicine, how can they believe and how can they practice such a palpable imposition as homœopathy? Well, gentlemen, it is very difficult

to account for the beliefs and vagaries of the human intellect. It is only occasionally that our convictions are the result of conscious reasoning. For the most part they arise in the mind, and take possession of it, we know not how or why; and our reasonings in regard to them (if we reason at all) are merely special pleadings prompted by the very convictions they seem to us to determine—in other words, they are not the foundations of our beliefs at all, but exhalations from them. It is not surprising, therefore, that, even on matters of supreme importance, irreconcilable differences of opinion prevail, aye, even amongst men of high integrity and cultivated intellect. And if we desire to live broad and unselfish lives, we must be slow to condemn all those who entertain convictions which to us seem foolish or mischievous, and logically untenable, or to refuse to co-operate with them. * * *

“I ask you, gentlemen, to forbear with me if I push my argument to the logical conclusion, and venture now to express an opinion which is opposed to the opinion which many, perhaps most, of you entertain. I do not ask you to agree with it; still less do I ask you to accept it. But I ask you to consider it; and I am content to believe that, if it be just, it will ultimately prevail. It is that, when homœopathists are honest, and well-informed, and legally qualified practitioners of medicine, they should be dealt with as if they were honest and well-informed and qualified. I shall not discuss the question whether we can, with propriety or with benefit to our patients, meet homœopaths in consultation. I could, however, I think, adduce strong reasons in favor of the morality of acting thus, and for the belief that good to the patient would generally ensue under such circumstances. I shall not consider at length whether the dignity of the profession would be compromised by habitual dealing with homœopathists. But I may observe that it is more conducive to the maintenance of true dignity to treat with respect and consideration, and as if they were honest, those whose opinions differ from ours, than to make broad our phylac-

teries and enlarge the borders of our garments, and wrap ourselves up, in regard to them, in Pharisaic pride. I appeal, gentlemen, in support of my contention, to other considerations. It has been held that to break down the barriers that at present separate us from homœopathists would be to allow the poison of quackery to leaven the mass of orthodox medicine. But who that has any trust in his profession, any scientific instinct, any faith in the ultimate triumph of truth, can entertain any such fear? All the best physicians of old times, all the greatest names in medicine of the present day, are with us; and we know that, as a body we are honest seekers after truth. What have we to fear from homœopathy? Bigots are made martyrs by persecution; false sects acquire form and momentum and importance mainly through the opposition they provoke. When persecution ceases would-be martyrs sink into insignificance; in the absence of the stimulus of active opposition sects tend to undergo disintegration and to disappear. The rise and spread of homœopathy have been largely due to the strong antagonism it has evoked from the schools of orthodox medicine, and to the isolation which has thus been imposed on its disciples. If false, as we believe it to be, its doom will be sealed when active antagonism and enforced isolation no longer raise it into fictitious importance. At any rate, breadth of view, and liberality of conduct, are the fitting characteristics of men of science."

I have sent you this extract because of its calm judicial thought upon a subject of great, natural difficulties, and one upon which we can seldom think at all without the bias of personal feeling; also because the eminent writer considered the theme worthy the attention of the British Medical Association; and finally, because his views upon the question are quite similar to those I ventured to express ten years ago.

H. R. HOPKINS, M. D.

Buffalo, September 5, 1881.

Editorial.

DEATH OF PROFESSOR JAMES P. WHITE.

It is with deep and heartfelt regret that we record the death of this eminent and distinguished member of the profession, which occurred in this city on the 28th ult. At first we hoped to notice this painful event in a manner which its importance demands, but the difficulty in procuring the desired data concerning his professional career, and the consequent delay in the publication of the present number, compels us to omit this at present. In the next issue there will appear an appropriate biographical sketch, together with such other matter as will prove of interest to his numerous friends and serve as a proper memorial to his illustrious memory.

CORRESPONDENCE AND CLINICAL REPORTS.

*We publish in this number a letter addressed to the editors by a member of the profession of this city. It will be observed that reference is made to the reply of our esteemed editorial predecessor, in which he promised, "with penitence and prayer," to revoke his steps in admitting a certain communication for publication. The present editors desire to say that they, so far from wishing to exclude, on the contrary, are anxious to receive, communications upon all subjects of interest to the profession. Especially do they desire once more to call the attention of their medical brethren to the importance of clinical reports, and to urge them to renewed zeal in compiling and transmitting them for publication. It is to the profession of this city and the neighboring country that the JOURNAL must look for active support, and we earnestly hope that by this means the number and character of the clinical reports may be made a principal and interesting feature. In conclusion we have only one word of caution to add, that all communications be as brief and concise as is consistent with perspicuity and completeness.

THE PRESIDENT'S PHYSICIANS.

While the public has been commenting upon the illness and death of our late President, not a few remarks have been made concerning his much advertised doctors.

The nation mourns a loss almost irreparable, yet it is, at least, a matter of congratulation to physicians in general, that the conduct of the medical attendants in the case has been of such a nature as to win the confidence of the entire community. While occupying such a prominent position before the public, they have been subjected to both annoyance and temptations of rather a peculiar nature. They have been overwhelmed by gratuitous advice from all sorts of people, and nostrums of various forms have been urged upon their notice, sometimes in friendly simplicity, but usually with the hope of obtaining for the remedy and its suggester an advertisement free of charge. The treatment of the distinguished patient has been sharply criticized by more than one doctor of small practice and smaller mind, as he entertained his astonished friends with an exhibition of his own wonderful insight into the President's condition; and still worse, abundant advice has been publicly offered by one or two of metropolitan notoriety who ought to have a better knowledge of the medical code of ethics.

Especially great was the temptation for the attending physicians to make themselves unnecessarily conspicuous, but though one of them has occasionally shown a fondness for the society of reporters, yet, as a rule, a most becoming dignity was observed in regard to official bulletins. From the very first, they have presented the facts of the case in a distinct, straightforward manner. The condition of their patient has been stated as nearly as possible, with mathematical accuracy, and the plan of treatment frankly and fairly given. Since the autopsy, it has been rather a matter of surprise that a man, wounded so severely, should live so long, and although the result was so much deplored, it is a source of great consolation

to know that the late President received the best attention of two of the most skillful and distinguished surgeons of the land, and that their conduct has reflected considerable credit on the profession to which they belong.

HYGIENIC.

It is said that a doctor once stopped on the sidewalk to regard attentively the heaps of unripe fruit, cucumbers and other indigestible merchandise, which was displayed in the shop of a green grocer. He then passed on to the undertaker's, conversed with him confidentially a few minutes, and rubbing their hands in evident satisfaction, they parted in great glee.

Whatever there may be of fiction in this, it is unfortunately too true that physicians in this vicinity have been unusually busy of late in treating those diseases, which are classed under the term dysentery. Undoubtedly many other causes besides unripe fruit produce the same general set of symptoms, but this is one so unusually recognized and one which accounts for so much sickness and so many deaths, especially among children, that we would suggest the rigid observance of the city ordinance which regulates the sale of unripe fruit.

Reviews.

A Medical Formulary, based on the U. S. and British Pharmacopoeia, together with numerous French, German, and unofficinal preparations. By LAURENCE JOHNSON, A. M., M. D., Lecturer on Medical Botany Medical Department University of New York. New York: Wm. Wood & Co.

When we say that this work is the least valuable of the series published this year, it is only because the other volumes of "Wood's Library for 1881" have been so valuable that no mere collection of formulæ, however good in itself, can be ranked with them.

A Treatise on Bright's Disease and Diabetes, with special reference to Pathology and Therapeutics. By JAMES TYSON, A. M., M. D., Prof. of General Pathology and Morbid Anatomy in the University of Pennsylvania, &c. With illustrations. Philadelphia: Lindsay & Blakiston. 1881.

The opening chapters of this work are devoted to a study of the anatomy of the kidneys as seen by the naked eye and with the aid of the microscope, both healthy and pathological. These chapters show a close and extended research, and contain much original matter. In the following portions albuminuria and casts receive the attention which these important subjects deserve. Under the head of "Casts" the author makes the following concluding observations:

"1. Hyaline casts are found in all forms of Bright's disease, as well as in temporary congestions of the kidney, active or passive.

"2. Epithelial casts are found in acute, subacute and chronic parenchymatous nephritis. In the latter two forms the cells are generally degenerated and fragmentary.

"3. Blood casts are found in acute parenchymatous nephritis, and where hæmorrhages have occurred in the kidneys.

"4. Pale granular casts are found in interstitial nephritis (contracted kidney) and chronic parenchymatous nephritis (large white kidney).

"5. Dark granular casts are found in parenchymatous nephritis, acute and chronic, and rarely in interstitial nephritis.

"6. Waxy casts are found only in chronic Bright's disease, and attend either of the three principal forms.

"7. Oily casts are found in subacute and chronic forms of Bright's disease, and may attend any of the three principal forms, but are most numerous in chronic parenchymatous nephritis.

"8. Free fatty cells and free oil drops are found in chronic parenchymatous nephritis.

"9. The form of fatty cell known as the compound granular cell is found in acute and chronic parenchymatous nephritis."

The divisions of Bright's disease adopted are into: I, Acute Bright's disease, acute parenchymatous nephritis; II, Chronic

Bright's disease, including (1) chronic parenchymatous nephritis, (2) lardaceous disease, (3) interstitial nephritis; adding chapters upon cyanotic induration and suppurative interstitial nephritis.

We are more than usually pleased with this portion of the work. The section devoted to Diabetes impresses us as a very complete account of what is known and what is believed regarding this as yet somewhat obscure disease. The experimental investigations hitherto made, as well as the physiological and pathological bearings of the disease, are reviewed in detail. In other respects, including treatment, the work embodies the most recent views.

A System of Surgery, Theoretical and Practical; in Treatises by various Authors. Edited by T. HOLMES, Surgeon and Lecturer on Surgery at St. George's Hospital. First American, from second English edition; thoroughly revised and much enlarged. By JOHN H. PACKARD, M. D., Surgeon to the Episcopal and St. Joseph's Hospital, Philadelphia. Assisted by a large corps of the most eminent American Surgeons. In three volumes. Philadelphia: Henry C. Lea's Sons & Co. 1881.

Since the appearance of Ziemssen's *Cyclopædia of Medicine*, the profession has felt the want of a similar work, embracing the science of surgery in all its details. Surgery has in the last twenty years made such rapid progress, that it is next to impossible for one mind to be equally well at home in all the different branches, as to write a work in which full justice would be given to every subject. Holmes' *Surgery*, written by the best-known English surgeons, has been long known and appreciated as such a work, and an edition of this work by well-known American surgeons cannot fail to be hailed with pleasure by the profession. Vol. I, which has just made its appearance, treats of General Pathology, Morbid Processes (Abscesses, Sinus and Fistula, Gangrene and Ulcers); Injuries in General, Complications of Injuries, and Injuries of Regions, and the text of the last English edition has been reproduced, unaltered and unabridged, the comments of the American editors having been

simply interpolated. Each volume will have a copious index at the end, and the work will be concluded with a more general one, so that the labor of reference to any particular point will be reduced to a minimum. For the busy practitioner, who has discovered that the purchase of Ziemssen's Cyclopædia was a useless expense, till a general index was provided and *extras* paid for, this will be appreciated. The revision has been carefully made by the American corps of editors, and the work, as now presented, gives a complete discussion of the most recent views, regarding the various departments of surgery.

The Mothei's Guide in the Management and Feeding of Infants. By JOHN M. KEATING, M. D., Lecturer on Diseases of Children at the University of Pennsylvania, etc. Philadelphia: Henry C. Lea's Sons & Co. 1881
Buffalo: Theodore Butler.

We have examined this little work with care, and have been repaid for the time and labor thus bestowed. It is a very useful contribution to the literature of the subject of which it treats, useful to the mother in the information it conveys, and to the practitioner as a hand-book for distribution among his patients. We cordially commend it to the profession.

Anatomical Studies upon the Brains of Criminals. A contribution to Anthropology, Medicine, Jurisprudence and Psychology. By MORITZ BENEDIKT, Professor at Vienna. Translated from the German by E. P. FOWLER, M. D., New York. New York: Wm. Wood & Co., 27 Great Jones St. 1881.

The translator offers an explanation for his labor in placing this work before the English-reading public, that it is a gratuitous contribution towards establishing a scientific basis for the prevention of crime. The anatomical construction and physiological development of the brain are at the base of the system it is the design of this work to establish. In the introduction the author takes up the normal brain and gives a clear exposition of its principal anatomical structures, after which he illu-

strates the subject by an examination of the brain of the most noted criminals. It will be seen, therefore, that from these premises the author endeavors to prove crime as a psychological act of the criminal, and the criminal is therefore the first object of study.

The work is certainly a valuable one. It unfolds a line of thought well worthy of study by the profession, and especially by the authorities to whom are entrusted the prevention of vice.

A Manual of Histology. Edited and prepared by THOMAS E. SATTERWAITE, M. D., of New York, President of the New York Pathological Society, &c., in association with Drs. THOMAS DWIGHT, J. COLLINS WARREN, and others. With one hundred and ninety-eight illustrations. New York: William Wood & Co. 1881.

This work is intended for the student and practitioner. Pathology and pathological histology receive notice in a way to call attention to the practical application of the facts of histology, which might otherwise appear valueless as matter of information. The author in his preface speaks of "the goodly number of medical men who are either engaged in teaching histology or in studying some special branch of it." This is rather a questionable statement. The small number of medical men engaged in original research in this country is properly a subject of reproach. The proportion, as compared with that in European countries, is insignificant. The excuse of former years, that this country is too new, can no longer be considered a satisfactory answer. It ought not to be many years before this country shall be able to point to the peers of such men as Stricker, Rindfleisch and Ranvier.

Again the author remarks: "In some respects the object sought for has not been wholly attained, as, for example, in the effort to separate purely human histology from the comparative." It may well be asked whether this separation of human from comparative histology is advisable. We are more inclined to

agree with the views of the speaker who delivered the opening address of the section of Pathology at the recent International Medical Congress. In the course of the address the speaker calls attention to the great benefit to be derived from a less limited scope of research. The fact that different animals afford peculiar advantages in the study of various histological and pathological subjects is too well known to require affirmative argument.

In reviewing the book we are inclined to think favorably of its filling "the obvious gap" to which the writer refers. While original matter is not to be expected in a work of this nature, it yet gives a concise review of the histology of to-day, a practical tendency being apparent throughout the volume.

Atlas of Gynæcology and Obstetrics. Edited by Dr. A. MARTIN, Professor of Gynæcology in the University of Berlin. Containing 475 black and 37 colored illustrations from the original designs by Brigel, Virchow, Hyrtl, Kilian, Naegele, Schroeder, etc. Supplemented by numerous illustrations from J. P. Maygreir's "Nouvelles Demonstrations d'Accouchements." Price, \$1.00 for each part. Cincinnati: A. E. Wilde & Co., publishers.

In the prospectus, the publishers announce that the "Atlas of Gynæcology and Obstetrics" will be published in fifteen parts, each part containing four elegant plates and four pages of explanatory text. We have received parts I, II, III, and IV. They are issued in the same size and style of the "Anatomical Atlas," by the same publishers, which we have had occasion to commend to the profession in previous numbers of the JOURNAL, and will constitute an equally valuable addition to the library of the practitioner. The illustrations are of sufficient size to portray clearly the subject; and in artistic finish the "Atlas" will be far superior to any work yet published for the moderate cost at which the enterprising publishers are able to offer it. A careful examination of the plates and the design of the work impress us favorably, and we commend it to the profession.



Yours Truly
James P. White

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Original Communications.

REPORT OF A CASE OF INVERSION OF THE UTERUS SUCCESSFULLY
REDUCED AFTER SIX MONTHS, WITH REMARKS ON REDUC-
TION IN CHRONIC INVERSION.*

By James P. White, M. D.

“On Monday, 28th January, Dr. Storck called at my office requesting my attendance, with himself and Dr. Dupre, upon a young female at No. 9 Huron street, who had been delivered of her first child upon the Tuesday previous.

“Accompanying him, I found the patient, 19 years old, exsanguine, with quick pulse, and greatly exhausted from loss of blood. I found that she had been attended, at the time of her delivery, by a German midwife, who stated that, after a brief labor, she had given birth to a male infant, weighing ten and one-half pounds. She also stated that the after-birth soon came away, accompanied by a large tumor, which descended into the vagina. This tumor she supposed to be a mole of false conception, and she stated that it was as ‘large as a cannon-ball.’ The flooding at the time, she described as terrific, producing protracted syncope.

“A day or two previous to my first visit, whilst making an effort to evacuate the bowels, the tumor had descended through

*Reprinted from an article in Vol. XIV. of the BUFFALO MEDICAL JOURNAL.

the os externum and became suspended between the patient's thighs. All her efforts to remove the tumor proving unavailing, the midwife had sent for the gentlemen above mentioned for that purpose, and they now associated me with them in the treatment of the case.

"The tumor was immediately recognized as the inverted uterus, as large as at the fourth month of pregnancy, which, with the external organs, was inflamed and tender. The uterus felt hard and inflexible, the body being apparently distended with blood from the ligated condition of the neck, and the parts had been rendered exceedingly irritable by manipulations for the removal of the supposed 'false conception or tumor.'

"By grasping the uterus gently and firmly with both hands, which it completely filled, compression was continued until the organ was relieved of its engorgement and considerably diminished in bulk. By continuing this firm but gentle compression, I was at length enabled to carry it up into the vagina. At this time the patient, having lost some blood during the effort, became very faint, in consequence of which, and the sensitiveness of the vulva, it was deemed prudent to omit further efforts at restoration of the organ until the following morning.

"Meanwhile the bowels were moved by an enema, followed by an anodyne, and fomentations were applied to the abdomen and external genitals. The patient was also directed to take freely of broths and stimulants.

"Tuesday, 29th, 12 M. Slept pretty well during the night; the hypogastric and vulval soreness is considerably diminished; the uterus lessened in size, and manifests some susceptibility to indentation upon pressure. The hæmorrhage has continued during the night; pulse 144, and feeble; has had a severe chill, and is greatly prostrated. During the last three hours Dr. Storck has, at my suggestion, applied extract of belladonna to the neck of the uterus. At 12 o'clock, placed the woman across the bed, her pelvis resting upon its edge and her feet being supported, one in the lap of Dr. Dupre, the other in that of Dr.

Stork. Prof. S. B. Hunt, who was kind enough to visit her, upon my invitation, gave her chloroform so as gradually to bring her moderately under its influence. This effect was maintained throughout the succeeding operation.

"I now placed myself upon my knees between the limbs of the patient, a position admitting of free motion on my own part, giving complete control of the pelvis of the woman, and which could be maintained for a considerable period without unnecessary fatigue to the operator- Introducing the entire right hand into the vagina, the whole body and fundus of the organ were firmly and continuously compressed for some time. At length, keeping up the pressure, it was found, upon applying the thumb to the fundus, that a slight depression could be made. Having succeeded in dimpling the fundus, pressure was maintained with the thumb at that point until the hand became so fatigued as to be nearly powerless. To preserve this depression whilst the muscles of the hand were permitted to relax, a rectum bougie, about twelve inches in length and one in diameter, was carried along its palm fixed in the dimple, and pressure unintermittingly continued through it by the left hand outside the vulva. So soon as the intra-vaginal hand was sufficiently rested, pressure by it was recommenced and the bougie withdrawn.

"Whenever these progressive efforts were resumed, the left hand was placed over the uterine tumor, which could now be distinctly felt in the hypogastrium. By means of the counter pressure above the pubis, a much greater degree of pressure could be made upon the depression in the fundus of the uterus without lacerating its vaginal connections. At length the fingers of the left hand being pressed well down into the abdomen, seemed to fasten upon or hook over the anterior uterine lip and aid in its reflexion over the organ. Thus securely held between the two hands, one within the vagina and the other upon the hypogastrium, these efforts at reduction were continued until I became nearly exhausted from fatigue. Gradually the concavity of the fundus was found

to be deeper and deeper, until it finally became completely restored. The bougie was now passed up to the fundus, penetrating twelve or more inches beyond the vulva, and gently maintained there by Prof. Hunt, whilst the patient was placed in bed. My fingers were benumbed and nearly deprived of sensation by the long-continued, unremitting pressure, and at my request, he also examined to ascertain whether the organs now occupied their normal relations. This being determined by him affirmatively, the bougie was gently withdrawn, and the patient left with directions that an anodyne be administered, quietude preserved, and stimulants and nourishment given freely. It may be added that she seemed more comfortable than before the operation, and expressed herself as feeling better than since her confinement. The hæmorrhage was, from this moment completely arrested.

“On the 30th, at 11 A. M., upon visiting her, with the same medical gentlemen who were present the day before, found her feeling better, with less pain and much more hopeful. The pulse had, however, but slightly diminished in frequency (140) or increased in force, and she still looked exsanguine.

“Continued the treatment of the day previous, giving as much beef essence and brandy as the stomach will retain.

“On Thursday, 31st, at 11 A. M., Dr. Storck informs me that the irritability of the stomach, which had been troublesome from her delivery, was now greatly increased, and it was with difficulty that she retained the smallest quantity of fluid. The pulse is more feeble, and she is evidently sinking. Notwithstanding the free use of quinine and brandy, she expired at 5 P. M. on the same evening.

“Feb. 1st, at 12 M., the *post-mortem* examination was made by Dr. Lemon, in the presence of Drs. Storck, Dupre, Hauenstein and Prof. Hunt, the last of whom, at my request, furnishes the following report of the condition of parts as they were found upon examination :

“The examination was held eighteen hours after death. Only the abdominal cavity was opened. All the tissues were extremely bloodless. The stomach and intestines were fully inflated with gas, but almost without any liquid contents. The walls of the intestines were white and translucent, and no trace of inflammatory injection could be found either upon them or any portion of the peritoneum. There was, however, a little serous effusion within the peritoneum, and between some of the convolutions of the intestines a very little lymph was exuded. The uterus was drawn up and removed with as little of the vaginal canal as could be reached from within. Externally, the uterus presented its normal shape and position, there being no trace of its recent inversion. The vaginal mucous membrane and the os uteri presented the dark color usual to the organ at this period after labor. The tissues were not softened, nor was there any laceration of them at any point. Upon section through the posterior wall, the same pale, bloodless appearance, noticed elsewhere, was presented. The uterine cavity contained a little altered blood. Upon washing the surface it presented no unusual appearance. The situation of the placenta was marked by the usual rough, flocculent surface.

“The examination revealed no cause of death, unless the anæmic condition of the tissues may be considered as such. I have never before seen so bloodless a subject, with one exception: that of a girl who died from purpura hæmorrhagica.’

“The uterus and its appendages were then submitted to the association for inspection.

“The case is regarded as interesting in many respects. It will encourage the growing belief among accoucheurs, that reduction may be undertaken, with reasonable hope of success, at a period much later than most writers have heretofore advised. Denman, Dewess, Velpeau and others, believe any effort at restoration useless after a very few hours. In a valuable paper upon this subject from the editor of the *Buffalo Medical Journal*, to be found in the November number, 1853, sixty-seven cases

are collected, and all the facts pertaining to their reduction, so far as they could be obtained, are given. Most of the cases which were successfully treated were operated upon very soon after the accident. Thirty-two of the sixty-seven were not reduced, and a few 'exceptional cases' at various periods after the first day. By this table Dr. Hunt has shown that treatment has, though very rarely, resulted in success at a latter period than was formerly supposed practicable, and the above case furnishes another instance in support of the same position.

"I have witnessed but three cases of inversion of the uterus, The history of one is given above. One of the others was seen and reduced soon after the accident; whilst the third was not visited until the fifteenth day—no effort at reduction being attempted. With my present views upon this subject, I should abandon such a case as hopeless only after a prolonged effort at reposition. The accident occurred in 1842, and the female, then but 19 years old, now enjoys tolerable health, though the uterus still remains inverted in the vagina. The case is referred to, and the course of treatment pursued given in part by Prof. Hunt at page 335, in the paper already cited.

"The position in which the patient was, in the present instance, placed for the operation, is deemed worthy of note. It will be perceived that it gives complete control of the pelvis, permits free motion of the person and arms of the operator, and may be maintained for a long time without fatigue. In this position he is able to render important assistance in the most difficult stage of the operation, with the left hand over the hypogastrium. Nor was the use of the bougie unessential; by its assistance continuous pressure was maintained, whilst the hand was relieved for a short period, thus, as it were, tiring out the circular fibres of the neck. How much of the success of the operation was due to the relaxation of the neck from the application of the belladonna, if, indeed, any beneficial influence was exerted by it, I cannot determine. The moderate anæsthesia, continued during the efforts of manipulation, doubtless saved

the patient much pain, and lessened involuntary resistance. Whether the patient's chances of rallying were improved by the reposition, may, by some, be deemed doubtful. There was no lesions of the utero-vaginal connection found, indicating that not such a degree of force had been used as to impair the integrity of or excite inflammation in those tissues. The hæmorrhage, which had been considerable during the previous twenty-four hours, ceased with reduction, and the woman was much more comfortable the day following than the one preceding. The patient doubtless died from loss of blood immediately attending the delivery of the placenta and inversion of the uterus, the disturbance of the system occasioned by the unnatural position of that organ during eight days, and the continuous drain by hæmorrhage during the same period. I believe it to be the opinion of all present, that the shock of the operation was fully compensated for by the increased comfort of the patient and arrest of flooding. She had, however, lost too large an amount of blood; reaction could not be established, though nature was aided in her efforts by all the resources of art."

Fully convinced, from the result of the efforts made in this instance eight days after inversion, of the feasibility of restoring the uterus in many cases heretofore considered irreducible, I did not meet with any opportunity of putting my convictions again to the test until the month of March last. The infrequency of the occurrence of this accident among careful practitioners is apparent from the fact, that many largely engaged in practice pass their whole lives without meeting with a single instance. On this point we may cite the reliable statement of Dr. West, in his work on the "Diseases of Women," that "in the annals of the Dublin Lying-in Hospital, and those of the London Maternity Charity, it was not once met with in a total of more than 140,000 labors."

On the third of March, Dr. C. D. Robinson, of Hornellsville, wrote to me stating that he "had been called in consultation with a neighboring physician, and found a patient with an in-

verted uterus of more than five months' standing." My opinion was desired as to "the possibility of returning the inverted organ and the propriety of extirpation." In my reply the impropriety of removal, unless as a last resort, was insisted on, and the hope expressed that a prolonged and well directed effort might succeed in reduction; and that, in my belief, it was due to the poor woman that the attempt should be made before she was abandoned to the evils of chronic inversion. A few days subsequent to this date, I was requested to visit her at my earliest convenience.

Engagements in the city prevented my complying with this request until the twelfth of March. On accompanying Dr. Robinson to the residence of the patient, Mrs. Amelia Miller, I found her extremely anæmic, confined to her bed, and suffering greatly from the loss of blood.

The history of the case, as furnished by herself, her husband, and the medical gentlemen who had been in attendance, is as follows: At the age of 30 she was taken in labor at the maturity of her second pregnancy, on the 22d day of September last, Dr. Batten in attendance. This labor was natural to the conclusion of the second stage, when she gave birth to a large male child. Placenta adherent, but removed at the expiration of about thirty minutes, and its delivery followed by copious flowing, severe pain, and faintings. The prostration was so great as to require the constant use of stimulants during the succeeding forty-eight hours, and for three weeks she continued extremely weak and faint. At about this time she took an aloetic cathartic, which occasioned violent efforts at stool, accompanied by pains resembling those of labor. Profuse hæmorrhage followed these straining efforts and a large pear-shaped tumor made its appearance through the os externum. The neck or smaller extremity of this body was at the vulva, and the larger extremity down between her thighs. By the assistance of her husband, she was enabled to return this tumor within the vulva, when a messenger was dispatched for Dr. Batten. Dr.

B., upon his arrival, introduced his hand into the vagina and carried the uterus high up into the pelvis, and resorted to astringents and cold for the purpose of arresting the flow of blood, which continued profuse and difficult to control. The prostration being at this time very great, the horizontal posture was enjoined, stimulants and tonics given, and the bowels moved by enema.

During the succeeding three months she had occasional hæmorrhages, which were severe, with constant discharge of muco-sanguinolent matter. Two or three times during this period she so far improved as to walk about her room and partially supervise her domestic affairs, though looking very pale and being very feeble. About the middle of January she had another severe attack of hæmorrhage, the tumor again presented externally, and was again returned as before; that is, pushed back within the vulva. Dr. B. again visited her, and prescribed such remedies as seemed necessary to control the flowing. Since about the first of February she has been compelled, from the debility consequent upon the exhausting sanguinolent and leucorrhœal discharges, to preserve the recumbent posture. Lactation, doubtless, added to the exhaustion, and being confined to her bed she had little appetite, the stomach was irritable and the bowels costive. Ever since the patient took the aloetic cathartic and the tumor made its first appearance between the thighs, she has been aware of the existence of something unnatural in the vagina. This body has occasionally made its appearance externally, requiring the assistance of her husband to replace it, and she has had frequent attacks of a "straining sensation" described as accompanying its first complete descent. She has suffered greatly from all the symptoms arising from exhaustion and sympathy with the uterine irritation necessarily developed by its malposition. The pulse now numbers 130; she is blanched or wax-colored, and grows dizzy and faint when raised to the semi-recumbent posture, and cannot be moved without producing a sense of prostration. It should have been stated, that on

the 25th of February Dr. Robinson, of Hornellsville, and Dr. Reynale, of Downsville, visited the patient in consultation with Dr. Batten, when inversion of the uterus was diagnosed, and measures resorted to, calculated to ameliorate her condition.

Upon making a careful examination (nearly twenty-five weeks having now elapsed since confinement,) the fundus of the uterus is found just within the os externum, and about one inch and three-fourths in its transverse diameter, and scarcely exceeding an inch in its antero-posterior diameter. The body and neck of the organ occupy the vagina, and the neck is not more than one inch in diameter, and feeling like the pedicle of a polypus. The inversion is recognized as complete, and the organ scarcely, if at all, larger than when in its natural position six months after delivery. Introducing a large cylindrical speculum into the vagina, the fundus of the uterus passes readily into its cavity, thus demonstrating the complete involution of the uterus, and bringing distinctly into view the rough mucous membrane of its now outer covering, which bleeds upon the slightest touch with the finger or sound. It is seen to be covered with muco-purulent matter also, and not susceptible of indentation by pressure with the point of the sound.

The bowels having been freely moved by an enema, I proceeded to the operation of reduction in the presence of Drs. Robinson, Reynale, Batten, Dimick, and Mr. J. W. Robinson, medical student. The patient was placed for the operation, as before, upon an elevated, firm bed, with the hips brought quite to its edge, the knees separated, the feet resting in the laps of Drs. Reynale and Robinson, with directions to each to support a knee and hand of the patient, and prevent her from moving about. Dr. Batten brought the patient moderately under the influence of chloroform, which was continued throughout the operation, whilst I placed myself upon my knees, between the limbs of the patient, her pelvis being at a convenient elevation for manipulation. I introduced my right hand completely into the vagina, and firmly grasped the entire body and neck of the uterus. It

may here be remarked that the parts were so firmly contracted as to render the introduction of the hand difficult. At the same time that the entire uterine tumor was grasped by the right hand, the large rectum bougie described in the first operation, was carried up, and also received into its palm, and held firmly in contact with the fundus of the uterus, the hand being sufficiently large to receive both, and keep them in apposition. Continuous, gentle pressure was now made upon the external extremity of the bougie with the left hand, whilst the right compressed the uterine tumor, and kept the upper extremity of the instrument directly upon the fundus, and with the dorsum of the hand in the concavity of the sacrum, directed the force in the axis of the pelvic cavity, putting the vagina completely upon the stretch. This pressure was exerted, and this position unintermittingly maintained, although the force was not to such a degree as to endanger laceration of the utero-vaginal connection, until my strength was nearly exhausted from continuity of effort. At length, and when about to relinquish the task, the uterine tumor began to shorten *at its neck*, and the mouth of the organ to push upon the upper surface of the hand. No depression or dimpling of the fundus was at any time perceptible. Ascending more and more rapidly as the neck diminished in length, the fundus finally passed out of the hand, and was easily pushed by the bougie through the mouth and neck of the organ up to its proper position.

In order to verify the restoration, Simpson's sound was introduced alongside of the bougie, and was found to enter a little more than two and one-half inches above the os, which could now be distinctly felt. The large speculum, already referred to, was now slipped up around the bougie, when the os was brought distinctly into view, surrounding also the bougie. The sound was again carried through the os to the fundus, through the speculum, and all the medical gentleman present saw that it passed easily beyond the mouth to the shoulder of the sound, and could not, without force, be carried further. Thus was de-

monstrated not only the reduction of the uterus, but that the organ was accurately measured, and found scarcely, if at all, enlarged. The speculum and sound were now withdrawn, the patient carefully removed to the bed, and the bougie retained in place by the hand, to prevent re-inversion. Meanwhile, stimulants were given to sustain the patient, and ergot in such doses as were deemed likely to excite the tonic contraction of the uterus. The patient soon recovered from the effects of the chloroform, and expressed herself as feeling quite as comfortable as before the operation. The patient suffered but little during the operation. The discharge of blood was slight, and when the effects of the chloroform had passed off, and she had taken a little brandy and water, she expressed herself as feeling comfortable. Pulse not sensibly changed in quality, and numbering the same as before the operation.

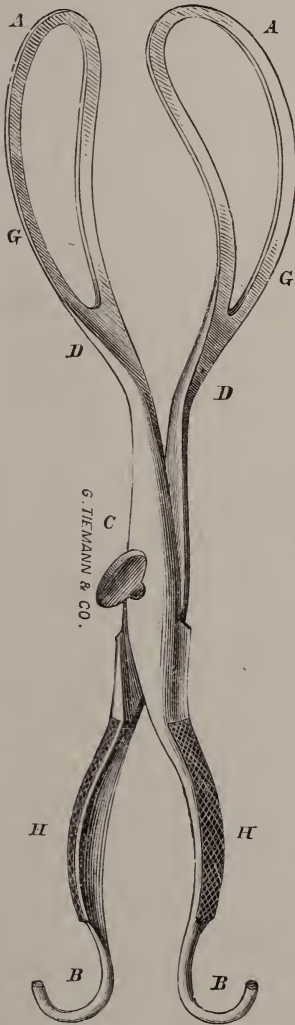
EXTRACTS FROM A PAPER ON THE OBSTETRICAL FORCEPS.

By Prof. James P. White, M. D., in Vol. XVII of this journal.

The instrument which I have used during the last few years is a long forceps, and is considerably curved upon its lateral aspects. It measures in its entire length, conforming the line measured to the curvature of the blades, 17 inches. The blades and their shafts to the pivot being about $9\frac{1}{2}$ or 10, the handles about 7 inches. The blade is $6\frac{1}{2}$ inches in length, and 7 lines at its narrowest point, and $2\frac{1}{8}$ inches in its broadest point. The fenestrum is one and three-eighths ($1\frac{3}{8}$) at the widest part, and gradually diminishes to less than one-half of an inch at the heel. The inner or fenestral margin of the blades is ground down so as not to exceed one-sixteenth of an inch in thickness, the width being scarcely $5\frac{1}{2}$ lines, and not exceeding one line in thickness at its periphery, being considerably thicker in the center.

The shaft of the blade is scalloped out considerably toward the pivot, upon its inner surface, beyond the termination of the fenestrum, thus diminishing weight without lessening the strength.

The points of the blades when the instrument is closed are but 8 or 9 lines apart, and at the widest point they are 2 inches and 9 lines apart, on the upper or concave surface; whilst on



the lower or convex surface, they are slightly more expanded. The shafts of the blades approach each other rapidly, but not abruptly.

The blades at the centre of the point deviate $3\frac{1}{2}$ inches from the straight line in forming their second or pelvic curve. The entire thickness of the closed instrument at their point of junction is less than six lines. They are united by means of the German notch and button, or screw, which is counter-sunk in the female blade, and when the instrument is closed, the blades are held as firmly as by a pivot. The edges or shoulder of the mortise, or notch, are rounded, or pared off for four or five lines on either side, so as to incline the pivot to slide into the notch. The mortise is not carried very deeply towards the opposite side of the blade, which would greatly diminish its strength at this point.

The handles, unencumbered by the heavy wooden beams which are attached to the handles of many modern forceps, diverge in the centre to $1\frac{3}{4}$ inches, and each is expanded or flattened to $1\frac{1}{8}$ of an inch in width at that point, and well roughened on the outer surface, so as to be securely grasped. Each handle is made concave on the inside and convex externally, thus diminishing its weight very much.

The points are contracted again, curved and polished, and will separately answer the purpose of blunt hooks. The one may be made to inclose a perforator, and the other a sharp hook or crochet. Each is made oval, and the sheath enveloping it is secured by means of a small transverse screw, which may be removed by the point of a pen-knife or scissors. The entire instrument is made of the German cast-steel, and is much better to be nickel-plated which prevents rust. It may be had of Tiemann & Co., No. 67 Chatham street, New York.

Here it is perceived we have a very light and graceful instrument of sufficient length to seize the head at the superior strait without difficulty, leaving the lock entirely free from the external organs. The curve is such, also, as to conform to the direction of the passage, without exerting injurious pressure upon the perineum. The shafts of the blade approximate so as not to distend the vulva before the descent of the head. They incline, however, so gradually as not to diminish their power, as is the case with the instrument of Dr. Hodge.

It will be found that the concavity of the fenestrum, beveling off the inner edges of the blades, will render it better adapted to fit accurately the parietal protuberances, and prevent those salient points from being injured or indented by the sharp angles usually found on the inner border of the fenestrum. Moreover, this is the widest part of the fœtal head and the surface to which the fenestrum is ordinarily applied, and if this margin of each blade be two or two-and-a-half lines in thickness, as is the case in many instruments, the amount of compression of the head must be three lines more in consequence of unnecessary thickness. One of the difficulties in application consists in uniting the blades. In the instrument represented this end is greatly facilitated, slightly lessening the weight at the same time, by cutting away the abrupt shoulders to the mortise, into which the screw easily glides, whenever it gets within these inclined planes. Again, whoever has been compelled to hold on to well polished round steel handles will readily appreciate the

comfort, as well as sense of security, which a roughened and expanded surface must afford. The length of the handle may be increased and bent so as to form a blunt hook, and a very good perforator may be inserted into the extremity of one handle and a sharp hook into the other, which will answer very well if the work of destruction becomes unavoidable.

Clinical Reports.

REPORT ON LAST OVARIOTOMY PERFORMED BY PROF. J. P. WHITE.

By C. M. Daniels, M. D.

Mrs. D., aged 52, commenced first to show signs of enlargement twelve years ago. For past few months had increased more rapidly, prostration becoming such that life was endangered.

Ovarian tumor diagnosed by the two attending physicians, but doubt was entertained by several in previous consultation. Dr. White first saw the case Sept. 7th, and at once confirmed the diagnosis and proceeded to operate. Patient under ether, exploratory incision in median line three inches below umbilicus, and there was considerable uncertainty as to where the aponeurosis ended and tumor sack commenced, it was so perfectly agglutinated to the abdominal parietes. The sack was finally opened with the point of a scalpel and about five quarts sero-purulent fluid escaped. Abdominal opening being enlarged to about four inches and then began the difficult operation of separating the adhesions. In fact it was with nearly as much difficulty as it would have been to separate the abdominal muscles and the emptied sack after removal seemed almost as firm and tough as moistened leather, very great force being necessary to accomplish its removal, although there were no intestinal adhesions. The tumor was a monocyst. A small piece of omentum was removed. No general hemorrhage. The pedicle was ligated with extra strong carbolized silk and re-

turned to abdominal cavity, which was then thoroughly sponged. The opening was closed in the usual manner, with silver wire for the deep, and silk for superficial sutures. Carbolized compress and long adhesive straps completed the dressing. Patient was very much exhausted and the prognosis seemed unfavorable. Dr. White remarked that it was the most difficult operation of the kind he ever performed, although time consumed was only forty minutes. The contents of the sack were rapidly disintegrating, and doubtless patient could have survived but a short time.

A report from the attending physicians six weeks after operation is as follows: For twenty-four hours the extreme prostration continued, the pain was severe until controlled by morphia, and stimulants were given freely. During the first five days the pulse ranged from 120 to 160; temperature being 102° to 105°, after that time there was a gradual improvement. At the end of a week the dressing and superficial sutures were removed, discharged pus seemed healthy and so continued. The edges of the wound united except at superior angle, and a small fistula still persists. At ten days the deep sutures were removed and union was perfect. There was some nausea during the first week, which was easily controlled by ordinary remedies. Bowels and bladder soon resumed their normal functions and convalescence seems now fully established. Thus, did the last as well as the first ovariectomy performed by Prof. Jas. P. White prove a success.

AN OBSERVATION CONCERNING CATARRHAL INFLAMMATION OF THE EUSTACHIAN TUBE.

By Dr. Lucien Howe.

In order to present a distinct mental picture of the affection, concerning which, these few remarks are made, it seems well to begin by sketching the history of a case which illustrates its principal clinical features.

Such examples are not difficult to find, and I select one which is especially appropriate on account of a certain peculiarity to be mentioned later. This patient was a girl of about sixteen, whom I first saw on the 15th of last May. Being a person of unusual intelligence, her history was stated with clearness and exactness, somewhat as follows: A few days previously she began to suffer pain in the vicinity of the left ear, and as an uncomfortable sensation extended downward in the direction of the mouth, the trouble was at first attributed to a carious tooth. The fallacy of this supposition was made evident not only by the pain becoming subsequently more localized, but also by the fact that after the extraction of the suspected tooth, the pain again appeared. This was the only subjective symptom complained of, and the objective signs, with a single exception, were equally meagre and unsatisfactory. An inspection of the membrani tympani showed it to be slightly concave, but otherwise normal, and on pressing the air through the Eustachian tube with a Politzer bag, or by holding the nostrils closed during forcible expiration according to Valsava's method of inflation, a distinctly moist rale was heard by means of the auscultation tube. These few ill-defined symptoms apparently indicated some trouble, rather difficult to locate exactly, and of no very great importance after it was diagnosed. More than one such patient applying to a routine practitioner receives a prescription for "ear drops" containing opium, and is dismissed from the office and from his thoughts. There was, however, a peculiarity about this case, which not only made it interesting in itself but which lead to considerations that were deemed worthy of notice.

This peculiarity, consisted in a cleft in the palate, which was very broad posteriorly and extended forward almost to the alveolar process. An artificial palate of hard rubber had been ingeniously arranged to partly cover the defect, but on removing that, an uninterrupted view could be obtained of all the important tissues about the posterior nares and upper part of the pharynx, reminding one of the illustrations to be found in

Cohen* and elsewhere. The opening of the Eustachian tube on each side was shown with a distinctness which could never have been gained with a mirror, and its condition could be observed at leisure without any of the inconveniences of rhinoscopy. On examining the opening of the tube on the left side, it was seen to differ materially from its fellow. The mucous membrane in its vicinity, when first seen, was red and œdematous, and from the partially closed orifice a whitish clot of mucous was oozing.

The case was therefore one well worthy of unusual study—a distinct catarrhal condition of the Eustachian tube presented for direct inspection.

This disease is not generally considered a common one, and to find it associated with cleft palate is still more rare.

Most writers on the ear, by omission or otherwise, lead the student to think that catarrh of the Eustachian tube is a rare disease. Of American and English authors this is especially true. When speaking of a catarrhal condition of the middle ear, Gruber† simply mentions the fact that the tube may be “abnormally constricted, or closed, when there is but little of the inflammatory products in the tympanic cavity.” Schwartz‡ describes the post-mortem appearances in such a condition, and Von Troeltsch|| has also dwelt upon the pathological changes in aggravated forms.

But one of the clearest chapters upon the subject is found in the excellent work recently published by Urbantschitsch,§ who describes in detail the different symptoms accompanying a catarrh of the Eustachian tube. These are pains more or less localized, a moist rale heard through the diagnostic tube, with the rhinoscope the orifice of the tube appears swollen, and when sounded, it feels constricted. It is undoubtedly true that this condition is often found with catarrh of the middle ear, but

* Diseases of the Throat, page 185.

† Lehrbuch der Ohrenheilkunde, s. 448.

‡ The Pathological Anatomy of the Ear, p. 137.

|| Archiv fuer Ohrenheilkunde IV, s. 136.

§ Lehrbuch der Ohrenheilkunde, s. 240.

there seems good authority for considering that the pain in, or about the ear, so commonly experienced, may be due to such an abnormal condition of the Eustachian tube alone.

But the general practitioner is not always provided with a diagnostic tube, a rhinoscope, a catheter or sound, or even if he is skilled in the refinements of diagnosis, it is sometimes necessary to attempt relief for a pain in the vicinity of the ear, under circumstances which make a thorough examination of the conditions impossible. In such a case it is, therefore, in the highest degree necessary to keep in mind the fact that the pain may be due to a morbid process going on in the Eustachian tube, and this should be treated, instead of resorting at once to "ear drops" of questionable value. This brings us to the question of the proper treatment of such a condition. The subject is of course too large for discussion in a short paper, and most of the text books treat of it, even though indirectly, as associated with catarrh of the middle ear. As one of the first means to be tried, we usually find it recommended to inflate the ears by means of Valsava's or Politzer's methods. Undoubtedly this may be advisable in many cases, but I am inclined to think that local application of astringents, especially tannin or alum, in weak solutions, with the atomizer, or a gargle of similar character, will do more good than the simple opening of the tube by inflation. These two suggestions as to the frequency, and as to the treatment, of catarrh of the Eustachian tube seemed to be worthy of note in connection with the case cited.

SURGICAL CASES.

Reported by Herman Mynter, M. D.

July 7, 1881, Mr. B., a strong and healthy butcher, injured his right knee-joint with an axe in chopping meat. He received a wound about one inch long, on the inner side of the joint, about one inch from the margin of the patella. The family physician examined the wound, and seeing a free discharge of

synovia, and recognizing the importance of the lesion, enjoined absolute rest and hermetically sealed up the wound. The patient, who had once before had a similar wound, which had healed without giving any trouble, discarded the advice of his physician and kept about his business for four days, until the increasing swelling and pain made it impossible for him to do so.

July 21, 14 days after the accident, I saw the patient, and took charge of him at the request of the family physician. He had then considerable fever, the temperature being 103, and complained of great pain, restlessness and lack of appetite. The right knee, which was considerably bent, was enormously swollen and expanded by intracapsular exudation.

On the inner side was seen a widely gaping ulceration with flabby, pale, unhealthy granulations. By examining the joint and slightly compressing it, a stream of light-yellow fluid with large fibrinous deposits spurted out three or four inches, and continued to do so till the joint was empty. A large canula was introduced, and the joint syringed out with 2 per cent. carbolized water. The wound was dusted with pulverized iodoform and covered with lint with an ointment of boracic acid and cosmoline (1 to 8). Posterior splint, compression with Martin's elastic bandage and ice bladders were applied. The fever disappeared in a few days, but the exudation returned in the joint, and during the following weeks continued to empty itself through the wound as soon as a moderate amount of fluid had collected in the joint. The wound gradually diminished in size, and at the end of the three weeks only a small fistula was left, through which synovia continued to flow. The fistula kept open three weeks longer in spite of cauterization and compression, but was at last healed by continually tapping the joint, whenever the fluid gathered, while a continual compression of the joint and fistula was used. As soon as the fistula had healed, the patient was put under the influence of ether, and the joint, which had become perfectly stiff, freely moved and the adhesions broken up.

Massage and frictions were practiced daily for a week, and the patient then encouraged to walk with crutches. A diffuse swelling of the lower third of the femur of periosteal nature delayed his recovery for some weeks, but he is now able to walk without crutches and the motion of the joint, although still somewhat impaired, is gradually getting better and better.

In the BUFFALO MEDICAL JOURNAL 1879 to '80 (vol. 19, page 393), appeared a translation of an article by Dr. Volkman about puncture of hæmartros, in which two points were brought out, 1st, that in cases of traumatic hydarthrosis the blood remains perfectly, or almost perfectly, fluid for some time and may be removed by puncture. He found it always fluid during the first three days; and once after six days, and three times after eight days, while in a large number of other cases, punctured between the fourth and eight days, the principal part of the blood was fluid, but some coagula were removed through the trocar, and others left behind; 2d, that anchylosis with total obliteration of the joint may occur in cases, in which the coagulated blood is quickly organized, which may happen, if uniform layers of clot are deposited on the inner surface of the synovial membrane and the secretion of synovia suppressed perfectly by it. Both points are of great importance, especially, I should think, in cases of fracture of the patella. Every surgeon has seen, how easy it is to bring both fragments together immediately after the injury, and how difficult it is, 24 hours afterwards, on account of the large accumulation of blood in the joint. And when this blood at last is absorbed, the muscles have contracted so much that we are glad if we can get a short ligamentous union. If we relieve the joint of the accumulated blood by aspiration, I should, from theoretical reasons, consider it much more easy to obtain a short fibrous or even a bony union. The first point, about the fluidity of the blood, I have had opportunity to verify lately. The patient, a little boy, five years of age, fell on the street and

hurt his right knee. I saw him three days after the accident, in consultation with Dr. Wetzel, and found the joint greatly swollen from intracapsular bleeding, and the limb bent and fixed at an acute angle. Under chloroform the limb was straightened and the joint aspirated and about 50 grams of dark fluid blood removed, which contained no coagula. A posterior splint, Martin's elastic bandage and ice bladder were applied, and in about eight days the little fellow was about the street again with a perfect joint.

August 8th, 1881, I was called to Suspension Bridge by Dr. Talbot to operate for strangulated hernia. The history of the case, from notes of Dr. Talbot, is as follows :

The patient, Mr. S., 30 years of age, developed a rupture fourteen years ago in Germany, and for three weeks the rupture had remained out and resisted all attempts of reduction. At last it returned to its place of its own accord. Five years ago it appeared again, and was reduced by a surgeon after two hours' manipulations. On his way home, August 6th, 1881, in the evening, the hernia slipped out beneath the truss-pad and soon became strangulated. Dr. Talbot saw him at midnight, two hours afterwards, and found him with cold, clammy skin; pulse 130. Hot applications and morphine were administered, and the next morning taxis was tried, but without success. During the day taxis was again tried under chloroform, but without avail. At 11 o'clock next day, August 8th, I saw the patient with Drs. Talbot, Lang and Collins. By the examination an enormous protrusion was seen, expanding the scrotum, being as large as the head of a child one year old. The skin was of a dark-red color, here and there with abrasions and blue contusions from the taxis. The whole protrusion was hard, almost solid, but with tympanitic percussion and not emphysematous, the pulse was still good and the patient anxious for operative help. Ether having been administered, a severe and prolonged

attempt of taxis was made, lasting $\frac{3}{4}$ hour, but without any result at all. Herniotomy was therefore performed in the usual way, and the sac opened. A large coil of bowels, measuring about one foot in length, presented itself. Although extremely congested, the bowels were intact and were repositied after a great deal of trouble and delay, owing to a band at the internal opening of the canal, which escaped detection when the canal was incised. After the bowels had been disposed of, almost the whole omentum was discovered lying behind in the sac, and forming one roll, a foot long—firm, dark, and congested and adherent to the sac. The whole omentum was securely ligated with strong carbolized silk, cut off and the stump left in situ. The wound was well cleaned with carbolized water, a large drainage-tube introduced in the enormous sac, the wound sutured except at the lower angle, where the ligatures and the tube came out, and Lister's antiseptic bandage applied. The operation lasted about one hour. Contrary to our expectations he recovered without an unfavorable symptom, and the wound united by first intention. The bowels moved on the 4th day, and on the 9th he sat up and walked across the room. On the 15th day one of the ligatures came away, the other is still not loose. Twenty-two days after the operation he was able to go out. This case is of interest on account of the size of the protrusion, and of the amount of omentum cut off. The successful result of so formidable an operation shows that the operation was made in time, as far as the bowels were concerned. It is a well known fact that inguinal hernia, especially large ones, endure the strangulation for a longer time than femoral hernia, in which gangrene may appear inside of twenty-four hours. Still, I firmly believe, that life was saved by cutting off the whole congested and inflamed omentum, which without doubt would have produced diffuse peritonitis, if returned into the abdominal cavity.

LITHOLAPAXY.

Reported by Bernard Bartow, M. D.

In June of the present year, Mr. —, æt. 66, came to me to be treated for frequent micturition, difficult and painful in character. About twenty-five years ago he underwent a course of treatment for urethral stricture; since that time the stricture had received no attention. He had had two attacks of renal colic—one in January and one in April of the present year. After the first attack a small calculus, the size and shape of an oat, escaped *per urethram*. Examination of the urethra showed constrictions to be present in the spongy and membranous portions, the former admitting No. 17 sound, the latter No. 11 (French). In four weeks, by gradual dilation, the calibre of the canal was so restored as to permit the passage of No. 30 sound. In the course of the treatment there escaped through the urethra a phosphatic calculus the size of a small bean. After removal of the obstruction to urination there did not follow the improvement in the patient's condition that was expected. The more perfect contraction of his bladder that he could then exert developed symptoms of vesical calculus, of which there had been no clear indications previous to that time. Examination of his bladder for calculus was twice made, and in each instance without success in finding one.

A third exploration of his bladder was made October 8, when a calculus was detected; measurement by the searcher did not show it to be of large size. Owing to the age and physical condition of the patient, the operation of litholapaxy was chosen.

In view of their dilatable character, the existence of strictures was not considered a contra-indication. As a preparatory measure, a No. 30 sound was introduced into his urethra, which permitted the sound to pass into the bladder without resistance.

Oct. 13, the patient having been etherized, a lithotrite with flat blades was passed into his bladder and the calculus freely

crushed. After the withdrawal of the instrument, the meatus was enlarged and a No. 30 straight evacuating tube introduced into the urethra. It was found impossible, however, to advance it beyond the stricture, in the membranous portion; a curved tube of the same calibre was similarly obstructed at that point. Smaller tubes not being at hand, evacuation of the fragments was temporarily deferred. The patient was one and one-half hours under the influence of ether. Forty minutes were occupied in crushing the calculus, the diameter of which, as shown by the scale of the lithrotrite, was 28 c. m. Assistance was rendered by Drs. Hopkins, Folwell, Gay and Mynter.

Two grains of opium in suppository and five grains quinine *per orem* were administered as soon as the patient had sufficiently recovered from the anæsthetic.

No constitutional or local disturbance was induced by the operation, nor did any develop in the following thirty hours. Urination was accompanied by none of the suffering that attended it prior to the operation. Small quantities of *debris* escaped with each emission of urine. After thirty hours a No. 28 evacuating tube was obtained and was introduced into the patient's bladder with ease. The aspirator was attached, and what afterward proved to be one-third of the fragments of the calculus, removed. This part of the operation was done without an anæsthetic, and caused the patient great pain, followed by a severe rigor about an hour afterward. As the amount of the *debris* removed did not correspond with the size of the stone, it was evident that there were fragments remaining too large to escape through the tube. As their presence induced no irritation of his bladder, he was allowed three days' rest.

On the fourth day the operation was repeated. Several large fragments were crushed and evacuated, in amount, as afterward shown, about one-third of the calculus. The time occupied by the operation was one hour. No shock to the patient ensued. A more normal condition of the urinary functions was noticeable after the removal of the fragments.

Nine days from the time of first operation a thorough exploration of the patient's bladder was made with a lithotrite. Several small pieces of the stone were crushed and evacuated, and the search continued until it was evident that nothing remained to form the nucleus of another calculus. The amount removed on this occasion with that which escaped at previous urinations completed the remaining one-third of the quantity of *debris* that was collected. On this occasion, also, ether was employed, and its effect maintained one hour. The composition of the calculus is phosphatic, the dried fragments weighing 4.29 grams.

Two days after the last operation the patient was able to resume his business. His relief has been complete, and with the exception of slight debility, no unpleasant effects remain from the operations. On several occasions pieces of stone became lodged in the prostatic and membranous portions of the urethra, causing intense pain when attempts were made to dislodge them with forceps or bougie. It was feared that abscess might result from their non-removal. Relief from them was obtained in the following manner: - A soft rubber catheter (the end of which had been cut-off above the eye so as to give it an open extremity) was introduced to a point a little in front of the fragments. The urethra was then compressed upon the catheter with the hand, and a current of water forced through the catheter into the bladder; this dislodged the pieces and washed them back into the bladder, from which they were afterward removed through the tube. When the urine showed a tendency to rapidly decompose, the bladder was injected every 8 hours with 1 per cent. sol. carbolic acid; it ceased to be ammoniacal in twelve hours after the complete evacuation of the calculus. The only instance of shock to the patient in the whole course of his treatment was on the occasion when evacuation was undertaken without anæsthesia. With that exception the progress of the case was unattended by a symptom of systemic irritation.

Selections.

A NEW METHOD OF TREATING SUBCUTANEOUS NÆVI.

By Carey Coombs, M. D., London.

About a year ago a child, aged nine months, was brought to me with a nævus about three-quarters of an inch in diameter, filling up the fossa on the left side of the nose. The swelling was entirely subcutaneous, and it was evident that none of the applications which cure the superficial form of the disease would be of any use. The gold needle usually employed in such cases was connected with a battery and introduced into the tumor, but the restlessness of the child (his eye being endangered) made me abandon it. Two lengths of No. 24 silver wire were then passed through the middle of the swelling, parallel to each other, and about a quarter of an inch apart. The zinc and carbon of a Bunsen cell (quart size) were then connected with the ends of each wire separately. The result was great heat in the wire during the short period, one or two seconds, of connection. The ends of the wires were then tightly twisted together, protected by being covered with lint and plaster, and left for the next application, which took place a week later. The current was applied three times altogether. The wires were removed after the third galvanization, and no further treatment was needed. The nævus is now scarcely perceptible.

This mode of using the galvanic current in the deeper nævi appears to me to be recommended by its simplicity and freedom from danger. There is less pain than is caused by the usual introduction of needles at each operation, and a single cell (bichromate, Grove's, or Bunsen's) is sufficient, the only resistance being the fine silver wire.—*London Lancet.*

REFRIGERATORS FOR SICK CHAMBERS.

A great deal has been said and written during the last few weeks about the means taken to preserve an equally cool temperature in the sick chamber of the President of the United

States. Those who have read the description given of the apparatus employed in this case must have perceived that it is not available for ordinary use. There is, however, a very simple method of lowering the temperature of a sick-room, and keeping it fairly equal, which is "practicable," at least in most populous localities. It consists in the placing of large blocks of ice in suitable positions, and allowing them to melt slowly. The mass must in each instance be large, and it should be placed on a stool or tripod in a tub or bath, so that the water may drain away from it as it melts slowly and regularly. If one of these blocks is placed near the principle aperture by which fresh air enters a sick chamber a cold current may be secured. If two of three large blocks are placed in advantageous positions around, though not too close to, the bed, the surrounding atmosphere will be much reduced in temperature. Unless the general heat of the chamber be great, the moisture of the air due to evaporation will be very small, and this may be almost wholly prevented by removing the ice water as quickly as the block melts. Large blocks do not, however, thaw rapidly, and they continuously absorb heat from the atmosphere, rendering a chamber of moderate dimensions easy to cool and keep cool during a lengthened period. The cost of carrying out this system of heat reduction effectually will not exceed a few shillings, and what is of primary importance, no preparation or noisy proceeding is required. The blocks of ice can be supplied by any wholesale ice merchant, and stools or tripods, and pans or baths, are to be found in every household. If the ice does not cool the air quickly enough, the process may be expedited by sprinkling the blocks with salt.—*London Lancet*.

EFFECTS OF DRUGS IN LACTATION.

Dr. Dolan, continuing (*Practitioner*, September, 1881) his series of articles on this subject, from which we have already quoted, gives a case where fifteen grains of chloral were given

to a patient every few hours before confinement, until seventy-five grains had been taken. No trace of chloral was found in the milk on third day; but Dr. Dolan thinks chloral does have an effect on the milk.

Calabar bean has been suggested as a means of restoring the suppressed secretion of milk. Dr. Dolan tried this remedy, but without effect on the flow of the milk.

Cod-liver oil was given to two nursing women in the dose of one tablespoonful three times a day in a cup of warm milk. The children nursed as usual, and no physiological effect was produced on them. Linseed tea, beef fat, and mutton fat were administered to women with the view of ascertaining what, if any, effect would be produced upon the amount of breast-milk secreted. In two cases no effect was produced.

Castor oil was given to mothers in a number of cases. It always produced a purgative action on the child.

Of cummin, as of other aromatics, Dr. Dolan says, "I believe that I may formulate the law that they all impart a flavor and odor to human milk, without increasing the quantity or improving the quality of the secretion."

Of conium he remarks, "Most of the Umbelliferæ are readily absorbed by the lacteal vessels, and may be easily found in the milk. Conium, from its sedative action and its influence on the nerves of motion, could not be expected to increase the milk-supply. There are reasons, however, for its administration to mothers who are nursing, so that it is important to note how soon, if at all, it appears in the milk, and what dose produces an effect. Conium, praised by Störck for the cure of uterine scirrhus, and by Dr. Tunstall for chronic inflammation of the womb, is an excellent sedative for back-ache and for the sexual organs. It must be given until its physiological effects are produced, and this means a dose of the succus conii B. P. of two or three drachms."

He administered two-drachm doses of the succus conii every three hours to a patient until she had taken twelve drachms. Analysis of the milk then showed the absence of conium.

Digitalis infusion, in half-ounce doses, every six hours, was given in three cases without any trace of the medicine being found in the milk.

Regarding ergot, Dr. Dolan says his results are negative or uncertain. Two grains every two hours were given to a nursing mother until twelve grains had been administered. The mother thought the child was affected, as it was cross and irritable. No ergot could be found in the milk, although it must be admitted that our present methods of analysis are unsatisfactory.

Of iodide of potassium Dr. Dolan says that in his experience it does not decrease the quantity of milk, although its prolonged use may deteriorate the milk by impoverishing the blood. He found iodine in the milk of a patient who had taken fifteen grains of iodide of potassium every three hours until sixty grains had been taken. A child eighteen months old, who had been given the milk from a woman taking iodide of potassium, showed iodine in the urine.

Of mercury Dr. Dolan's experience is inclusive. In the two cases examined, no trace of mercury was found in the milk.

Opium, when given to the nursing mother in large doses, can be found in the milk. After small doses it cannot be detected.

Phosphorus was given to two nursing women in doses of one-thirtieth of a grain for fourteen days without any trace of the drug being found in milk or urine. The potash salts and quinine do not, in Dr. Dolan's experience, pass into the milk. Rhubarb and senna, however, do, and produce their physiological effect on the nursing child. Sulphur and turpentine, administered internally, affected the milk, the former acting as a mild purgative on the nursing infant. Valerian, dill and copaiba are also excreted by the milk.

PUERPERAL CONVULSIONS.

Several cases in which pilocarpin, by mouth and hypodermically, was used in eclampsia, are reported with varying results. Langer asserts that it excites uterine contractions and renders them more powerful, and, in two or three cases, as many physicians report a similar result; but Kroner used (*Amer. Jour. Obstet.*) injections of pilocarpin in four cases without any appreciable effect upon the uterus, although the toxic effect of the drug was marked.

The weight of opinion seems to favor chloral in large doses by the rectum. Guyot (France) reports remarkable success, thirteen of fourteen cases being saved. He injected into the rectum from one to four drachms in twenty-four hours. Dr. Goodell believes it the best single remedy. He directs a drachm by rectum, or twenty grains by mouth, repeated as often as may be necessary, and asserts that he has never lost a case. Other writers are equally laudatory of chloral, while none discard chloroform. With regard to the induction of premature labor in eclampsia, there seems to be a growing sentiment in its favor, and successful cases are recorded.

Blood-letting is apparently growing in favor again. Many writers advocate it, or at least speak of it as a too much neglected remedy. Dr. C. C. P. Clark (*Amer. Jour. Obstet.*) is a strong advocate for the use of morphia in heroic doses. He argues that a woman who bears her pregnancy lightly never has convulsions, hence a prophylaxis consists in removing all irritating conditions. In eclampsia the nervous system is peculiarly tolerant of opiates. Ordinary doses are useless. Inject at once into the arm *a grain and a half of morphia*; should the paroxysm return any time after two hours, repeat the dose. If in labor, repeat the dose in eight hours. He says: "This quantity may look large, but I am perfectly confident, after having tried it many times, that it is perfectly safe. I am almost prepared to

swear that twice the quantity, not repeated, would do no harm to a patient in a strongly eclamptic condition.—Dr. Henry Gibbons, Jr., *Pacific Medical and Surgical Journal*.

THE DIFFICULTY IN FINDING A BALL IN THE DEAD BODY.

Dr. Wooster Beach, whose extensive experience in autopsical examinations is worthy of great respect, says :

“Some of our wiseacre scribes of the daily press, and, it may be added, a few medical men in the President’s case, have insisted that an attempt should have been made to extract the ball at some time during the course of treatment.

“Having had a very considerable experience in autopsies, it has fallen to my lot to trace the course and discover the location of many pistol-balls in the dead body. In some cases this is by no means an easy task. Through certain tissues the mark left by the passage of the ball closes up so as to be almost imperceptible. Coagulated blood in recent cases, and the products of inflammation in old ones, burrow into parts near the track, and so disturb or obliterate it as to make it impossible to judge by its means the course taken by the ball.

“Its final location is often quite as difficult to find, and in some cases cannot be discovered except by removal of quite a large part of the body where it is supposed to be, and thoroughly mincing it. I have frequently spent hours in such an endeavor, and in one or two cases have not been able to find the ball at all.

“Persons inexperienced in making such *post-mortems* may ascribe my want of success to a lack of skill. On this point I am willing to abide by the judgment of those who have had practice in this kind of work.

“If the difficulty of discovering the course and location of a ball may be so great in a dead body, where we may cut, tear, or even entirely remove organs at pleasure, would it not be insanity to attempt the removal of the bullet from a living person, when its exact seat was unknown, or even uncertain?”—*The Medical Record*.

Correspondence.

VIENNA, October 15, 1881.

Editors of the Journal:—Perhaps some of the observations of a medical student abroad may have interest to others beyond himself, and it is with this belief that the present letter is sent. It is quite common for those intending to study in German universities to spend a few months previous in some North German town for the purpose of perfecting themselves in the language. Generally some Brunswick city is chosen, for the finest German is spoken in this province—either Hannover or Brunswick. Therefore I went to Göttingen, and to a physician I found it afforded also advantages for medical study. There are two or three hospitals and a large provincial insane asylum, and we could visit these whenever we pleased. The “theatrum anatomicum” has a celebrated anatomist at its head—Henle—and his anatomical museum was a pleasant place to pass away leisure hours. In it is the well-known collection of skulls by Blumenbach, comprising several hundred, and even in a cursory examination one noticed the square-skulled English, backward-sloping Chinese skulls, protruding-jawed Irish, narrow-jawed Russian, prominent Swedish cheek bones, narrow-skulled Danes, round, thick African skulls, and the well-shaped ancient Greek. The Chemical Laboratory seems to draw many Americans to Göttingen; Prof. Hübner is the chief chemist. Some twelve young Americans are making a specialty of this science under him. The university has Prof. König in the department of surgery. The insane asylum contains some three hundred and fifty patients, mostly chronic. The principle of treatment is merely to make the asylum like a home to them. They work, have concerts, balls, go to church, etc., just as if sane and at home. I noticed there and in many other similar institutions later, that

the methods of ventilation and heating are far from perfect. They often use their old-fashioned porcelain stoves in the wards. The Göttingen surgeons must become exceedingly expert in the use of sutures, if one may judge by the numberless scarred faces of the students. One would think the scars average nearly seven to each of the 1,000 students in the town. Duelling is merely a sport among them, a pleasant pastime, but is also often resorted to, to satisfy their imaginary honor. The loss of a piece of nose or ear, a slash through the cheek, chin or forehead, is generally sufficient to satisfy it; but while I was there, one had his brain thrust through by a sword and another was shot fatally through the lung.

I remember once reading somewhere that difficult labor is very much more common among the German women than those of other nations. One would not wonder at this when he sees the amount of hard work the woman performs in Germany. Always in my numerous walks into the country I would see them along the roads carrying on their shoulders a hundred-weight of market produce, or hoeing in the fields, mowing in the meadows, and once on the Elbe river loading a boat with coal, and quite often carrying mortar and brick up some lofty building. Apparently they are very healthy and strong, but we notice that they are soon old. The heavy labor makes closer-set pelves, and very unyielding ones, and this may be the reason for a great per cent. of instrumental interference in childbirth. The sewer system of most of the German towns of this size, at least of a dozen or so I visited, are very defective. The sewer is a superficial gutter down which all sorts of fluids flow under the hot sun, while the solids are scraped together and carted away. Therefore it is that in Göttingen, within its old walls, the summer brings with it a fever of a typhoid type. Students can always in Göttingen find pleasant families outside the wall in which to have practice in German conversation. I spent part of July and all of August in this quiet, studious village, and

then betook myself to the Harz mountains and Thuringia for a two-weeks' tour a-foot. There are several things a medical student will notice in such a tramp. First, I passed one day through the village of Lerbach in the Oberharz, whose one long, straggling street in a narrow valley showed me so many examples of goitre and cretinism. I had hardly anticipated these before reaching Switzerland next year. They sat stupidly—mostly dwarfed children—before their doors and generally held out their hands for pennies. This village is the one most populated with these deformed beings. It is situated in a rich iron region, the great mines of Clausthal being but a few miles off, and the hillsides here are covered with iron ore. It is also a limestone region, and the water percolating through this and running over it, may, as has been said, be a cause of the disease in those who drink of it from their infancy. Nothing further in the Harz mountains was professionally interesting, if I may except the baths at the much-frequented summer resort Harzburg in the Vorharz, and these not so much as the beautiful village itself, which I thought would be an enchanted land to some one whose nerves were all unstrung or who was invalided by overwork. What beneficial influence on such would not the green meadows have, the fir trees, the beech walks, the mountain air, the baths, the music, the Ladanthal, the Ockerthal, the Ilse river, and a trip to the Brocken! Nordhausen, which I soon after visited, is noted for fine chemical works, and especially for the manufacture of sulphuric acid, and works of this character I also made it a point to visit. A few days later I came to Gotha to see—its Crematorium. In this, of course, I had a very deep interest. The Crematorium, built and owned by the city of Gotha (be it said to its honor and credit), is a one-story building of the fine old Roman architecture. It consists of two wings, united by a columned corridor, which is its Columbarium. In the left wing are the doctor's office, a *post-mortem* examination room, and a large hall in which the dead may lie in state. In the

right wing are the office of the priests, the stairway descending to the furnace rooms, and the handsome hall where funeral services are performed. In the centre of the funeral hall is a platform for the coffin, over which is spread a pall. While the service is going on, the coffin sinks noiselessly and unseen, the pall remaining, to the furnace beneath; the body is placed on an iron slab, which moves into the white-hot brick oven, and in a short time is consumed—not by flames of fuel, however, but by burning gas; by the end of the service the removal of the pall reveals the urn containing the ashes of the dead one. The apparatus is that of Siement of Dresden, and the Crematorium was constructed under his direction. Fifty-eight have already been cremated, and tasteful urns containing their ashes stand upon pedestals in the Columbarium. The building is situated in a cemetery newly laid out by the city. To a medical man the contrast could not but be great between the poetic, Grecian urns and their wreaths of flowers, and the graves of others in the field into which and whose impurities his thoughts could not fail to dive.

Three weeks in Leipzig afforded me many opportunities to visit the institutions belonging to the medical department of its university—the anatomical laboratory of His and Braune, the pathological of Cohnheim, and the physiological of Ludwig, and the fine pavilion general hospital with beds for 600 patients. Many of the professors were taking their vacations, but I had the advantage during my stay there of the interesting *chirurgikal poliklinik* of Prof. Schmidt.

A week in Berlin did not profit me much—medically. It was just a few weeks before the beginning of the Semester, and beyond a hasty visit to the hospitals and to the magnificent anatomical museum, I did nothing for the increase of my professional knowledge. At Dresden there was little to see except a fair hospital. In both Berlin and Dresden the arts occupied the best portion of my time and thoughts. From Dresden I made

a pleasant tour through the Saxon Snitzel land to the Bohemian capital Prague. After the historical associations of the quaint old city, its Hradschin, Jews' Quarter and broad Moldau river, came a visit to the General Hospital and the Lying-in Asylum, and the last is what Prague can well boast of. The first assistant was good enough to show me everything in it and to explain everything satisfactorily. It consists of a large main building three stories in height, a court and three wings on each side. The number of births average four daily, and the unusual opportunity is given students, of a residence in the hospital for a very small sum of money indeed, and a bell startles him up at every birth about to take place.

But now I am in Vienna and established for many months. A course of hard study begins two days from now. Already I have attended several of the surgical clinics of Prof. Albert and the gynecological of Prof. Spaeth. I have found a room within two minutes of the Allgemeine Krankenhaus, where most of the clinics are held. Some idea of the amount of material here—dead and living—may be gained from the statement that last year 24,000 patients were treated in this hospital alone, of whom 13 per cent. died. But this hospital is not the only one, though the chief. There are thirty others. One can see cases all day long and every day in the week. I must bring this letter to a close. I fear it does not contain much of medical importance; but I hope later to have gathered material in the way of cases and descriptions of professors which will prove of more interest, and from which I can fashion a letter or two for the JOURNAL.

Sincerely,

F. P.

Editorial.

PROFESSOR WHITE AND THIS ISSUE OF THE JOURNAL.

So much has been already said and written in this vicinity concerning the late Professor White that any further encomiums coming so tardily, seem almost inappropriate and ill-advised. Nor do high-sounding eulogies in any case alter the estimation of a man's character in the minds of those among whom he has lived. We write our epitaphs with our own actions. It is therefore superfluous to indulge in glittering generalities concerning the life of one so well known as Dr. White, although a word of introduction to the following biographical sketch seems eminently proper.

This sketch is given at some length as the professional record of a man whose well marked characteristics have made him a historical personage in the medical annals of this vicinity.

As a teacher he came in contact with medical men, not by hundreds, but actually by thousands; as a writer he was a contributor to some of the best journals in the country; and as an operator in gynecology he possessed an experience seldom equalled. It is not surprising, therefore, that his death should make a profound impression upon those with whom he lived. Moreover, as this journal has a large circulation among his friends and among the alumni of the Medical Department of the University of Buffalo, it seemed advisable to devote a considerable part of the present number to a consideration of his character and works.

We offer no further apology, therefore, for reproducing portions of articles which have already been published by him, believing that they will prove acceptable from their intrinsic worth aside from the personal interest attached to them. The steel engraving frontispiece was copied from a picture taken some few years ago, but may still be considered a good likeness. The biographical sketch necessarily contains many data which

have heretofore been publicly noticed, but his career is here treated, especially, from a medical standpoint, and as such, is the record of an active life spent in advancing his profession and in the services of humanity.

OBITUARY.

PROFESSOR JAMES P. WHITE.

Within the past few weeks the medical fraternity of Buffalo and its vicinity, has sustained the loss of one of its most honored members, Dr. James Platt White, who died at his residence in this city, on Wednesday, Sept. 28th, closing a long career of assiduous devotion to his profession. He was born in Livingston County, in this State, March 14th, 1811, and therefore had, at the time of his death, exceeded man's allotted three score and ten, though his hale and vigorous appearance belied any suspicion of decay. He was essentially "of the people," his father being a farmer in by no means affluent circumstances, whose children had the spur of necessity to urge them forward on the road of life, and so similar has been the experience of many of our eminent men in America, that this early struggle with disadvantages may almost be regarded as an indispensable element of ultimate success. Certainly, Dr. White's career did not prove the fallacy of such opinion, and who can judge, how far this training in the school of adversity, served to mold the indomitable will and clear judgment, characteristic of his later years. In 1816 his father removed to Erie County, then a far western point of emigration, affording few facilities for obtaining an education, and until fifteen, young White lived at home, his sole opportunity, for acquiring knowledge being in the small schools of the village of East Hamburg. These could not, however, satisfy his ambition; he ere long, found his way to the larger academies in Genesee County, where, by teaching a portion of the time, he gained the coveted means to prosecute his studies further.

The law was his first choice as a profession, chiefly perhaps, that in the office of his uncle, Henry White, Esq., an occasion offered for legal reading; but an opportune hearing of some lectures on physiology, convinced him of the bias of his mind, and changed his whole course. All other plans were abandoned, and medicine became the mistress of his heart from that time; for its sake difficulties were overcome, and obstacles surmounted, which would have completely discouraged a less ardent lover, as such a pursuit was no easy one at that date, when the print of the red man's foot, was scarcely effaced from this section of the country. Yet the "will" discovered the "way;" in 1830 the young student gladly embraced the excellent offer of Drs. Marshall and Trowbridge of Buffalo, to enter their office. Two years later the dread disease, cholera, swept over the land, claiming hundreds as its victims, and visiting alike city and hamlet. At Black Rock—which was then disputing with Buffalo the honor of founding the future city—almost the only limit to the scourge was the number of its inhabitants. Though his brief experience scarce equipped him for the fray, White was called to this field, "fleshing his maiden sword" in this serious conflict with death, working day and night with the energy, which subsequently crowned him victor in more widely bruited contests. Two years more spent at his books, after this trial of his metal, and he graduated from Jefferson College, Philadelphia, returning immediately to Buffalo and entering into active practice. A tall, slight fellow, whose spare figure possessed few attractions, and gave no promise of that dignified presence which, in later years was one of his striking characteristics.

About this time a severe accident almost cut short his valuable life. In going to Batavia by stage—then the only means of conveyance—an upset of the coach, caused an injury to the upper part of the vertebral column; his recovery was thought at first impossible, and to the end of his days, a certain stiffness of carriage, bore witness to his marvelous escape. He married a

daughter of Henry S. Penfield, of Penfield, N. Y., in 1836. She, with a nephew (his adopted son) constitute his immediate surviving family.

Buffalo physicians can glance back with pride to the succeeding ten or twenty years, for the youthful town was at that period the nursery of several practitioners, since not unknown to fame. Intimately associated with Dr. White were Drs. Flint, Hamilton and Dalton, and a union of intellects of such calibre naturally resulted in the advancement of the profession in this vicinity. To their efforts the foundation of the Medical Department of the University of Buffalo, is due—Dr. White being instrumental in obtaining the charter in 1846, and was one of its Professors from the outset.

In 1850 he began to teach midwifery, clinically, and as a pioneer in that department was met with great opposition. It was so arranged that a portion of the class then attending lectures could witness the process of delivery, and have each step clearly demonstrated. While this method of teaching was frequent enough in foreign schools, it was something uncommon or quite unknown in America, and therefore called down a torrent of abuse from some contemporaries. The secular press took up the subject, and much feeling was exhibited in the discussion for and against it. At last the matter culminated in suit for libel, which Dr. White, in the name of the people, brought against one of those opposed to him and his methods. Those were stormy days among physicians of the then provincial town, and the generation now passing away have much to relate of the word battles then fought. But, while many faults could be found with such lessons in clinical midwifery, the plan was acknowledged to be a good one, and when subsequently developed into more perfect form, was unanimously admitted to be an important step forward in the advancement of this department of science. Dr. White was also one of the founders of the Young Men's Association, and, in later years, of the Academy of Fine Arts; an able supporter and

promoter of the interests of many charitable institutions, besides, including the Church Charity Foundation, the Foundling Asylum, the Eye and Ear Infirmary and others.

With the late Mr. Joseph Warren he conceived and carried into effect the establishment of the State Asylum for the Insane, remaining its President, till within a late period; was for some time President of the Medical Staff of the General Hospital; was one of the original builders of St. John's Church; nor, must it be forgotten, a large subscriber to the movement which has beautified our city with a Park, pleasure grounds and extensive avenues. In brief, whatever concerned the well-being of the community wherein he dwelt, found a ready response, a warm sympathy in the generous heart of Dr. White, and he was one, who having put his hand to the plough, looked not back, but used his unquestioned abilities to bring to a successful issue whatever was undertaken.

In 1850, and again in 1866, he visited Europe, on both occasions having more in view improvement in his loved science, than mere pleasure of travel. During his first trip he studied under the distinguished Prof. Simpson of Edinburgh—and others in Paris and Vienna; renewing, during his second visit, the valuable friendships previously formed.

The winter of 1870-71 brought him the honor of supplying the place of Prof. Elliott, as lecturer, at the Bellevue College Hospital, during the latter's illness. So acceptable did he make himself to the attending students, as well as faculty, that a handsomely engrossed testimonial was presented on his departure, as an evidence of their appreciation of the benefit derived.

Dr. White's contributions to medical literature consisted almost exclusively of reports of cases, and, addresses delivered before medical societies. They are nearly all to be found in THE BUFFALO MEDICAL JOURNAL, "The American Journal of Medical Science," "The Transactions of the American Gynecological Society" and the "Transactions of the New York State Medical Society." They date from 1845 to nearly

the present time. Among them are reports of operations for ovariectomy, one case of parturition with occlusion of the vagina and os uteri, requiring section to admit of delivery; several cases of operation for chronic inversion of the uterus of varying duration; a paper upon the subject of forceps; as well as several others of lesser interest. The operation of ovariectomy he had performed more than one hundred and fifteen times.

Dr. White being a man of active habits, naturally preferred practical operations to devoting his time to the elaboration of abstruse papers, and we, therefore, find that the record shows these to have been comparatively few.

Not many men have been more earnest, unremitting workers than Dr. White, and few have reaped a more abundant harvest, for he gathered into his garners (long before his labors were ended) fame, wealth and high social position, as the well-earned reward of many years' toil. But the fruition of his hopes and aspirations did not dampen his ardor, nor render lethargic his professional ambition. His zeal showed no abatement up to the very end of his life; indeed, but for that zeal and devotion to practice, his earthly existence might have been prolonged. A short time since he was induced to perform an operation, an account of which is contained in the present number of this journal. The patient lived in a neighboring town, and he returned from the trip in a state of exhaustion, that at once excited the fears of his friends. From this he never wholly rallied, and the breaking down at last, of the grand energy, may be dated from this point. To those who fully understood his predominant trait, nothing more plainly marked the approach of the great Destroyer than the quenching of the buoyant spirit. He, who had sustained so many on the very borders of the dark valley,—almost forcing the shadows to flee away by the power of his skill,—gave himself up, and to his attending physician, Dr. Rochester,—who asked him how he felt—said simply "I am gone;" then was the golden bowl broken, the silver cord loosened forever.

The death of such a man naturally fell on the public with heavy force, calling forth universal expressions of regret.

On Sept. 29th a meeting of the Buffalo Medical Association was held, when the following resolutions were presented by Dr. Lucien Howe :

Whereas, Following close upon a season of universal public sorrow, it has seemed good to the Ruler of Events to deprive our city of one of her most distinguished sons, Dr. James P. White; and

Whereas, We, who were honored by being intimately connected with him as fellow-physicians and members of this Association, are most keenly alive to the extent of the bereavement sustained; therefore,

Resolved, That in the death of Dr. White the Buffalo Medical Association, the City of Buffalo, and society at large have together met with a loss which can scarcely be measured or fittingly expressed. The Association mourns one of its founders, one of its most active and eminent members, and one whose scientific zeal reflects credit upon its record. The medical profession has lost a skillful practitioner whose nerve and judgment were always to be relied upon, whose wise counsel was like a beacon-light for guidance, and whose wide reputation added a lustre to this branch of knowledge. The city of Buffalo misses an able citizen and promoter of its interest in every department, and society is deprived of a man whose Christian example will live beyond the grave, and whose energies, like his Master's, were spent in the relief of suffering humanity.

Resolved, That while recognizing the hand of Divine Providence, and submitting to the decrees of His unerring wisdom, we deplore the removal, of our illustrious associate while yet in the zenith of his fame and usefulness.

Resolved, That our grief for his loss, and the painful void caused by his absence from our midst shall be incentives to us to emulate his brilliant career; and, by following in his footsteps as physicians, in so far insures his earthly immortality.

Resolved, That a copy of these resolutions be transmitted to his family, and to the medical and secular press of the city.

Appropriate remarks were also made by Drs. Barker, Howe, Davidson, Rochester, Wykoff, Cronyn, Samo, Dayton, Nichell, Wetmore, Strong, Van Peyma and O'Brien. A very largely attended meeting of the Erie County Medical Society was held Sept. 30th, when addresses were made by Drs. Johnson, Ring, Folwell, Storck and Bartlett, and the following resolutions were then adopted :

Whereas, It has pleased God to remove from among us Dr. Jas. P. White, whose career, both professionally and otherwise, has been one of singular success; and

Whereas, Such as has contributed to the renown of the man, so has it to this Association, with which he has so long and so honorably been connected; and,

Whereas, Every member of our Society has had more or less intimate acquaintance with our departed friend, and always found him courteous, kind and instructive, how much the more is felt the great loss we have all suffered at his taking off; therefore,

Resolved, That we with heartfelt sorrow sympathize with the bereaved family in their misfortune, and express our great grief at the loss to the medical profession at large.

Resolved, That we attend the funeral in a body.

Immediately after the adjournment of this Society, the members present of the Alumni Association of the Medical Department of the University of Buffalo, were called to order. Very appropriate and fitting resolutions were offered by Dr. Barrett, which were adopted, following which extended remarks were made by him and also by Drs. Daniels and Warren.

Soon after the reassembling of the students, for their course of study at the University, they testified their deep regard for the late distinguished Dean of the Faculty, by unanimously adopting the following preamble and resolutions :

Whereas, It has pleased Divine Providence that, in the midst of great professional influence and usefulness, the earthly life of Dr. James P. White should, on the 28th day of September, 1881, terminate; and,

Whereas, His official connection with the Medical Department of the University of Buffalo, as one of its founders and for many years as Dean of the Faculty, and one of its honored and revered professors, has linked his name and memory with its history and renown; and,

Whereas, His professional skill and great ability as an instructor in obstetrical and gynecological science, his generous sympathy as a friend, his ripe wisdom as a counselor, have endeared him to the students, it is hereby

Resolved, That as students we feel that we have sustained an irreparable loss in the death of our revered and accomplished instructor and friend, Dr. James P. White.

Resolved, That in his death the University has lost one who ever sought its improvement and efficiency, the medical profession one of its acknowledged authorities, one of its distinguished ornaments and one of its most active and practical members.

Resolved, That we tender to Mrs. Dr. White our deep and sincere sympathy in her great bereavement.

GEO. STRASENBURGH,
JACOB FRANK,
CHAS. G. STRONG,
L. B. AAKER,
J. W. PUTNAM,

Committee.

There were in addition special meetings of the Board of Managers of the Church Charity Foundation, and of the Board of Directors of the Buffalo Club, in each of which a memorial was presented, deploring the loss of their President; Dr. White holding that responsible position in both. No more convincing proof of the high esteem, in which he was held, can be adduced than the forgoing resolutions, offered by the many societies and associations of this vicinity; though, the volume would be large indeed, if we essayed to put on record the eulogies of all those who leaned on him for advice, valued him as a friend, or felt his importance as a public-spirited citizen.

DR. WALTER CARY.

This number of the JOURNAL seems destined to be a bearer of evil tidings; for scarcely have the last words been written in regard to Dr. White, than a cablegram brings the sad intelligence of the sudden demise of Dr. Walter Cary at Marseilles, France, and Buffalo is again called to mourn one of her prominent men. It is to be regretted that brevity of time affords little opportunity to do justice to this occasion; but short as the notice must be, we cannot allow this number to go to press without paying a slight tribute to one so identified with all the interests of our city, as well as closely associated with its medical profession, though not an active member. Dr. Cary was born about the year 1812, and was between 60 and 70 years old at the time of his death; but, like Dr. White, his vigorous constitution and elastic temperament kept him youthful, in spite of the stride of time, until a few months since, when failing

health cast its shadow over his life. He graduated from the University of Pennsylvania in 1843, evincing at that date, talents and characteristics which promised a more than ordinary career, and the easy circumstances of his father—the late Trumbull Cary, of Batavia—enabled him to supplement his studies with a desirable experience of some years in the hospitals on the Continent. In 1845 he associated himself with the late Dr. Charles Winne, entering into practice in Buffalo under the most favorable auspices, and gaining an enviable reputation soon after, by the zeal and skill displayed during the cholera epidemic, which for a second time made havoc in our city. Professional duties had, however, less claim on him than other more personal interests. Though frequently called in consultation, Dr. Cary gradually withdrew from the practice of medicine, and we can now but deplore that other attractions should have lost to our science his well-known energies. The remainder of his life was spent in a pleasant and large-hearted enjoyment of the many blessings prosperity had laid at his feet. His genial, social qualities brought him hosts of friends, both at home and abroad; and to the hundreds who have partaken of his open-handed hospitality the recent news carried unfeigned sorrow. We have not time, at present, to speak of the more sterling qualities and the unblemished integrity of the deceased, indeed he was too widely known in this vicinity to need an elaborate eulogy; but our sympathy—in the truest sense of the word—is extended to the large family circle which has lost a head, as Buffalo also has lost a noted citizen.

Reviews.

Physicians' Visiting List for 1882. Lindsay & Blackiston.

We have received a copy of this list which for thirty years has held a prominence over all others. The volume for 1882 contains the metric system of weights and measures, and a posological table, in addition to the usual contents.

The Applied Anatomy of the Nervous System. By AMBROSE L. RANNEY, A. M., M. D. With numerous illustrations. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. 1881.

In the preface we learn that this volumè comprises a course of lectures which were delivered by the author before the students of the medical department of the University of the City of New York, during the winter of 1880 and 1881. The volume abounds in illustrations and is in many respects a very interesting work. It is an admitted fact that the subject treated in this book is one sufficiently obscure to the profession generally, to make any work tending to elucidation most welcome. The treatise is a volume of 500 pages octavo. It is divided into four parts, treating respectively upon the brain, the cranial nerves, the spinal cord, and the spinal nerves. So far as we are able to judge, the work appears to notice all the latest researches in this department, and it is certainly one which the profession generally should possess. It has been written with a view to practical usefulness, and in this respect we are inclined to think that the efforts of the author have been successful. We earnestly recommend it as one unusually worthy of study.

The Prescriber's Memoranda. New York: Wm. Wood & Co.

The name of the compiler of this little work is not given on the title page. There is no preface, no introduction and no claim to have supplied "a want long felt." This unusual modesty caused us to look over the book pretty thoroughly, and we say that it is one of the most useful little books of this character, which has appeared. The writer, commencing with the first letter of the alphabet, gives Dr. Wm. T. Lusk's rules for the treatment of abortion, then some hints on the treatment of alcoholism, and so on, giving useful hints, memoranda and formulæ of approved prescriptions for various diseases, which are so arranged alphabetically as to be readily referred to.

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Original Communications.

ANGINA PECTORIS.*

By H. R. Hopkins, M. D.

What is angina pectoris? To answer this question with such scientific accuracy, as would meet the approval of your Committee on Pathology, would require more exact information than I have been able to glean from the literature of the subject that has fallen under my observation. The reason of this is found in the inherent difficulties of the subject, and not because the disease is one which has attracted little attention. For in the whole round of death-producing maladies, there is none that attacks its victims with more terrible and deadly energy; none, in which the picture of "death struck short on life" is more often seen, and none whose victims are more eminent and widely known. Hence it is that investigations into the nature and cause of angina pectoris have not been wanting, and its students have been among the leaders of our profession, have been men who availed themselves of every advantage that the science of medicine could offer, and as a result of their labor, we have several more or less plausible hypotheses, but we are still far from a settlement of the question.

* Read before the Buffalo Medical Club, Nov. 9, 1881.

Would time permit, it might not be uninteresting to scan the arguments put forth in support of these various hypotheses ; that the disease is a spasm of the heart ; that it is a paralysis of the heart ; that it is not a disease of the heart at all, but is a neurosis, and that its essence is a hyperesthesia of the cardiac plexus ; that its seat is in the system at large, and consists in an abnormal contraction of the circular fibres of the arterioles, and that it is hastened by the work of forcing the blood through these abnormally narrowed channels.

All of these theories are supported by ingenious arguments of able men, and I strongly suspect that the future will show that there is a germ of truth in each. But we must have a theory, and to my mind there is none more scientific and more practical than that adopted by Fothergill in his recent work, "The Heart and its Diseases." Still, I would caution you that it is only a theory, and that it may never see verification. Fothergill divides angina into two classes, true and false. True angina consists in an acute distension of the left side of the heart, as the result of vasomotor spasm of the arterioles, and a consequent rise in blood pressure ; ordinarily it is found in cases where the arterioles have undergone fibroid degeneration from long continued lithæmia, and when at the same time the heart's fibre is materially awakened by fatty degeneration. And it is only in the presence of such organic conditions that an attack of angina becomes so serious an affair.

False angina occurs in hysterical women, and is not so distinctly connected with arteriole spasm. My own conviction is that the distinctions thus set up cannot be maintained. That the conditions of the circulation are similar in both cases ; that in both there is marked high arterial tension ; that in the so-called false angina a sound heart is struggling against this overburden, while in the true variety the heart is enfeebled by fatty disease, or is poorly fed by coronary arteries narrowed by atheroma. Certain it is, that hysteria is frequently associated with high arterial tension, and my observations with the sphyg-

mograph show that in every case of sterno-cardiac pain, occurring as it so frequently does in women about the menopause, high tension would be present, and in many cases I have been able to predict the coming of an attack, days before its appearance, from a peculiarly wiry state of the pulse. I think, then, that we will do well to consider that an attack of angina pectoris is the warning of a tired heart, staggering beneath the weight of the circulation, made more burdensome by vasomotor spasm.

When we quit the field of pathology and begin the description of the symptoms of angina, the necessity for cautious speech ceases. There may be serious doubt regarding the nature or the cause of angina; there are none whatever concerning it as an assemblage of symptoms. As students we are interested in the former, but as practitioners our concern is with the latter.

Clinically considered, angina consists of an attack of pain of a peculiar character, located in the mid-sternal or precordial region, associated with this is a peculiar impression of impending death. Observation has taught me that there is great variety in this pain, and writers who delight in discovering different varieties of disease, base their classifications of the kinds of angina upon the differing characters of this pain. And there is certainly a great difference between the description of the complaint in the hysterical girl, and in the old man whose heart we have good reason to suspect is being starved from narrowed coronaries.

An attack of angina, as seen in a man of advanced years, is like nothing else in the world, and a vigorous man with nerves of steel and dauntless courage, will be reduced in the space of a few moments to the state of utter helplessness. He will hold out to you a cold, pulseless hand, and in a thin, scarcely audible voice will implore you to do something for his relief, that this pain is killing him.

All authorities agree in making prominent the essential unbearableness of the pain. Said one of my patients: "It is not

pain ; it is indescribable misery." Said another whom I found speechless, when relieved so as to be able to speak : " There is no honor in that pain." Another remarked, " My breast is one solid pain." There can be no doubt that in some cases the nature of the pain is most distinct, and that there is very little danger of mistaking its presence. The seat of the pain is distinctive, but subject to considerable variation. The favorite location is mid-sternal, but it may come in any part of the front of the chest, and generally has a preference for the left side. Then there is a most decided tendency to extend into the shoulders and down the arms ; here the preference being shown to the left side. These extensions are referred to as radiations, and this in general is my experience ; but in one of the most marked cases I have observed the pain came first in the left wrist, then in the right, slowly spreading up both arms, involving all the tissues in its course, and at length the two pains would unite over the heart. When the paroxysm yielded, the retreat was in the reverse order to the onset, the pain disappearing from the left wrist last. In the case of the late Dr. Pratt, of this city, the pain was present in the left fore-arm most of the time for years before the fatal attack.

Besides the pain, which remains by far the most prominent and persistent symptom, there are other signs which should be observed. The pulse, as you would suspect, is always changed, but in a way that requires critical examination for its detection. My observation is that the principal alteration in the pulse is in its volume. In patients with whose circulation we are reasonably familiar, we see that the pulse, instead of being full and soft, is small and resisting, and tells at once of a contracted artery. The rate per minute will not ordinarily be changed, but when changed, it will be by slowing. One of my patients whose normal pulse was 80, I found with a rate of 60 and 64. Authorities give several peculiarities of the pulse, such as intermittent, wiry, feeble and rapid. I have never met any of these during the attack. The general condition of the patient needs a mo-

ment's consideration. In some cases we find the face white and pinched, with cold perspiration standing on the forehead, the look of the man being a blending of anxiety and terrible suffering, and we will be surprised at how fast he has grown old; sometimes he will be extremely restless, unable even to keep in bed, and we find him pacing the floor, but more often he will be fixed in one position with such terrible earnestness that shows at once his feeling, that to move a hand is to court instant death.

One thing more regarding the pulse: During the attack, as before stated, we may find the pulse regular, and neither very fast nor very slow; but after a severe attack we will be sure to find a decided change in the heart's action. It would seem as if the heart had been well nigh exhausted in the attack, and the next day we find the pulse weak, small, rapid, and frequently intermitting. I believe this phenomenon of the circulation will come to have diagnostic significance, inasmuch as intercostal neuralgia or neuralgia of the diaphragm are not accompanied with this change in the pulse. I have said nothing of the breath; but this we must observe carefully, for we will have to diagnose between angina, and asthma, and perhaps pleurisy. During the attack the breathing is rapid and shallow, but on calling our patient's attention to his lungs, as by asking him to take a full breath, we will find that he can fill the lungs fully and freely, and upon listening, we will not hear any of the sounds peculiar to any affection of the lungs.

Before leaving the signs of angina, it will be well to call attention to some of its sequæ.

These, so far as my observation and reading go, depend upon the terribly depressing effect of an attack of angina upon the heart's power, and I will again mention that one may expect for days to find the heart's action notably weakened. As the result of this withdrawal of the vis-a-tergo of the circulation, congestions are liable to take place, preferable in the lungs, but also in the brain, the kidneys and the liver.

This complication, congestion of the lungs, was the cause of the death of my uncle, Dr. Pratt, and of my mother, and seriously threatened the lives of two cases that I can recall. As I look back upon my earlier cases, I cannot but feel that had I then known, as I now know, this tendency to lung complication of angina, I should have been upon my guard, and might have done something to ward off the attack which I then never suspected and only recognized when fully developed. I feel that I am only doing right to strongly impress this liability to fatal complication, and to urge that it be kept in mind.

This naturally brings us to the consideration of what we shall do for angina pectoris. We will remember that we have to do with an overburdened, fainting heart, and with a patient who is being killed by pain. We must be prepared to act wisely, efficiently and promptly. Many times we will be too late, and find the struggle over, the patient in the rest that knows no waking; and then again, a glance will show us that there is not a moment to lose. The patient, with an old, shriveled, cold face, with scarcely perceptible respiration, and voiceless, will extend to us in mute supplication a cold, wet, pulseless hand, and with the other will indicate the seat of his trouble. Or he may be able to gasp, "You must do something to help me, quick." We have at our disposal three great agents: morphine, heat, and ammonia. We call for water, and set about getting ready a hypodermic injection of morphine. This will protect his nervous system from the deadly influence of the terrible pain, and may also be directly curative according to the theory of Balfour, which makes angina consist in a state of acute heart failure, brought about by the operation of two causes: first, the directly depressing effects of the pain—the most acute and severe the human frame can experience; and second, a condition termed sub-paralysis of the parts supplied by the motor nerves, whose sensitive roots are being thus pained. Balfour holds that this condition of sub-paralysis is the direct result of the pain, and is more or less intense, as the pain is more or less severe, and can only be

relieved by first neutralizing the pain, and that this can only be done by a pure anodyne or anæsthetic, and recommends chloroform or morphia. While we are getting this ready, we order hot mustard baths for the feet and arms, hot bottles to keep up the influence when the water is removed; we order brandy, and after quickening it with aqua ammonia, will literally pour it down.

The heat, the ammonia and the brandy will each act upon the circulation, the heat and the brandy by relaxing the spasm which exists in the arterioles, thereby greatly relieving the heart's labor, and the ammonia by stimulating the heart to just one more struggle, just one, and that for life. When there is time to write a prescription we can order equal parts of Hoffman's anodyne and aromatic spirits of ammonia, or equal parts of the ammonia and compound spirits of lavender, and from one of these mixtures will add a teaspoonful to each dose of brandy. It is also well to order tr. of glonoin, and to give, of that, 5 drops in a wine glass of water, or of sling, with order to repeat every four hours.

The attention of the profession was called to the action of nitro-glycerine in angina by William Murrell, M. R. C. P., in the *London Lancet*, of 1879. The writer gives the result of sundry experiments made upon himself, and upon his professional friends, which seem to establish the fact that nitro-glycerine has the same action as nitrite of amyl upon the capillary circulation, but that it differs from the amyl in that its action is much more prolonged; and that by repeating doses once in four to six hours, he could keep the circulation continuously under its peculiar influence. Upon the theory that vasomotor spasm exists as a factor of angina pectoris, a remedy which acts by relaxing this spasm suggests itself as being directly curative. All the cases I have seen published, go to show that when given in angina, nitro-glycerine acts uniformly and beneficially. I have given it in several cases of lead colic, and have found the high arterial tension peculiar to this condition to be

promptly relieved, and that with this improvement the pain and constipation also disappear. In angina pectoris my experience is limited to two cases, both old men, one of 82 and the other at 78 years. In both of these cases the attacks were of the greatest severity, and the glonoin was used in connection with the other remedies and expedients before advised. I could not, as Murrell seemed to do, keep off the attacks, but my patients both recovered, and from what seemed to be the brink of the grave. I am firmly persuaded that enough is known of the action of glonoin to warrant us to make use of it in angina and in other cases where high arterial tension appears as a factor.

It has been my practice to begin its administration with 5 gtt. every 4 or 6 hours. The usual solution is of one per cent., and is said to be perfectly safe to carry or handle in any way. Before concluding this subject, I wish to say a few words upon chronic angina pectoris. My impressions may have been quite fragmentary, and not at all representing the accredited belief of the profession upon the subject, but from what I have read and heard, it did not seem to me possible that there could be such a thing as chronic angina; nevertheless such cases exist. I do not mean to be understood that I supposed that a man always died from his first attack; but my impression was that a man was entirely free from angina between the severe attacks; that the attacks might come occasionally for years before the final one; but that when the seizure came, it was sharp, severe and abrupt in its onset, and the same in its departure. Now I know that a man can have angina every day for five years or more, and not lose a month's time from business during the whole period.

That is my idea of chronic angina. The man cannot climb stairs; nor walk more than one or two blocks; nor walk against the wind; nor black his boots; nor pull them off; nor get annoyed or angry. He cannot have acid stomach, nor a flatulent stomach, nor colon, nor any form of stomach indigestion, without causing classical angina, often so severe as to threaten life. Should I

have the privilege of surviving him, I hope to be able to present the heart of such a man to the Club, with the expectation of finding some permanent reason for such a continuous and unvarying clinical history.

Theoretically, we might suspect that the walls of this heart were seriously weakened by fatty disease or starved by narrowed coronaries, and it is certain that at no time has the man any but the poorest exhibition of heart power; and yet case after case in which the autopsy shows these conditions to exist, comes to the very last hour without a single symptom pointing to trouble with the heart.

Yesterday it was my privilege to witness the autopsy of a man who suffered for over eight years with well-marked angina. His life was seriously threatened in his first attack, but being a man of the persistent and minute correctness of habit, he continued to live in the constant shadow of death for so many years.

His final illness began about eight weeks ago with a most marked and severe attack of angina, during which, in the absence of his physician, I was called upon to attend him. It was in his case that the peculiar pain, coming first in the left wrist, was observed. Aside from this there was nothing noteworthy in the attack which yielded promptly to the treatment. I learned from his physician that the attacks of pain came to be more and more frequent, and towards the close of his life were well nigh constant.

What his treatment was, I did not learn. At the autopsy in the presence of Drs. Folwell and Barker, and other members of the profession, the accompanying specimens were obtained. The heart was thought to be decidedly hypertrophied, and upon the right side distinctly fatty. The coronary arteries which you here see, are universally atherosed and decidedly narrowed. The valves were nearly normal, as was the aorta, and there were no other evidences of arterial disease found.

But a few years since some of us attended an autopsy of a man in the same walk in life as the subject of yesterday's exam-

nation, and of about the same age, who had complained for a few days of dyspepsia, but had not been sufficiently ill to call a physician, and who literally dropped dead instantly. I remember the case distinctly, partly from the fact that the two men lived as near neighbors in the same block. The revelations of the autopsies were almost identical, and yet nothing could be more unlike than their clinical histories. How shall we construe these seemingly discordant facts? To my mind the lesson is this: In cases of angina pectoris, not plainly hysterical, we are to conclude that the ventricular walls are seriously weakened from scanty or faulty blood supply. That in the presence of such conditions great care may prolong the life to its full term, or that death may occur at any time with scarcely a moment's warning. Surely we should have no ordinary interest in a disease where there is so much at stake, and so much to be gained by a wise and timely exhibition of the resources of our art.

ACUTE PSOITIS.*

By Herman Mynter, M. D.

Acute inflammation of the psoas muscle is a rare affection, and the literature of the subject is very scarce—so scarce that a great many writers ignore its existence. With the exception of a few short articles in “Ziemssen’s Encyclopædia,” “Bilroth and Pitha’s Surgery,” “Smidt’s Jahresbericht and Half-yearly Compendium of Medical Science,” I have been unable to find any notice of this disease, even in our largest surgical works. I myself have had the opportunity of seeing and treating two such cases, and I therefore take the liberty of presenting the subject for your deliberation, leaving out of consideration the common form of psoas abscess, originating in caries of the spine or pelvis, and taking a chronic course.

Etiology.—The inflammation, it is stated, may be caused by embolism and metastasis, may extend from the neighboring soft

*Read before the Buffalo Medical Club.

parts, from inflammatory processes in the pelvic viscera or the areolar tissue around them.* I doubt whether this statement is wholly correct. The ileo-psoas muscle is so well protected by the strong iliac fascia, that inflammation, originating in the pelvic viscera, will not be apt to take this course, especially as the great amount of loose connective tissue between the pelvic viscera and the peritoneal covering will favor the extension of the inflammation in other directions. More rarely, as I intend to consider in this paper, acute psoitis occurs as an independent disease as the result of violent exertion, straining (during parturition), or direct contusion. Finally it may occur "without any discoverable cause, and is then viewed as rheumatic or due to chill."† The disease is found relatively often in childhood.‡ During 18 years, 29 cases were observed in Vienna, in Franz Joseph's Hospital for Children, among 14,000 cases. The primary acute form is the result in children exclusively of injuries; more boys than girls are affected, and older children oftener than younger ones, as they are more exposed to injuries. The disease is generally only on one side, exceptionally on both, and is often first discovered by post-mortem examination.

Dr. Neureutter does not give any statistics about the number of recoveries of these 29 cases, nor about the pathological condition at the post-mortem examinations, but he mentions one case in a boy, 11 years of age, who as the result of a fall developed a traumatic psoitis as a complication in an interstitial hepatitis. The patient died, and at the post-mortem the abscess was demonstrated in the psoas muscle. Another case, with report of the post-mortem, is reported in *Fahruebuecher fuer Kinderheilkunde*, by Dr. Wittman.§ It occurred at the hospital for children, at Pesth, and as proof of its extreme rarity the doctor mentions that he in the literature can find only three similar cases, reported by Bokai in *Oestreichische Zeitschrift fuer Kinderheilkunde*. Wittman's case

* Ziemssen's Encyclopædia, vol. xvi, p. 96.

† Ibidem.

‡ Dr. Th. Neureutter in Smidt's Jahrbücher, 1878.

§ Smidt's Jahrbücher, 1875.

was that of a boy, 8 years of age, who had injured himself by a mistep during gymnastic exercises. On examination he found high fever, insomnolence, somnolence, great pain in right lumbar and iliac region, and especially at the insertion of the psoas muscle at the thigh. The leg was fixed and adducted (?). Swelling and redness occurred later in the inguinal region, but without fluctuation.

The patient succumbed to a pneumonia, and at the post-mortem the psoas muscle was found infiltrated with fluid, yellowish green matter, as was the connective tissue which covered the psoas and iliacus muscle. Some small pus cavities were found in the adductor muscles.

Of Bokai's three cases, one died and two recovered—one after the formation of an abscess on the thigh, the other almost without suppuration.

That inflammation can occur in muscular tissue is recognized, and especially as the result of some strain or partial rupture. Bryant states that it is not seldom seen in the rectus abdominis as well as in the psoas muscle as a result of injury; "Indeed, as a cause of psoas abscess, I believe injury to be more common than spinal disease." Neither is it to be wondered at that this affection is found especially in the psoas muscle, when we consider that by its size and function this muscle is particularly exposed to strains and injuries, more so than any other muscle in the body.

Symptoms.—The disease commences with fever and severe pain in the lumbar region, sometimes after a period of some weeks after the injury, during which time there have been only indistinct symptoms. The pain soon extends downwards to the thigh. Fever and pain may last for weeks and the diagnosis be doubtful, till the peculiar position of the corresponding leg clears up the doubt. Since active contraction of the inflamed muscle is as painful as passive extension, the patient relaxes it as much as possible, and consequently flexes the thigh and rotates it outwards.

We often find spasmodic rigidity of the affected muscles, due to reflex irritation of sensory nerve ends, or to direct irritation of the motor fibres of the muscular tissue itself.* When the abnormal position is maintained for some time, shortening of the muscles may take place. Pressure in the iliac region along the psoas muscle is extremely painful, as is pressure in the lumbar region. By deep palpation we will, generally, in course of time, be able to feel an obscure swelling of oblong form, and sometimes we may detect fluctuation.

The exudation takes place either in the muscle itself, which then may be perfectly destroyed, and parts of muscular tissue be found mixed with the matter, or on the surface of the muscle beneath the iliac fascia. Pitha says that in this case a fluctuating abscess will quickly appear in the abdominal wall above Poupart's ligament. At last the matter rushes down on the thigh, and, according to Shaw, invariably on one place, behind Poupart's ligament, and between the united tendons of the iliacus internus and the psoas muscle and anterior inferior spinous process of the ilium. The situation corresponds with the junction of the outer with the middle third of Poupart's ligament.† As the abscess escapes from the abdomen, it becomes released from compression and enlarges in Scarpa's triangle. It then, if left to itself, generally passes downwards and inwards along the sartorius muscle. Sometimes it turns inwards over the adductor muscles, rarely outwards. Occasionally it divides in the groin, one portion going inwardly, another outwardly.

The opening between the abdominal and femoral portion is necessarily always on the outer side of the femoral vessels, but once arrived on the thigh, the abscess occupies in different cases different relations to the femoral vessels. In one case it may be in front, in another on the outer side, on the inner side, on both sides and in front, behind and lifting up the femoral vessels, so that their pulsation may be felt immediately beneath the super-

* Ziemssens' Encycl., vol. xvi., p. 97.

† Halfyearly Compendium of Medical Science, January, 1875.

ficial covering and simulate an aneurism, as it occurred to Dupuytren.

Occasionally the abscess may, as is stated in Ziemssen, take another course and open above the crest of the ilium, into the pleura, pass out through incisura ischiatica, or forward between fascia and musculus transversalis, open into the rectum, vagina, etc., etc., but the regular course is the one described. The fever is, according to Ziemssen, always present from the outset, is not of any regular type except when matter has formed, when it takes the type of suppurative and pyæmic fever. The pain in the muscle is often associated with pains in the course of the nerves, which perforate the psoas, ileo-hypogastrica, ileo-inguinal, genito-crural and external cutaneous. The abscess may remain circumscribed and finally lead to cicatrization, or the pus may become inspissated and enclosed in a capsule, but it will be very exceptionally.

The prognosis is doubtful, but at any rate more favorable than the chronic form of psoas abscess. If of metastatic nature, the result is always death, but if the result of injury, or of rheumatic nature, and discovered in time, the prognosis must be considered favorable. In regard to diagnosis, little need to be said. The acute attack with continuous fever, the local tenderness in the lumbar and iliac region, the obscure swelling, corresponding to the psoas muscle, the characteristic position of the limb, the symptoms on the part of the nerves, ought to insure a correct diagnosis after some time has passed. Inflammation of the hip-joint may be excluded by the lack of pain and change of form of the posterior part of the hip, and by the previous history. Aneurism and femoral hernia are mentioned in larger surgical works in regard to the diagnosis of the chronic psoas abscess. I doubt if these could ever be confounded with an acute abscess. Inflammations of the pelvic viscera may be excluded by vaginal examination and by their more superficial position. In one of my cases a swelling was felt over the rim of the pelvis, corresponding to the median margin of the psoas. The treat-

ment is purely surgical, and as soon as possible the operation ought to be performed. Till that point arrives, the disease should be treated on general surgical principles.

This operation consists in introducing an aspirator needle into the psoas muscle, commencing in Scarpa's triangle below Poupart's ligament, and then, bringing the needle in a horizontal position, letting it follow the course of the muscle upward, inward and backward, till the matter is found. A free incision must then be made with the needle as a guide, drainage tube introduced, and the cavity treated in the usual way. Allow me, finally, to report two cases I have seen during the last year.

Case I. Mrs. D., 54 years of age, a healthy German widow, who lived under very favorable circumstances, was seen by Dr. Shade, on April 12th, 1880. Six weeks previously she had an attack of acute gastritis with vomiting, diarrhoea and fever, from which she recovered perfectly. She complained then, without any known cause, of deep-seated pain of neuralgic character in the left lumbar region, extending downwards to the thigh. Pulse, 104; temperature, 101½.

By objective examination nothing particular was discovered, except that deep palpation in left lumbar region was very painful. A mixture of aconite and morphia in a saturated solution of citrate of potash was ordered, and a hot poultice applied, and the symptoms became thereafter less prominent, while a moderate fever continued.

April 26th. A slight swelling was noticed in left lumbar region by deep palpation, and very painful for pressure.

May 1st. The swelling and deep-seated pain extend downward and are most noticeable in the iliac region. Her leg was kept flexed in the hip-joint and rotated outward. Extension was impossible on account of pain. The patient was sleepless and restless, no appetite, continuous fever (about 102), increasing weakness, feeling of numbness of left femur. These symptoms continued and gradually increased, while the strength decreased in spite of quinine, tonics and appropriate nourishment.

May 6th. I saw the patient in consultation with Dr. Shade. She was very emaciated, temperature 102, pulse 108. Left leg extremely flexed and rotated outwards, and could not be extended, while slight flexion was possible without pain. Slight movements of the hip-joint and pressure on trochanter major, the knee and posterior part of the joint not painful. In left iliac region a deep-seated swelling was felt, very painful on pressure; fluctuation could not be discovered. Nothing abnormal in Scarpa's triangle. By vaginal examination the uterus and its appendages were felt in a normal state. The case was considered an acute psoas abscess, and the treatment continued for a few days to let the symptoms develop.

May 8th. A diffuse fluctuating swelling appeared below Poupart's ligament outside the femoral vessels. Under chloroform, Drs. Shade and Granger being present, an incision was made and about $\frac{1}{2}$ pint of good and laudable pus evacuated. The finger could then be introduced high up behind Poupart's ligament and made to explore a large pus cavity in the psoas muscle. The inner opening was enlarged, a drainage tube introduced, the cavity syringed out with carbolized water, and antiseptic dressing applied. The farther course was favorable. The fever disappeared, the appetite returned, and in the course of 14 days the drainage tube was removed, and in a week more the wound was healed. The contraction of the muscles gradually disappeared, and the patient has since been perfectly well.

Case 2. Mrs. T.; 28 years of age; was confined with her fifth child December 1st, 1880. The delivery was easy, a midwife being in attendance. Four days after her confinement there was slight pain in the right lumbar region, which grew less in a few days without any treatment, but soon returned again. Sixteen days after her confinement, Dr. Hebenstreit was called in, and found the patient sick in bed, complaining of deep-seated pain in right lumbar and iliac region, with more or less superficial tenderness. Temp. 102, pulse, 108. Local application of warm aromatic lotions and internal administration of anodynes again made the

symptoms disappear in a few days, and the patient was discharged until further notice. Dr. Hebenstreit was called in again January 3d, 1881, and found the former symptoms aggravated, the patient sleepless and restless, continual deep-seated, throbbing pain in the right lumbar and iliac region, with intense tenderness of the abdominal wall. Temp. 103, pulse 108. The right leg slightly contracted and rotated outwards, could not be fully extended. From now till January 22d, when I saw the patient in consultation with Dr. Hebenstreit, the condition slowly but gradually grew worse. Pain was excessive, lancinating downward to the knee, and required large amount of morphia. The muscles contracted more and more, the limb was now bent in an acute angle in the hip-joint and rotated outwards. A deep-seated swelling could be felt in the lumbar region, extending downwards into the iliac region. Fever had been continuous, with morning remissions, ranging between 102 and 104. Fluctuation could not be felt, and the tenderness was so extreme that no perfect examination could be performed without anæsthesia. Examination of vagina showed the uterus and its appendages free from soreness, and in a normal state.

Over the rim of the pelvis, on the right side, a local tenderness, corresponding to the psoas muscle. The diagnosis being considered acute psoas abscess, operation was decided upon and attempted January 24, 1881, in the presence of Drs. Tobie, Dayton, Hauenstein and Hebenstreit. A small-sized but long trocar was introduced vertically below Paupart's ligament, in the outer part of Scarpa's triangle, and having perforated the fascia lata, the trocar was brought in a horizontal position, and carried into the psoas muscle upwards, inwards and backwards behind Paupart's ligament, a distance of about four inches. By removing the needle, healthy matter flowed out, showing the correctness of the diagnosis.

A transverse incision was now made below Paupart's ligament through fascia lata, and with the trocar as guide, a large opening was made and the finger introduced into the pus cavity. About

one pint of healthy matter was evacuated. A drainage tube was introduced 12 inches, the cavity washed out with warm carbolized water, and antiseptic dressing applied. The fever disappeared immediately and the patient gained ground daily.

February 11th. A severe chill occurred to-day with high temperature (105), after the patient, for a couple of days, had been left to the tender care of her mother. By perfectly cleaning the cavity, the fever disappeared in a few days.

February 15th. Drainage tube removed on account of pressure on crural nerve, and a smaller one introduced. The cavity measures still 12 inches.

The patient continued to improve, and was discharged cured three weeks later.

The contraction of the hip-joint gradually disappeared, and the patient has since been well.

ON THE USE OF THE "RADIOMETER" IN TESTING THE VISION.

By Lucien Howe, M. D.

With a view to greater accuracy in our observations, it has occurred to me an improvement might be made in the manner of recording the vision of our patients. It is true that Snellen, Jaeger, Greene, and others, have furnished excellent tests in the form of types, but as yet we have no standard by which to measure the amount of light to be admitted upon them at the time of making our observations. We naturally understand that these test letters are to be viewed under such illumination as render them distinguishable at a given distance.

In this case we say the light is "sufficient," or "good," or "fair," and we express the vision by means of a fraction, the numerator of which represents the distance in feet at which the letters are placed, and the denominator shows which set of letters is seen. Thus $V = \frac{20}{60}$, means that at twenty feet (a distance from which rays enter the eye practically parallel) the patient sees type No. 20, and the size of this set of letters is

such as to subtend only the angle of minimum vision, or, in other words, they are the smallest that can be seen at that distance by the normal eye. Such a formula, therefore, expresses perfect vision. Or, $V = \frac{20}{30}$, $V = \frac{20}{40}$, means that at 20 feet, only a type is seen which *should* be visible at 30 or at 40 feet. This formula is fully explained in every text book on diseases of the eye, and is too well known to require more than simple mention here.

Not always, however, is there a perfect eye at hand for purposes of comparison, and the employment of any indefinite and varying method is, to say the least, inexact and unscientific. For instance, the vision of a patient may be recorded as $\frac{20}{20}$ on a bright day, when the types are hung in the full glare of sunlight, whereas in diffused light it may be $\frac{20}{30}$, or with the questionably perfect illumination of a rainy day it may reach only $\frac{20}{40}$.

It seemed to me, therefore, that it would greatly aid the correctness of such observations if they were always made under the same conditions, and if we had some convenient photometer which would readily indicate some illumination which might be agreed upon as a standard. Such an instrument has been devised by the English physicist, Professor Crookes, and called by him a radiometer. It will be remembered that in the main it consists of two fine wires crossing each other at right angles, and bearing at the extremities pith disks, one side of which is blackened, and the reverse covered with tin foil. At the intersection of these wires they are balanced upon a needle point, and the whole is enclosed in a glass bulb, some two inches in diameter, from which bulb the air is exhausted. Now, when the light falls upon these disks, it causes them to revolve about the needle point with a rapidity which is practically proportional to its intensity, thus giving us a photometer. There is still much doubt as to whether it revolves from the action of those waves of motion which we call light, or by virtue of those also to which we give the name of electricity; but practically, for our purpose, this makes but little difference. It

is true, also, that every radiometer revolves at a rate peculiar to itself under a given illumination, but we have the standard of direct sunlight with which to test each instrument and make our record accordingly.

For instance, the one I have been accustomed to use, makes about twenty revolutions per minute, when exposed to direct sunlight. If, however, it is under such an illumination as may justly be termed "good" or "fair," it revolves much more slowly. In observing a patient's vision, therefore, I regulate the amount of light, making it more on a dark, cloudy day, and lessening its intensity on a clear one to such a degree that the radiometer will make a certain number, say five, revolutions in a minute. When the same patient is seen again, I am able to judge precisely as to improvement or other changes, however slight they may be, which have taken place, and to be certain that the conclusions drawn are absolutely correct. During the short time that I have employed this method of observing the vision, it has proved so simple, so exact, and in general so satisfactory, as to seem worthy of mention.

Clinical Reports.

CLINICS AT THE BUFFALO GENERAL HOSPITAL
BY PROFESSOR ROCHESTER.

Reported by Dr. C. C. Fredericks.

Case 1. E. P., æt. 34, married, and by occupation an iron moulder, entered the hospital Aug. 30, 1881. Patient said that he had been sick for six months, beginning with intermittent fever, which was persistent, and even since recovery from it, had had great pain over the region of the liver and stomach. Appetite was poor, was constipated, had failed rapidly in strength and was considerably emaciated. Examination showed the liver to be enlarged, the area of dullness extending from the nipple to about two inches above the crest of the ilium. He had

always been temperate. Pressure over the liver produced pain. Heart and lungs were found to be normal, and an examination of the urine detected nothing unusual. The evacuations from the bowels, although constipated, were otherwise natural. The pulse rose from 80 to 100, and at night the temperature ran from 100° to 102°; no chills during either day or night. Patient was given tonic treatment, rest and counter-irritation, with warm applications over the affected side, and a mild laxative daily. He remained about the same till Sept. 15, when he began to have irregular and severe chills associated with excruciating pain just beneath the ribs. This pain was so severe that large doses of morphine by the mouth (gr. $\frac{1}{2}$ -1) would not control it. Morphine (gr. $\frac{1}{2}$) hypodermically, would give relief for a short time. The temperature then ranged from 102° to 105° at night. On Sept. 20, chills were less frequent, and on Sept. 25 the patient was improving. By Oct. 1 he was again sitting up, ate quite well, had no more chills, temperature was only slightly above normal; still he had a dull heavy pain under the ribs on right side. On Oct. 15, chills and great pain again returned. Examination of the chest showed the area of dullness to extend about two inches above the nipple. Examination from time to time showed this area extending still higher. Effusion into the plura being suspected, a hypodermic needle was thrust through the chest wall posteriorly, reaching no fluid. This was repeated several times, with the same result. The case was diagnosed as hepatic abscess, but as no fluctuation could be determined, it was thought to be multiple abscess. Oct. 19, Dr. Rochester saw the patient at his clinic, and after careful examination thought the case abscess of the liver, but could not determine the existence of a distinct pus cavity. The case grew worse, with anasarca of the lower extremities, followed by that of the whole body. Nov. 9th the patient died. The autopsy was made the same day before the medical class.

The attention of the students was especially directed to the position of the abscess, occupying as it did the upper part of the

liver and extending far upwards into the cavity usually filled by lung tissue. In this respect especially was the case rare and interesting. The causes of such abscesses were also considered at some length, being due to a local inflammation of obscure nature, to the presence of stones in the ducts of the liver or to echinococci.

On laying open the chest and abdomen, the liver was found to extend from the second rib to the crest of the ilium, thus occupying nearly all the right side of the trunk. Its outer surface at points was covered with inflammatory lymph. The diaphragm had been pushed before the ascending liver, thus nearly obliterating the right chest and lung. The whole liver was hypertrophied, but the greatest enlargement was from the superior curved surface of the right lobe, in the form of an abscess, which stood like a dome, its base about eight inches broad, and arching to the lower border of the second rib. The whole organ when removed weighed $16\frac{3}{4}$ lbs. The abscess was punctured and evacuated, and the liver then weighed $6\frac{1}{4}$ lbs., making the weight of the contained pus $10\frac{1}{2}$ lbs. No other abscesses were found, hence the reason why fluctuation could not be detected, the abscess being entirely beneath the ribs. No other organs were found diseased. Dr. Rochester said that this man might have been relieved temporarily, had the exact location of this abscess been determined and its contents evacuated, but he thought nothing would have given him any chance of restoration to health.

Case 2. G. R., æt. 50, single, a laborer, entered the hospital Nov. 19th, 1881, very feeble. Gave a meagre history, saying he had been sick only two weeks, and had great pain in his right side. Coughed constantly, raising large quantities of purulent matter; pulse was feeble, 120 to 140 per minute; temperature, 102° to 104° . On examination, the heart's apex was found between the sixth and seventh ribs to the left of a line perpendicular through the nipple. Percussion over the right chest gave dullness in the upper part, flatness below, dullness over the

whole left chest. Auscultation gave mucous rales over left lung and upon lobe of right, and very weak respiratory murmur, if any, over lower lobes of right. The patient was moribund and died the next evening. The autopsy was held before the medical class, Nov. 23d. On opening the chest, the right side was found to contain about two quarts of purulent fluid, the lower lobe of the right lung was hepaticized and bound to the costal and diaphragmatic pleura by a thick, false membrane of recent formation. Throughout both lungs, there was an abundant deposit of tubercle undergoing softening in spots, a cavity the size of a small egg being found in the middle of the right lobe, and several smaller ones in the upper lobe.

This then was a case of tuberculosis, pluro-pneumonia and empyema. Dr. Rochester thought the tuberculosis the primary, and the others only secondary, remarking that any case of tuberculosis is liable to such complications, and that they would occur more frequently were it not for the conservatism shown by nature in causing the opposing pleural surfaces to unite opposite to a cavity, and thus preventing the rupture of the cavity into the plura and the consequent pneumo-hydrothorax succeeding to such conditions.

PELVIC VERSION; REPORT OF CASES, WITH REMARKS.

By Chas. C. F. Gay, M. D.

CASE I.—SHOULDER PRESENTATION; VERSION.

Mrs. H., æt. 28 years; American; multipara; third pregnancy; former labors natural; patient in charge of Dr. Gould, and in labor twelve hours. Membranes had ruptured with escape of water some time prior to my visit. Pains were feeble; chloroform was given, when I passed up my right hand and brought down one foot. By making considerable traction, in fifteen minutes the woman was delivered of a still-born female child. Mother recovered.

CASE II.—VERTEX PRESENTATION; VERSION.

Mrs. ——; Irish; multipara; sixth labor, all difficult and still-births; vertex presented; Drs. Diehl and Wetmore in attendance. Forceps had been used and craniotomy attempted; labor had lasted several hours. I passed up my left hand, seized a foot, but could not withdraw either the foot or my closed hand clasped around the child's leg, until my hand was opened; applied blunt hook above the child's heel, drew down the foot, effected version, and delivered the head by using great force. Child had been dead at least two or three hours. There were hour-glass contractions, and the conjugate diameter judged to be less than three inches. Chloroform employed. Recovery of the patient.

CASE III.—SHOULDER PRESENTATION; VERSION.

Mrs. ——; English; multipara; sixth labor; Dr. J. C. Green called me to this case; in labor several hours. Membrane had been ruptured spontaneously, and waters had escaped. Under chloroform I turned with considerable difficulty; much more indeed than would have been experienced had the membranes remained intact. Brought down one foot and delivered the woman of a still-born child. Mother had a good recovery.

CASE IV.—VERTEX PRESENTATION; PROLAPSE OF CORD; VERSION.

Mrs. M.; German; æt. 32 years; sixth labor; Dr. Diehl in attendance; woman in labor all day, and at first attended by a midwife. Pains had ceased at evening; large portion of cord was prolapsed. Placed patient in knee and elbow position, and repositioned the cord, which would not so remain on account of absence of pains. Forceps applied without effecting delivery. Under chloroform, with my right hand one foot was reached and then the other. The body of the child still-born, delivered, and the case given to Dr. Diehl to complete. There was much hemorrhage; patient recovered.

CASE V.—PARTIAL VERTEX PRESENTATION, WITH RIGHT HAND PROTRUDING, A LITTLE IN ADVANCE OF HEAD; VERSION AFTER FAILURE WITH FORCEPS.

Mrs. ———; German, æt. about 32 years; fourth labor; in charge of Dr. Diehl; midwife had been in attendance several hours; waters had escaped; forceps applied, but strong traction during pain was of no avail. I passed up my right hand, brought down one foot, turned and delivered the woman of a dead male child. Mother recovered without a bad symptom.

CASE VI.—RIGHT HAND AND CORD PRESENTING; VERSION.

Patient æt. 40 years; in her sixth labor; in charge of Dr. Gould; had been in labor only three hours; membranes ruptured and cord prolapsed. Under an anæsthetic I introduced my right hand, brought down one foot and delivered this woman of a dead boy. Mother recovered without any untoward symptom.

CASE VII.—TRANSVERSE PRESENTATION; VERSION.

Mrs. A.; æt. 32 years; fifth labor; cross presentation; has been in labor about eighteen hours; pains have now ceased; patient in care of Dr. Folwell. Under chloroform I passed my right hand into the uterine cavity; seized one foot and brought it down; delivered both lower limbs, then turned the case over to the doctor for completion of labor. There was much hemorrhage; both mother and child lived.

CASE VIII.—TWINS; FIRST CHILD DELIVERED ALIVE NATURALLY; HAND PRESENTATION OF SECOND CHILD; VERSION.

Mrs. W.; æt. 26 years; primipara; in charge of Dr. Damback; had been in labor during the entire night; a living child had been delivered; pains had ceased and waters discharged. On examination I found a right hand presenting, and ascertained that the child was dead. Under chloroform I turned, by drawing first one foot down and then the other, but not without much difficulty and effort. The delivery of a double placenta soon followed. The patient made a good recovery.

REMARKS.

These cases are arranged chronologically. Death of the fœtus, in two of the cases, was ascertained before any attempt was made at version. In one case only was there a living child delivered. Five versions out of eight cases resulted in the death of the fœtus, which gives sixty-two per cent. of fatal cases as the result of pelvic version. It appears, therefore, that while pelvic version inflicts no harm upon the mother, it is quite destructive to the child, and leads one to cast about for some method which shall be equally safe for both mother and child.

It was Celsus who recommended extraction of the fœtus by the pelvic extremity, but only after the fœtus had ceased to live. This precept prevailed until the time of Ambrose Paré. He was the first to suggest pelvic version on the living fœtus (Chailly). I do not presume to offer any suggestion or new method as an improvement of the old, for the safe delivery of the fœtus in cases requiring version, but I wish in this connection to direct attention to a method recommended by Dr. E. R. Maxon*, an account of which was published in the year 1867, and which at the time it was made public, obtained the endorsement of the late Sir James Y. Simpson. Maxon's plan consists in a change as he says, from an "abnormal into a perfectly natural presentation, without risk to mother or child, by placing the mother on her knees for from three to five minutes, on pillows of folded quilts, with the head and shoulders low, as suggested by Thomas, to return a prolapsed cord."

If this plan be feasible, I trust it may have trial. Although my attention was directed to it some years since, I must confess that when called to the bedside of the parturient woman, that Maxon's method has escaped my memory, but now, since again reverting to it, I shall put the plan into execution and test its merits at the first opportunity.

* *Medical Record*, N. Y., p. 661, vol. x, 1875.

CASE OF FORCED TWIN LABOR AT SEVEN MONTHS.

Dr. L. E. Ellis.

Mrs. C., age 34, of German birth, called me in on the morning of October 12, at 12.15 A. M., and I found her in labor and with a severe chill. She said the waters had broken at 12 o'clock, and the bed and her clothing were completely wet through; said about a month before she had flowed considerably, the discharge being about half water and half blood, but she thought nothing of it, and kept at work saying nothing to any one until the day before she called me. As she was cleaning the house, and standing upon a chair, reaching up to clean the doors and windows, she noticed she "flowed" so as to be wet through. She then told her husband, who advised her to stop work and lie down, which was done. She had some light pains, but they all passed away in an hour or two, and she resumed work. In the evening she felt quite weak again, but soon went to sleep, being often awakened on account of fullness in the abdomen. This interfered with her at intervals, after which it lessened somewhat, and she again fell asleep. She had been somewhat similarly affected throughout this pregnancy.

I made an examination, and found the os well dilated and soft, and the head descending into the pelvis, but since the waters had escaped, she had felt no pains. At this time I gave her a drachm of ergot-Squibbs, Fl. extract, and after waiting fifteen minutes gave a drachm more, made friction over the womb, dilated the os with my hand, and still there was no pain. I therefore gave more ergot and waited further developments until six A. M., when I called counsel. This physician made an examination and advised the repetition of the ergot and dilation of the os, and still there was no pain. I now made pressure over the womb and the child descended without any trouble and was delivered. We waited a short time to see if she would not have pains to deliver the second, but as none occurred we made pressure in the same manner, and the second was born dead. The first was alive, but very weak, and only lived thirty-six hours. This one weighed four pounds, the second one, three and one-half pounds.

Translations.

CRITICAL REVIEW OF HOFMEIER: UPON THE VALUE OF PROPHYLACTIC IRRIGATION OF THE UTERUS IMMEDIATELY AFTER DELIVERY.

MAX RUNGE: OF OBSERVATIONS UPON AN EPIDEMIC OF PUERPERAL FEVER AT THE OBSTETRICAL CLINIC OF THE CHARITY HOSPITAL. H. FEHLING: UPON THE PRACTICAL VALUE AND THE METHOD OF DISINFECTING IN OBSTETRICAL PRACTICE, AND BREISKY: UPON LOCAL INTRA-UTERINE TREATMENT OF PUERPERAL FEVER.

From the German by P. W. Van Peyma, M. D.

An active revival has occurred of the question of intra-uterine treatment immediately after birth, or during the parturient condition. Upon the meritorious pamphlet of Fitsch there followed, as is well known, a list of enthusiastic reports that placed the local intra-uterine treatment in the most favorable and least dangerous light. On the other hand, warning voices have in more recent times been raised that cautioned us against its too general use, and showed the indisputable objections, as developed in practice. This change of opinion must be looked at as an advance. Uterine irrigation has now passed into the hands of the general practitioner. These one-sided reports, according to which irrigation was possessed of great advantages, and was entirely harmless, are at fault in that they were indiscriminately and wrongly employed. Being used after every normal birth, in the slightest aberrations of the parturient condition, in cases of discolored lochia, they often did more harm than good. The practitioner felt no blame in these occasional ill results; on the contrary, he with right fell back upon these publications of the larger institutions in which irrigations were extolled as harmless, as important prophylactic, and as curative in puerperal fever. He thought he would have been inexcusable had he not made use of this means.

Soon, however, as well as later, attention was called to serious accidents and even deaths immediately after irrigation.

However, as these cases were not very numerous, they were attributed not to any inherent dangers, but to the faulty method employed. And it is only the later observations of Hofmeier, Runge, Fehling and Breisky that have placed the objections to intra-uterine treatment in their true light, and have limited its scope of applicability.

Hofmeier, in reviewing the prophylactic intra-uterine irrigation as practiced in Schweder's clinic, has pointed out that the health standard is lowered. Of 260 normally delivered women who were immediately subjected to irrigation, 16.1 per cent. became sick, while of 240 not thus treated only 8 per cent. suffered illness. In consequence of this showing, Hofmeier has laid aside all prophylactic intra-uterine irrigation after normal deliveries. Only in cases where morbid processes are occurring in the post-partum uterus, is the cavity of the uterus disinfected with a 5 per-cent. solution of carbolic acid.

Runge has shown in Gusseron's clinic that post-partum prophylactic uterine irrigations, which were employed experimentally in the beginning of a so-called puerperal fever epidemic, in reality promoted the spread of the septic poison. This consideration is of importance to the practitioner, for the reason that if the practice should become common, the same physician would often be constrained both to attend the patients and to perform the irrigation. Only where septic processes are taking place in the uterus does Runge allow irrigation. According to this principle, 1,500 cases were treated and only 39 died from septic poisoning.

Fehling, also, in his small and readable treatise, warns against too meddlesome treatment of the parturient. He also has had unsatisfactory experience with intra-uterine irrigations at the Stuttgart Hospital, and on this account has entirely discontinued them.

Breisky is very critical. He throws aside especially regular uterine irrigation and drainage, as he has observed threatening symptoms and spread of the infecting material, as a result of their employment. As the preferable form, he endorses the

continuous irrigation of Schweder, which results in the washing away of the secretions and in a diminution of the temperature. In proof whereof he reports fifteen cases. In all these cases a special assistant, who was not allowed to attend in delivery, was entrusted with the operation. This fact, to say nothing of its inherent want of practicability, would exclude it from general private practice. In consequence of his experience he has done away with all uterine and vaginal irrigation, except where special morbid processes demand it. In normal cases he agrees with Spiegeberg that non-interference is the preferable course. Neither has Breisky been able to convince himself that the mortality of puerperal fever can in any great measure be lessened by a particularly active and regular prophylactic injection of the internal genital organs.

Selections.

NOTE ON THE RELATIONS BETWEEN SYPHILIS AND LOCOMOTOR ATAXY.

By Julius Althaus, M. D., M. R. C. P.

The question whether syphilis should be looked upon as a frequent, or indeed the principal, cause of locomotor ataxy, has recently been much discussed, most of the French and English observers being strongly in favor of this view, while our German *confreres* have expressed the contrary opinion. I therefore wish to add some of my own experience in the etiology of ataxy to the facts already published, and have with this view analyzed a thousand consecutive cases of nervous affections which have been under my care in private practice, with the object of discovering the part which syphilis has played in their causation. Amongst these thousand cases there were—206 of epilepsy; 101 of neurasthenia, or nervous exhaustion, without evidence of substantial lesions of the nervous system; 77 of hemiplegia owing to cerebral hæmorrhage or softening; 51 of neuralgia;

and 32 cases of ataxy with fully developed symptoms; the remainder of the cases being such as hysteria, infantile paralysis local paralysis, muscular atrophy, anæsthesia, chorea, tumor of the brain, impotency, paralysis agitans, torticollis, etc. In 29 out of 32 cases of ataxy there was a syphilitic history; and in these 29, secondary symptoms had occurred in 28, while in one of them there had been a soft chancre and a bubo, but no secondaries.

These results are certainly startling, as they show a percentage of 90.6 in favor of the syphilitic origin of tabes dorsalis, which is higher than that found by Gowers (70) and Erb (67.) They become even more striking on being compared with the percentages found for the other nervous affections, inasmuch as of 206 cases of epilepsy only 10, of 101 cases of neurasthenia only 12, of 77 cases of hemiplegia 5, and of 51 cases of neuralgia only 2, had been preceded by syphilis. The percentages are therefore as follows:

| | | |
|-----------------------------------|------|-----------|
| Ataxy was preceded by syphilis in | 90.6 | per cent. |
| Neurasthenia | 11.8 | " " |
| Hemiplegia | 6.2 | " " |
| Epilepsy | 4.8 | " " |
| Neuralgia | 3.9 | " " |

There were 6 additional cases in which paralysis of the ocular muscles, shooting pains, and sexual debility rendered it probable that sclerosis was developing in the posterior columns of the cord, and in 4 of these there were syphilitic antecedents. These cases, however, were lost sight of before the symptoms had become unequivocal; and, as they all occurred some time before the loss of the patellar tendon-reflex was utilized for the diagnosis of this disease, I think it better to exclude them. Yet it is a significant fact that in 4 out of these 6 doubtful cases syphilis should have previously occurred, giving a percentage of 66.6. If we were to add them to the fully developed cases, the percentage of the whole would amount to 86.8.

With regard to the interval which had elapsed between the first symptoms of syphilis and of tabes, it was found that the former had preceded the latter upwards of twenty years in 2 cases, between ten and twenty years in 7 cases, between two and ten years in 19 cases, and eighteen months in 1 case. Amongst the 3 cases in which there was no history of syphilis, the affection was attributed in one to an operation for piles, in another to an accident in a tramcar, and in a third to exposure to wet and cold. The age at which ataxy became developed was from twenty-one to forty-five, and all the patients were males. It is to this latter circumstance that I attribute the higher percentage of syphilitic antecedents in my cases, as ataxy in women is generally not preceded by syphilis. In all my cases, one or another of the ordinary causes of ataxy, such as accidents, over-exertion, combined with the influence of wet and cold, and sexual or alcoholic excesses, were mentioned as having led to the outbreak of the complaint.

An overwhelming numerical testimony is thus clearly exhibited in favor of the view that tabes is habitually preceded—I do not say produced—by syphilis. But the real question at issue is whether syphilis is the originator of ataxy, or merely an accidental concomitant of it. The length of time which had generally intervened between the outbreak of the two diseases does not speak against their standing in the relation of cause and effect. Sir Benjamin Brodie met with an accident while riding on horseback in 1834, dislocating his right shoulder, and he eventually died of cancer which had become developed in the same joint in September, 1862, which gives an interval of twenty-eight years between the injury and the consecutive disease. It would not be difficult to multiply such examples. Other considerations, however, serve to show that ataxy is a disease, *per se*, which occurs without any syphilitic taint whatever, but which may, like so many other disease, be imitated by syphilis under certain circumstances.

1st. Tabes has unquestionably existed in Europe long before the first appearance of syphilis in this quarter of the globe.

2d. Numerous cases of ataxy are on record, more especially as having occurred in women, where no syphilitic affection whatever had preceded it.

3d. Ataxy is not a common or inevitable consequence of syphilis, as, for instance, roseola or sore-throat, but only appears to become developed in the syphilitic, if they have the neurotic constitution, and if other causes, such as accidents, excesses, and the influence of wet and cold, etc., have also been active.

4th. Treatment by iodide of potassium, even if used perseveringly and in large doses, is only exceptionally useful, even in cases with a pronounced syphilitic history, while the exhibition of nitrate of silver, ergot, the continuous galvanic current, nerve-stretching, and general remedial measures which have the tendency to improve the condition of the central nervous system, but which have no influence on the syphilitic diathesis, are frequently productive of beneficial results.

5th. The same disease—sclerosis—occurs in the lateral column of the spinal cord, more particularly in young women who have never been exposed to venereal infection.

6th. Syphilis may, however, imitate ataxy (to use an expression of Mr. Johnathan Hutchinson), just as it imitates iritis, lupus, rodent ulcer, and other diseases. Clinically the symptoms of syphilitic and non-syphilitic tabes appear to be identical. That ataxy should be so frequently associated with syphilis is probably owing—first, to the fact that syphilis, like masturbation and other excesses and irregularities, deteriorates the nutrition and power of resistance of the central nervous system; and second, and more particularly to the specific tendency of the syphilitic virus, to lead to low forms of local inflammation, which, when once established, are apt to spread in certain definite paths. Where this kind of inflammation attacks the posterior root-zones of the spinal cord, it will produce the clinical aspect

of locomotor ataxy, being aided in its development and further progress by the natural tendency of spinal disease to invade symmetrical and homologous anatomical and histological portions of the organ:—*London Lancet*.

ACUTE INTESTINAL OBSTRUCTION CAUSED BY IMPACTED GALL-STONE.

By John Walters, M. B. Lond., and W. A. Berridge, M. R. C. S., Etc.

Mrs. G——, widow, aged sixty-nine, had always been tolerably healthy; had suffered occasionally from bronchitis, and two years ago had an attack of acute recurring pain in the right side, called pleurisy, but no definite friction sound could be made out. She never was jaundiced; was in the habit of taking an aperient pill occasionally, and had lately become very stout. The patient was seized on the evening of February 2d, 1880, with acute abdominal pain and vomiting; her bowels had acted freely during the day. When seen about 11.30 P. M. she had just vomited a quantity of dark "bilious" fluid. Pulse 72; respiration 24; temperature 98.5°. Tongue clean and moist; urine abundant, containing lithates, but no albumen. She complained of great pain in the abdomen, especially on the right side, and kept moaning, "Oh, the pain, the pain." There was no abdominal tenderness or tympanites; no swelling or lump could be felt, and there was no external hernia. The diagnosis was, "She is passing a gall-stone." Opium was prescribed, hot fomentations and brandy, etc. On February 3d the symptoms continued; she vomited about every four hours. Before vomiting her face was sunken and distressed, and the pulse quickened to 120; after vomiting she became quite composed, and the pulse quiet. Nothing whatever passed per rectum; an enema was given and repeated, but only a very small quantity of fæces came away and a little flatus. Another enema was given on the 4th, but returned quite clear. On the 5th the vomiting began to be offensive; on the 6th it was decidedly fæcal in odor, and continued so on the 7th and 8th. During the first part of her illness she was chiefly under the care

of Mr. Hallows and Mr. Berridge. On the 6th she was seen by Dr. Holman, and opium was freely given; on the 7th matters had not mended, and it being evident that we had a case of acute intestinal obstruction to deal with, it was decided to explore the abdomen on the next day if there was no improvement. Accordingly on Feb. 8th, or the seventh day of her illness, after consultation with Drs. Holman and Walters, and Mr. Hallows, ether was given by Mr. Skelting at 4 P. M., and the abdomen opened by Dr. Walters with full antiseptic precautions. An incision five inches long was made in the median line from the umbilicus downwards, and the hand introduced. A hard mass was found in the middle of the small intestines obstructing the bowel. The bowel was distended above the obstruction, collapsed and empty below. This was drawn to the surface, the gut opened by a longitudinal incision along its free margin, and a large impacted gall-stone removed. The wound in the bowel was closed with a continuous suture of carbolized silk, the bowel was then cleaned and returned into the abdominal cavity. The intestines were seen to be injected and their peritoneal surface roughened. The abdominal wound was closed in the ordinary way. The patient was put to bed and given an opium suppository, and hot bottles to the feet, etc. She had afterwards a little champagne and warm water to relieve flatulence. In the evening the patient seemed to have recovered from the shock of the operation and had no more vomiting. Pulse 84; respiration 24; temperature 99°. She passed a fair night, and had no pain or tympanites. The urine was drawn off by catheter. Next morning the pulse was 120; respiration 26; temperature 99°, and she appeared to be doing well. About 2 P. M. she became rather suddenly collapsed, and died about 3 P. M.

At the autopsy next day a little recent peritonitis was found. The wound in the bowel looked healthy and was quite closed; it was about the middle of the small intestine. The liver was large and fatty; no gall-bladder could be found, but where it ought to have been the duodenum was adherent to the liver by

a mass of fibrous tissue. On cutting into this some small fragments of gall-stones were seen in the duct. A ragged opening existed in the upper part of the duodenum where it was adherent to the liver. The abdomen was covered by a layer of fat three inches deep. Only the abdomen was inspected.

The points to which we would draw attention are: the suddenness of the attack; the complete obstruction; the small size of the stone to give rise to such severe symptoms; the facial aspect of the patient and the character of the pulse (*a*) before, (*b*) after vomiting; the relief after the operation; and comparatively easy death.

The reason for thinking the obstruction was caused by a gall-stone were: the age of the patient; the sex, being a female; her sedentary habits and mode of life; previous history; and chiefly by excluding all other causes of acute obstruction. The stone will be in the museum of the forthcoming Congress.—*London Lancet*.

PASTEUR'S INVESTIGATIONS ON RABIES.

The Paris correspondent of the *British Medical Journal* writes of M. Pasteur:—

This eminent biologist has made some most important contributions to science, and his name will ever be connected with his ingenious researches on fermentation, and other important discoveries; but he has drifted into a more speculative kind of scientific experiments. As an example of this may be mentioned his recent experiments with the saliva from the mouth of a child with rabies, with which he inoculated rabbits and guinea-pigs. All the animals died, and their blood was found to contain myriads of micro-organisms, which he concluded to be the specific germs that produce hydrophobia. He then performed a second series of experiments, by inoculating other rabbits with the blood of those that had succumbed from the first inoculation. These also died, and their blood was found to contain the same micro organisms. He, however, soon discovered, by further

experiments, but this time with the saliva of children who had died from other diseases, that the results were precisely similar to those observed with the saliva of the first child. In pushing his experiments still further, but with the saliva of a healthy adult, he met with the same results and the same germs as in the preceding cases. This rather puzzled the persevering experimenter, but he is not so easily beaten; and if he has not yet discovered the real nature of the virus of rabies, he fancies he has laid his hand on the organ that secretes it. According to him, the virus of the rabies is not secreted by the salivary glands, but by the brain—or rather, the latter is the seat of the malady; and in support of his thesis, he inoculated a small portion of the bulbous extremity of the medulla oblongata of a rabid animal under the cerebral covering of a healthy animal. The latter became rabid. These results were recently communicated to the Academy of Medicine, in a paper read by the general secretary for the learned experimenter, which called forth some trenchant remarks from M. Bechamp, who positively refused to accept the principle on which M. Pasteur has hitherto founded most of his theories, and added that it is not outside the body that one must look for the germs or elements of destruction; but they are to be found in our own body, in the form of microzymes, which are the only cause of all fermentation, and the lowest element to which our organism can be reduced. Nothing daunted, however, M. Pasteur continues his parasitic warfare with unbroken zeal; and, by further experiments with human saliva, he has made the startling discovery that the saliva of a person fasting is venomous, as it contains the same parasites as those found in the saliva of children above described; but that, on the person breaking his fast, his saliva is deprived of the venomous quality, as the parasites are taken into the stomach with the food. All this is terrible to contemplate; and even M. Pasteur was confounded, as the result of his experiment was as awful as it was unexpected. The learned biologist made no attempt to offer any explanation, but said that he would for the present only point to the fact, which, he added, was in itself very suggestive.

TREATMENT OF CHRONIC PROSTATIC ENLARGEMENT.

Mr. Thos. Smith, surgeon to Bartholomew's Hospital, in a recent lecture published in the London *Medical Times and Gazette*, gives the following advice on the above subject:—

Treatment.—Your assistance will rarely be sought in the early stages of this disease; but should you be consulted by an elderly patient suffering from undue frequency or difficulty in micturition, it will always be prudent to make a digital examination through the rectum, to ascertain the condition of the prostate. The examination is best made with the patient lying down on his back. Your finger-nail being filled with soap, and the finger well oiled or greased, it should be introduced very slowly, so as not to excite spasm of the sphincter.

Should you judge that the urinary difficulty is caused by prostatic enlargement, the occasional passage of a full-sized instrument will often relieve the inconvenience, and, if steadily persevered in at regular intervals, will generally secure the patient against all the more serious consequences of the disease.

In cases where the difficulty in micturition has gone on to produce an inability to empty the bladder completely, it is of primary importance that at least once in twenty-four hours the urine should be all drawn off; but in carrying out this plan it is necessary to exercise caution, lest by suddenly emptying a greatly distended bladder you should produce a complete paralysis of the organ, with a loss of the power of voluntary micturition, and cystitis.

As a general rule, if there be not more than one pint of retained urine in the bladder—that is, urine the patient is unable to pass for himself, it may be safely drawn off at once. But if there be more than this of residual urine (and there may be several pints), you should draw it off by installments, taking away a little more each day, until the bladder is completely emptied.

This complete evacuation of the bladder, when once accomplished, should be repeated each day, by means of an instrument,

and for the purpose an india-rubber catheter, a bulbous-ended or Coude catheter, should, if possible, be used.

By these means, in an early stage of the disease, the patient will generally regain the power of normal micturition, or at all events, if this result be not attained, he will be secure from the worst consequences of the disease.

The treatment may be carried out by the patient himself if you will be at the pains to teach him how to pass an instrument—nowadays a comparatively simple process, owing to the great improvements in catheters; for you should know that since the introduction of the various forms of soft catheters now in use, the instrumental treatment of prostatic enlargement has lost more than half its terrors and much of its danger.

This large silver prostatic catheter which I now show you—at one time almost the only instrument used in these cases—is truly a formidable weapon with its long shaft and wide-sweeping curve. It was constructed to ride over the prostate, but in the hands even of experienced surgeons it frequently failed in the performance of its normal functions and rode under the gland, or through its substance. Used with a strong and steady hand it rarely failed to draw off water. As an instance of its powers in this respect, I may mention a case within my knowledge where a prostatic catheter in the hands of an energetic surgeon drew off some gallons of water, which, however, a post-mortem examination disclosed to have come from the peritoneal cavity.

I will suppose now that you are called upon to treat a patient with retention of urine dependent upon enlarged prostate. The difficulty will usually have come on at night time; the patient will, as a rule, be advanced in years; and the prostate can be felt in the rectum unduly prominent. In such a case let me advise you first to try a flexible red rubber catheter, of full size; it will often find its way round a corner, and through a urethra which would be impervious to a more rigid instrument. This failing, you should try and pass the same catheter with a stout wire stylet reaching two-thirds of the way down the instrument; this

gives you more power to push the catheter onwards, and leaves the end flexible, to accommodate itself to the distorted urethra.

Next in order you may try the Coude catheter, which I show you: then, if necessary, the bulbous French instrument, a gum elastic, without and with the stylet; and lastly, others failing, a silver instrument.

Whatever instrument you use, let it be a full size; it will go in as easily as a smaller one, and is less likely to damage your patient. Keep the point of the instrument on the upper wall of the urethra; and, above all things, use no force.

After drawing off the water in a case of retention, the patient will, for a time at least, require the regular use of the catheter until he recover his power of voluntary micturition; and should there have been great difficulty in introducing the catheter, I should advise you to tie it in for the first twenty-four hours.

In the subsequent treatment of these cases of prostatic retention, in addition to other troubles, you will often have to contend against an increasing frequency in micturition. The frequent desire to pass water must be resisted as much as possible by the patient, or it will grow upon him. The bladder must be completely emptied, and, if need be, washed out, at regular intervals, and the patient exhorted not only to resist by a strong effort of the will the solicitations of his bladder, but to avoid all sights and association that are likely to suggest to him the necessity of micturition. With this object in view, you should counsel your patient to keep his catheter and chamber-utensil out of sight; as soon as possible to leave his bed-room during the day; and to occupy his mind by any pursuit which may draw his thoughts away from his urinary necessities.

EFFECTS OF OIL OF TANSY.

Dr. G. Jewett, Boston *Medical and Surgical Journal*, reports eight cases of poisoning with this drug. Case I—Fifteen drops at 11 A. M., a teaspoonful at 2 P. M.; convulsions, shock, general

cyanosis ; recovery. Case 2—Teaspoonful to promote catamenia ; convulsions and death in one hour and a half. Case 3—Unknown quantity to cause abortion ; convulsions ; death in three hours and a quarter ; no abortion. Case 4—Teaspoonful to cause abortion ; coma, recovery ; no abortion. Case 5—Four drachms ; spasms and death. Case 6—To cause abortion ; rapid death ; no abortion. Case 7—Decoction of tansy leaves to produce abortion ; paralysis, coma, death in twenty-four hours without abortion. Case 8—Infusion of leaves daily for a week ; also for vaginal injection ; abortion, metritis, peritonitis ; recovery after three months. As druggists are often asked for oil of tansy under various pretenses, we believe the above table will be useful in reminding them of the dangers attending the sale of tansy and its preparations.—*Country Practitioner*.—*Therapeutic Gazette*.

TREATMENT OF HERNIAS OF LONG STANDING.

The following conclusions are reached by M. Thiry, in a paper on the above subject, presented by him to the Royal Belgian Academy of Medicine : (1.) Old hernias of large extent, constituting a variety of eventration, are susceptible of reduction in most cases. (2.) The large volume of a hernia is never a contra-indication to its reduction, although it necessitates the adoption of certain precautions, and the employment of considerable time. (3.) The diminution in the capacity of the abdominal cavity, in old hernias, is never antagonistic to a slow, methodical, and progressive taxis. (4.) By slowly re-entering the abdominal cavity, the extended parts gradually resume their former places. (5.) The best method of reduction is the "compressing taxis," which consists in only restoring organs to their natural position after they have been relieved, by pressure, of any vascular engorgement. Those organs which effected an exit last should be first replaced. (6.) In this variety of hernia, an elastic truss, adapted to the gradually decreasing size of the tumor, should be

attached to an abdominal belt. (7.) When the hernia has been completely reduced, the projecting knob of the truss, with properly shaped convexity, should penetrate the ring and adapt itself to its dimensions.—*Bulletin de L'Academie Royale de Medecine de Belgique*, vol. xv., No. 6.

HUXLEY'S THEORY OF DISEASE.

The body is a machine of the nature of an army, not that of a watch or of a hydraulic apparatus. Of this army, each cell is a soldier, an organ a brigade, the central nervous system headquarters and field telegraph, the alimentary and circulatory system the commissariat. Losses are made good by recruits born in camp, and the life of the individual is a campaign, conducted successfully for a number of years, but with certain defeat in the long run. The efficacy of an army, at any given moment, depends on the health of the individual soldier, and on the perfection of the machinery by which he is led and brought into action at the proper time; and, therefore, if the analogy holds good, there can be only two kinds of diseases, the one dependent on abnormal states of the physiological units, the other on perturbation of their co-ordinating and alimentative machinery.—*Canadian Medical Record*.

Editorial.

A GOOD LESSON.

A luckless practitioner in this neighborhood has found himself placed in an unenviable position by a mistake which might happen to many others. After treating a man for a short time, word was brought to him that the patient had suddenly died. Apparently not considering it necessary to make inquiries regarding the method by which his former patient had been suddenly converted into a corpse, he forthwith sat him down and

proceeded to manufacture the death certificate required by law. It was a saving of time, and the homely proverb informs us that "time is money." But that saving may prove a costly one. For it afterward transpired that the patient probably was not dead at all; at least the person buried in his stead was not the one who had been treated by the doctor,—or, in other words, the dead man was a different individual from the former sick one. There is a mystery enveloping the whole affair, which still hides the details of this interesting transformation scene, and which gives the daily press ample opportunity to guess in sensational terms as to how and why the substitution of one body for another was made. It looks like an effort to cheat an insurance company, even if no worse crime was committed. Whatever a further examination of the case may prove, it is already evident that the practitioner was at fault in not assuring himself as to the facts, before certifying to a death. It is a flimsy excuse, to say that the same thing is continually done by the ablest and surely by the busiest physicians, and that the procedure is a mere matter of form. The law requiring these certificates was framed with a view to defeat just such criminal schemes as have been partly carried out in this instance. The necessity of enforcing that law is attested by all good sense. Within the last year our efficient City Physician has especially directed the attention of the profession to it. If any one disregards it still, he must suffer in public opinion, if not otherwise; and the mistake of this one practitioner will doubtless serve as a wholesome lesson to many others.

EXAMINING INTO THE DEPARTMENT OF THE INTERIOR.

The aggressive nature of surgery is being continually shown by its encroachments upon the domain of medicine, and each year some new advance of this kind indicates the progress of our art. The laryngoscope, the rhinoscope and the otoscope have revealed to us regions almost unknown, and the ophthal-

moscope especially, opened to our eyes a field not only undiscovered, but one whose beauty and importance was entirely unsuspected. These, with similar instruments of precision, are most acceptable aids to study, and their value has been tested by long experience. But when we read of various appliances, by means of which the surgeon can survey with ease the mysterious depths of the urethra, or, by properly manipulating a peculiar speculum, he can placidly gaze far beyond the sigmoid flexure almost up to the coecal valve,—then does the spirit of skepticism steal in upon us, and without any play upon words, we speak of these as extraordinary tales. And now of late still another item has been going the rounds of the press in relation to a certain gastroscope invented by Leiter, the Vienna instrument maker. This enterprising gentleman, it is said, can illuminate the stomach from within by simply causing the patient to swallow an electric light properly insulated in a glass globe. Moreover, this “is double, so that no heat can be communicated to the stomach, and to make it the more sure, the space between the outer and the inner globe is kept supplied with a current of cold water.” These seem to be excellent suggestions in their way; but such a stomach full might not prove in every way comfortable. One would have comparatively little objection to swallowing half-a-dozen tallow candles, a few matches, and bits of broken mirrors, with the hope that some fortuitous arrangement would result in the instrument desired; but when he is asked to devour part of an electric battery, he is apt to decline—with thanks. Let Mr. Leiter try again, and perhaps with some improvements he can devise a more tempting and digestible morsel than the present form of his gastroscope.

WILL GUTEAU RECEIVE THE BENEFIT OF A DOUBT?

If the President's assassin had been a man of some social standing, or had been wealthy, it is probable there would have been no lack of so-called physicians, whose desire for justice

would have urged them to testify in the strongest terms that he was insane.

The singular mixture of some viciousness and much foolishness which characterized the former career of the fellow, his fanatical notions concerning himself and his own divine mission, and the statement that there is a crazy streak somewhere in the family, would, in many cases, be amply sufficient reason for sustaining such a plea by abundant medical testimony. The definitions of insanity are often so elastic as to bring within their scope those who have proved themselves vastly more rational than this notorious "crank." It is easy to recall more than one apparently deliberate murder, in which the plea of temporary insanity cheated the gallows of a victim; and it is also worthy of note that if such evil-doers were deemed proper inmates for a madhouse, they usually managed to recover from their malady with a rapidity which was quite astonishing. If Guiteau's cause were not one so universally unpopular, it is probable that this might also be urged with greater effect than it is, in his defense. It was with difficulty, however, that he obtained any counsel and it would, probably, be next to impossible to find men to interest themselves for him. It is generally conceded that the world is better off without such vermin upon it. This is the popular verdict.

But the voice of the people is not always the voice of justice; and if the law was a fair one, by which other men have escaped the death penalty, why should not this one avail himself of it?

It is quite another question as to whether the assassin of our chief magistrate should be allowed under any circumstances to go unpunished. That does not concern us at present. We only contend that it will be especially difficult for this man to secure strict legal justice, and in future years, when resentment will have cooled, and when the account of this trial will be written, the historian may say that the plea of insanity was not urged more strongly partly because frank and fearless doctors were too few.

A MEDICAL BOOKSTORE.

Among the signs which mark the growth of Buffalo as a medical centre, is the opening of a bookstore on Main street, near Chippewa, devoted entirely to the sale of medical works. It is an indication, at least, that we have among us men who wish to keep abreast of the times, and whose tastes for professional study are not dwarfed by the necessities of active practice. The very presence of a good collection of books is an incentive to study, and their mute rebukes, as they stand before us, half forgotten and perhaps covered with dust, are continual inducements to mental activity. Let us, therefore, wish much success to the gentleman who has inaugurated this enterprise, and may his books not only find readers, but in a certain sense produce them.

A NEW JOURNAL.

We are glad to welcome to our list of exchanges still another journal—this one being named the *New England Medical Monthly*. If future numbers are equal to the first one, it must certainly prove a success. Professor Post, of New York, furnishes the opening article; another is contributed by Professor Carmalt, of Yale College, and similarly excellent papers, together with sprightly editorials, combine to make the first impressions of this new-comer in the field of journalism most agreeable.

DR. J. MILNER FOTHERGILL ON USE OF MALTINE.

In order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase "maltine." But, as Dr. Roberts points out, in order to make this ferment operative it must not be taken after a meal is over. Rather it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like matter and mixes readily with the

milk, gruel, &c., without interfering either with its attractiveness in appearance, or its toothsome-ness; indeed its sweet taste renders the gruel, &c., more palatable. A minute or two before the milky mess is placed before the child, or invalid, the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it, before it is placed on the nursery table, we should hear much less of infantile indigestion and mal-nutrition.—*From the Practitioner.*

Reviews.

A Text-Book of Physiology. By M. FOSTER, M. A., M. D., F. R. S. Second American edition, by EDWARD T. REICHERT, M. D. Philadelphia: Henry C. Lea's Son & Co.

The readers of the former American edition will, doubtless, agree that there is no better text book on physiology than this, in print. Besides being clear and simple in its statements, it is abreast with the very latest researches, and these are presented in an instructive and, indeed, in an entertaining style. Comparison is not criticism, and we, therefore, avoid the mention of other standard works, which have long stood before the student as oracles in physiology. It is certain, however, that Foster presented to us the most recent phases of the subject in a very attractive light, and the additions of Dr. Reichert are such as to elucidate any points which might possibly have seemed obscure. In a brief notice of any book it is evidently impossible to review critically its various parts, but we can not omit a word of unusual praise of the excellent manner in which the author treats the "special senses." In general it is a most admirable work, and this new edition of it will prove acceptable, not only to younger students, but also to physicians who still wish to base their treatment of the abnormal on a knowledge of normal conditions of the body.

Favorite Prescriptions of Distinguished Practitioners; with Notes on Treatment. By B. W. PALMER, A. M., M. D. New York: Birmingham & Co.

A small book which requires an equally small space for its notice. As an enumeration of formulæ employed, it may be a success, or for one who cares to follow a certain rut without variation, it may be convenient; but as a guide to the rational treatment of disease which changes its form in almost every case, it is necessarily a failure. Unfortunately, however, many practitioners will search for a prescription, more assiduously than for an intelligent diagnosis and among such the manual will probably find a ready sale.

The Medical Record Visiting List for 1882. New York: Wm. Wood & Co.

This is certainly the most handsome, if not the most concise and compact of all the lists published. It contains all that is necessary in a pocket memorandum of professional visits, and the arrangement is good. We find that in this city the Medical Record List is steadily growing in favor.

The Physician's Memorandum Book. Arranged by JOEL A. MINER, Ann Arbor, Mich. Fifth improved edition. Price, \$1.25.

This new Visiting List has all the general advantages of books of this class. The publisher lays claim to superiority in the general convenience of its blanks, its ledger sheets and its cash account.

Walsh's Call-Book and Handy Ledger. RALPH WALSH, M. D., Washington, D. C.

These two books are well adapted to the wants of the practitioner. The Call-Book, or Visiting List, has special advantages of its own, which give it a high place in the consideration of a great many physicians. The use of the Handy Ledger will enable even the busiest physician to keep his own accounts with the least possible expenditure of time and trouble.

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Original Communications.

THE PERMANENT CURE OF HERNIA.

By W. H. Heath, M. D., Assistant Surgeon U. S. Marine Hospital Service.

The interest manifested by those of the profession I have been brought in contact with here, the several extracts from, and reference to the article which appeared in the May number of this journal, suffices to show that even a meagre contribution to the subject is considered worthy of attention.

To those who may avail themselves of the method of treatment known as the Heatonian, there are some points of practical importance influencing the results, which I consider of sufficient moment to speak of again, even at the expense of repetition. The selection of fit cases to operate upon is most essential. I know of no procedure in surgery where this is of any greater necessity, yet so little said about, and I am confident many failures can be traced to this neglect, where cause is attributed to the method itself. A first or second failure to a beginner would be extremely unfortunate and disheartening, and probably cause a hasty and erroneous opinion of the value of the procedure. It is not an operation of emergency, or at any time of necessity to life; therefore the selection of proper cases is perfectly feasible. Some cases with contra-indications present can

be suitably treated with a view of removing them, to be fit for operating at a later period; others should never be subjected to it at all.

No case should be attempted while suffering from any condition likely to interfere with perfect rest in the recumbent position. A cough due to either chronic or acute bronchial difficulty, would, by disturbing the abdominal contents, force the protrusion against and into the inguinal canal; any trouble of the digestive tract causing vomiting, accumulation of flatus in larger quantity, or looseness of the bowels, would be equally detrimental. It is necessary to keep the bowels quiet for four or five days at least; administration of opium for this purpose should be done with care, not to provoke nausea.

Chronic cystitis, or irritability of the bladder from any cause, stands in the same relation. Epilepsy, where the attacks are of frequent occurrence, is absolutely against success, one seizure would undo all that had been gained. Albuminuria is a contra-indication, as in all surgical operations. In the one case where I resorted to this method upon a man with albumen in his urine, pus promptly formed; the abscess, however, healed after many months.

With children of a restless or very nervous disposition, action had better be postponed for some years until they are more amenable. Very young children are not fit candidates, nor the aged or feeble, for reasons too obvious to mention. The best period of life I should say would be from ten to thirty years of age, and the most promising class of hernia, the oblique reducible, and particularly the congenital variety; femoral hernia are the least promising and accompanied by more danger.

When the parts are inflamed from wearing a truss, or from any cause, it should first be allayed; in brief, the patient should be in general good health and condition.

These considerations are of practical importance, as likely to affect the result, and I trust will be borne in mind by all who intend operating by this method.

The manner in which a cure is brought about is apparently not clear to some. In the first place *the sac is not injected*, nor does it take part at all in the procedure; when possible it should be reduced along with the hernia; its presence in the canal, however, does not interfere with a successful result; it is the fibrous structures, and they alone, that are concerned in the matter. Nor is the cure effected by a glueing together of the edges of the ring with lymph, as has been supposed; on the contrary the hernial passage is *obliterated* throughout its extent by thickening and contraction of the fibrous structures which surround it, the thickening depending upon the production or effusion of plastic lymph, largely interstitial, rendering the parts more rigid, less yielding, while the contraction which occurs and is peculiar, and has much to do in bringing about the result, depends on the anatomical arrangement of the fibres.

The canal is not actually glued together at its edges, nor in fact anywhere; it is an obliteration of it by a shrinking and thickening of the structures which enter into its formation, and which are fibrous. It is in this way that the parts are restored to exercise their functions, and in principle and pathology is distinct from other methods.

This thickening from effusion of lymph, contraction, and obliteration is a reality, and can be detected and its gradual formation watched and demonstrated by carefully examining the parts at varying intervals after they have been irritated.

Some hernia require a second or third injection to bring about this condition, especially in hernia of some time standing and with large patulous rings. After the lapse of two or three days, if there is but a slight amount of tenderness or firm pressure, and examination reveals the fact that but a slight impression has been made upon the structures, they should be thoroughly wetted again as in the first instance. This very generally has the desired effect, but should it not, it may be again repeated. The danger of abscess is not great, the tissues involved are not vascular, being maintained more particularly by nutritive juices,

and therefore less liable to inflame; besides the mild character of the irritant has to do with lessening the danger of this sort.

The permanency of the condition brought about at once comes up as a question of practical import. If these results are but transient, the lymph becoming absorbed after a period, allowing the hernia to descend again, the method at its best is but palliative, a temporary one, the transient benefit scarcely warranting the patient subjecting himself to the inconvenience of having the operation performed. Disappointment from other operations in this respect have been so constant that foregone conclusions are generally formed, and especially to this method which claims so much and is apparently so simple. In evidence of the duration of these results, we can refer to the numerous examinations of patients at periods varying from months to years after being operated on. The class of patients my operations have mostly been upon pass from my observation after a few months. I have, however, had the opportunity of examining several after six months; the last one after a period of nine months, a man who had been actively engaged during that time, in his case there was no evidence of any retrograde change going on. Heaton and Warren report cases examined after many years and found to be permanently cured. I may say that in all cases examined by me, that had stood the test of six months, I could discover no evidence of absorption of lymph or returning hernia.

Besides this, which may be considered the "proof of the pudding," we have the well-established pathological fact that fibrous structures, generally, when subjected to inflammatory action are apt to be permanently altered, that the changes which occur under the condition of inflammation are likely to remain; thickening of periarticular structures and of the heart valves after endocarditis are examples of this principle. Post-mortem examination of this region, at any time after operating, would be highly interesting and valuable in this connection, but as death is not a part of the history of this method, and as patients

after a time, generally, pass from view of the operator, it rarely falls to the lot of any one to make such observations. Heaton mentions one case where he had the opportunity of examining the parts many years after making a permanent cure, and according to him they were so restored, that it was difficult to conceive a hernia had ever existed. Without, therefore, discussing further the possibility or impossibility of absorption taking place, I think we are justified in considering that even if it does go on at all, it does so, in so slow a manner as practically not to interfere with the desired result.

Another point, and upon which I have been questioned, is where the instrument is introduced and what instrument is the best.

The object is to insert the needle of the instrument into the inguinal canal with as little injury to the tissues as possible and without any to the contents of the canal or abdomen. The most direct way is therefore the best, and the first point is to locate the entrance to the canal,—the external abdominal ring, upon the surface directly over it. This is accomplished by first defining it with a finger of the right hand, invaginating the scrotum, in a manner similar to that followed in examining for the existence of hernia, and then transferring the location of it to a finger of the left hand from the surface, thus leaving the right hand free to manipulate the instrument. After the right-hand finger has clearly made out the ring, the finger of the left should rapidly be pushed into it, carrying with it the intervening tissues, and as this is being done the right hand is withdrawn, so that the exit abdominal ring is localized from the surface and by the left hand. The contents of the canal—the cord—is protected from injury by being pushed towards the median line out of the way, and retained in that position by the left hand finger when it descends into the ring from the surface.

The abdominal contents can only be injured by penetrating the transversalis fascia, which, while it would not be a fatal accident would be very unfortunate. Such a circumstance could

only happen by carelessness and is best averted by great gentleness in handling the needle after it is in the canal, and remembering there is an alteration in the relation of the parts, in all hernia of any duration, viz., that the internal ring is dragged down towards the external, and the canal is consequently shortened and its direction less oblique. The needle, when it is passed in, is not pushed through either pillar of the external ring, on the contrary it should enter the aperture clear and free, though close to the external pillar, it should be introduced directly from the surface alongside of the finger which is pressed into the ring and which serves as a guide for it, this is the most direct and the easiest way; it is never passed in from below through the invaginated scrotum.

After penetrating the tissues and entering the aperture its point will be found free to move in all directions, at this time the finger should again be invaginated through the scrotum and the exact position of the needle verified before its direction is changed and it is carried on into the canal.

The fluid is deposited from the instrument as it is gradually being withdrawn, care being taken to wet thoroughly all the structures from the one end of the canal to the other, and particularly all around the external opening.

For a long time I was in the habit of using Dr. DeGarmo's (of New York) needle, which is a sharp-pointed instrument, arranged with an attachment to sheath the point after it has penetrated the tissues so that it is carried forward into the canal, blunt, to prevent injury. The syringe is a small one, holding about 20 m, the piston working on a screw to gradually deposit its contents.

This very convenient and ingenious little instrument is easily managed, but is not altogether a safe one, the sharp point being liable at any time, even with the greatest care, to wound a vessel in its passage, or puncture the cord, which is frequently flattened out from pressure and difficult to keep entirely out of the way of danger.

Recently I have been using a syringe and needle devised by Dr. Warren, of Boston, which I consider the safest and best. The needle, instead of being round, is flattened and somewhat oval, has a spiral twist to it, and also many more openings for the fluid to escape; the point is also blunted. The barrel and piston are so arranged with a spring on the latter, as to retain the fluid in the chamber under considerable pressure, which at the proper time is allowed to escape by opening a valve, which causes the fluid to be projected with some force through the apertures on each side of the needle. The advantages of the instrument are less liability of injury to vessels or cord, and the structures are more thoroughly wetted by the fluid which is sprayed out, rather than dropped as in the DeGarmo needle.

PERITYPHLITIS OR PERINEPHRITIS.

Reported by Judson B. Andrews, M. D.

A young man, 21 years of age, in good health, on Monday, Sept. 9, started on horseback for a pleasure excursion in the Adirondack region. During the first three days, a distance of about thirty miles a day was easily made without fatigue or discomfort. On the evening of the fourth day, after a ride of about the same length, a short bath was taken in one of the cool lakes that abound in that locality. It was not followed by chill or even any unpleasant sensation. The journey of the fifth day was begun early in the morning after partaking of a light breakfast of pork and coffee. When twenty miles had been made at about 2 P. M., a hearty meal, prepared by the guide, of pork and potatoes fried in a large quantity of fat, was eaten. A further ride of nine miles, and a supper at the hotel completed the incidents of the day. During the night the patient was taken ill, complaining of a severe pain in the bowels, had a copious movement followed by vomiting. On Saturday morning no breakfast was eaten, the vomiting was repeated, and in the afternoon the bowels moved again freely. The patient,

however, continued to suffer from severe pain now located in the right iliac region and kept his bed. He partook of some tea and toast for supper, but without relish, and slept little during the night. On Sunday, while in the recumbent position, the pain was less severe, but the feeling of illness and the pain on motion led to the decision to return home as soon as possible. On Monday morning, he started for the nearest railway station, a distance of thirty miles. This was made in a buckboard wagon. The pain induced by the motion was great and the suffering intense. Some relief was obtained by partially supporting the body by the hands pressed upon the seat of the wagon. From the station, a ride of 120 miles by rail brought the patient to Albany, where the first medical attention was received. Dr. S. B. Ward, Professor of Surgery in the Albany Medical College, was summoned. He found the temperature at 104° and the pulse 120. Under the administration of morphia, rest and relief were obtained. On the morning of the 17th, the temperature reached $104-8^{\circ}$, the pulse still counting 120. The patient, though offered the advantage of hospital treatment, determined to continue the journey home, where he arrived at 1 P. M. The Doctor sent a note in which he stated the result of his examination, as given above, and expressed his fear that the case was one of perityphlitic abscess.

When first seen by myself, soon after reaching home, the temperature was then 105, the pulse 130, and the pain in the right groin was so severe that the leg could not be moved voluntarily. The pain was reflected along the cord and felt severely in the testicle. There was retention of urine; the catheter was employed and its use continued twice a day till the following Saturday. Hot fomentations were applied. An ounce of whisky was given every two hours. A single dose of 20 grs. of quinia, and morphia $\frac{1}{8}$ gr., the latter to be repeated till pain was relieved, were administered. Milk was taken freely and at regular intervals. In the morning, the temperature stood 103° and the pulse at 112. The pain in the groin had mostly

disappeared, and the leg could be moved voluntarily. From this time forward for several days, the temperature varied from $102\frac{1}{4}$ to 104 , and the pulse fell to 96.

On Wednesday, the 18th, an attack of vomiting occurred, but ceased on the stomach being relieved of its contents. The following day the bowels were tympanitic, and by pressure upon the diaphragm produced nausea. This was relieved, and a good movement obtained by an enema.

During the week the pain was not severe, but was felt on pressure along the lower border of the ribs, and especially over the right kidney. The same line of treatment was continued; whisky to the amount of 24 ounces, quinia from 20 to 40 grs. and morphia from $\frac{1}{2}$ to 1 gr. daily. The patient had no chill, sweating, vomiting or delirious. There was no dryness of the tongue, nor sordes upon the teeth, and considering the gravity of the disease, was in a very comfortable condition. Examination of the urine discloses the presence of a slight amount of albumen, about three-tenths of one part in a thousand.

On Monday the 23d inst., there was some thickening of the abdominal parietes, in the right iliac fossa, and on Tuesday a swelling was detected. The temperature increased to 105° , the pulse to 120 and the pain was severe. The necessity for operative interference became apparent, and Dr. Ward was called in consultation. Examination on Tuesday evening and again on Wednesday morning, failed to give positive indications of the presence of pus, and the operation was delayed. On the evening of Wednesday, swelling and redness of tissues were apparent above Poupart's ligament and near the external opening of the inguinal canal. The tissues were still hard and tense, but deep fluctuation was thought to be detected. On Thursday morning, the diagnosis was further confirmed, and an operation decided upon. This was performed by Dr. Ward, assisted by Drs. Ford, Brush and Andrews. The temperature was 105 , and the pulse 140. Ether was administered, and an exploration by an

hypodermic needle inserted perpendicularly to the surface revealed the presence of pus. An incision was made an inch and one-half in length just above the ligament, and about an inch inside of the course of the external iliac artery. Pus flowed freely to the amount of one pint; it had the characteristic fæcal odor and contained flakes of lymph. The patient bore the anæsthetic and the operation well, and in the afternoon the temperature fell to $102\frac{1}{2}$ and the pulse to 120.

The temperature continued to vary for $102\frac{1}{2}$ to 104, the discharge being free and the pus normal till Saturday evening, the 28th of September, when an abscess was developed under Poupart's ligament, directly over the femoral vessels. This was opened, and a quantity of sanious pus discharged. There was a communication between the two openings, and the carbolyzed water used for washing out the upper abscess flowed freely from the lower one, till both were closed by the healing process. The next night the temperature again reached 105; the patient was restless and slept poorly. The following morning it stood at 104, the pus was sanious, ill-conditioned and scanty, and on examination showed the presence of uric acid. In the evening the temperature was 105; the patient was dull and sleepy, perspiration profuse, and the feebleness very marked. Poultices were kept applied to the wounds, the whiskey was increased to two ounces every hour, and quinia given in a 15-gr. dose, repeated at midnight. At 6 A. M., of Tuesday, the temperature stood at $101\frac{1}{2}$. The morning urine contained blood and pus. This increased the fear induced by the discovery of the preceding day, that there might be some connection between the abscess and the urinary tract. To reduce the interchange of material to a minimum, it was determined to keep the bladder empty by leaving a catheter in it. This produced so much discomfort that after a few hours it was given up and frequent urination insisted upon. In the afternoon the pus had improved in character and amount, the patient was taking food more readily, and was feeling much better; temperature 103° .

Wednesday evening, the opening of the lower wound was enlarged.

On Friday morning, October 4, the temperature stood at 102° , and thorough examination of both urine and pus showed there was no admixture; it increased to $104\frac{1}{2}$ in the evening, and the symptoms became more severe. The cause of the unfavorable change was not apparent and created considerable anxiety, only added to when at 2 A. M. of Saturday all discharge from the wound ceased. This had been thoroughly washed out every two or three hours. At the washing at 6 A. M. a small shred floating from the upper opening was found attached to a mass of disorganized material, so large that it could be extracted only when compressed with the dressing forceps. There followed immediately about six ounces of decomposed pus. This came from the region of the bladder near the root of the penis. The patient had complained for some days of pain and tenderness in this region. The temperature commenced to fall, and at 9 A. M. reached $101\frac{1}{2}$, but stood again in the evening at 104° . There was for a few days no special change in the condition of the patient, who was improving in appearance, strength and appetite; tongue was clean and wound healing, the discharge decreasing in amount. On the 8th of October he passed a large lumbricoid, 10 inches long. October 10, examination of urine made by Mr. Deecke, special pathologist of the Utica Asylum, with the following result: deposit of urate of soda, urate of ammonia, phosphates and pus corpuscles; temperature again elevated, reaching 105. Quinia and whiskey increased during the night, and morning temperature 102.

Oct. 13. Urine again examined; result, sp. g. 1023, reaction acid, deposit, pus corpuscles, transparent casts, a few granular casts, epithelium from pelvis of kidney and bladder mucus, traces of albumen. From this time stimulants were reduced, and lactic acid in 10 gtt. doses given.

Oct. 18. Urine shows little evidence of cystitis, and no albumen. Microscopically, *many casts and much epithelium from the lining of the uriniferous tubes.*

Oct. 21. Reaction acid; no albumen; microscopically same as before. Patient is still gaining in strength, eating more freely, tongue clean, bowels moving regularly, as they have done during most of the sickness. Discharge from wounds diminishing, and they are filling up from the bottom.

Oct. 24. There is a bagging of pus from the upper wound, toward the iliac fossa, and a free incision, with patient under ether, discloses a secreting membrane; wound kept open by pledget of lint; stimulants are reduced to sherry wine, and tonic doses of quinia are only given. Iodide of potass given in 20-gr. doses b-d, with special reference to kidney trouble. Amount of urine has not fallen below three pints per day, and there is no pain in region of kidney or difficulty of urination. For a few days there has been some sciatic neuralgia in left limb, and slight œdema about ankles. The pulse persists in its rapidity of beats from 112 to 120.

Oct. 27. Examination of urine shows presence of casts. Patient is now able to be moved from bed to lounge; discharge from wound small and decreasing; improvement in general condition marked; appetite good; takes ale only as a tonic. Quinia discontinued.

Oct. 30. On crutches and able to be carried down stairs.

Nov. 1. Took a short ride in carriage.

Nov. 2. All discharge has ceased; external wounds closed; temperature 99; pulse 120. Urine same as last examination, *transparent casts*.

Nov. 6. Patient took ride again; is feeling well and steadily gaining.

Nov. 10. Temperature varies from 99 to 100°; pulse from 112 to 120; slight œdema about ankles; casts still present, but decreasing in amount. Iodide potass continued. Patient is considered convalescent.

In considering the case I cannot avoid the conclusion that we have been dealing with a perinephritis and not a perityphlitis; that there has been an inflammatory condition essentially

chronic in character, and which I fear will result in partial cyrrhosis of one or a part of one of the kidneys. It may not be of so serious a character, and after a season may entirely subside without any apparent unpleasant results.

The case has been characterized by an extremely high temperature, and since the operation a very rapid pulse. There have been a series of incidents or accidents which have called for the strictest watchfulness.

Clinical Reports.

CLINICS AT THE BUFFALO GENERAL HOSPITAL
BY PROFESSOR ROCHESTER..

Reported by C. C. Fredericks, M. D.

CASE I.—O. B. Scott; entered the hospital Dec. 2, 1881; æt. 74; married; American; patient complains simply of voiding too much urine, in small quantities and frequently; measurement shows the amount of urine passed daily, between three and four quarts, sp. gr. 1030, contains no sugar or albumen. Has had this polyuria for 6 months. An examination of the prostate gland by the finger, per rectum, finds it enlarged and tender.

CASE II.—Charles Patterson; entered hospital Nov. 30, 1881; æt. 68; married; American; patient says he is very weak, nauseated, constipated, poor appetite, has vertigo at times, and when he lies down a sensation is felt as of a gale of wind blowing past his ears. He attributes his weakness to excessive excretion of urine, which malady has been gradually increasing for the past six months. His sleep is disturbed by the desire to pass small quantities of urine frequently. Amount of urine per diem, by measurement is about one gallon, sp. gr. 1015, contains no albumen or sugar. Examination of prostate shows it enlarged and tender.

Dr. Rochester thought both of these cases of polyuria due to age, general debility, and most of all, to the condition of the prostate gland in each. He said diabetes mellitus is not so fatal as polyuria when the latter occurs in persons who have led a sedentary life and of great mental activity and strain. These cases he thought not of this kind, and that they would improve with rest, tonics, good diet, and a suppository of ext. belladonna gr. $\frac{1}{4}$, at bed-time, to relieve the irritability of the bladder and prostate.

CASE III.—Thomas M. Spencer; entered hospital Nov. 30, 1881; æt. 64; widower; American. This man has been in the institution twice before during the last six months, under treatment for the same conditions from which he now suffers. Complains of dyspnœa, inability to lie down at night, poor appetite, constipation, anasarca of feet and legs, and general prostration. Examination of urine reveals a small amount of albumen. Area of dullness of liver extends about $2\frac{1}{2}$ inches below the margin of the ribs, and is tender on pressure or percussion. Apex of heart is heard, not seen or felt, faintly between the sixth and seventh ribs, to the left of the nipple. Percussion finds the lower part of the right chest very dull, presumably an effusion of fluid into the right pleura. Exploration with a hypodermic needle gets no fluid, although he has had fluid there at both preceding attacks. Dr. R. advised infusion of digitalis, iodide of potass., salines sufficient to move bowels once daily, tonics, and good food. He spoke of the liability that there is of the physician falling into an error in these cases, viz: That of supposing the effusion into the pleura to be due to the renal or heart difficulties, and not considering that disturbed cardiac action, albumen in the urine, and anasarca is apt to follow from a pleuritic effusion or empyema, and thus be secondary rather than primary.

A CASE OF GOUTY HEART, WITH NOTES OF AUTOPSY.

Reported by H. R. Hopkins, M. D.

C. T. C., æt. 62, was plainly of gouty ancestry. Gout having frequently visited his father and paternal aunts, and being a constant companion of his brother, while a sister had suffered for years with a chronic eczema of a supposed rheumatic character.

He had seen the prosperous and comfortable side of life; was a successful banker; had been a man of correct habits; was probably a large eater, and for years accustomed to take with his meals large quantities of ice water, four to six goblets.

In early manhood he suffered severely from gall-stone colic, but for the last twenty years had enjoyed average health, with only an occasional bilious attack. He was very fond of the saddle, and in summer and winter could be seen almost any day upon the road.

Early in January of this year, 1881, he had a severe attack of suffocative pain in the region of the heart, accompanied with urgent dyspnœa. The attack came without warning and could not be traced to exposure or strain. The pulse was irregularly intermittent, the heart's sounds confused and its action wobbling the area of cardiac dullness was thought to be rather increased towards the right. The surface and extremities were cool, the mind clear and very anxious and apprehensive. This was the beginning of an illness which lasted nearly three months and furnished continuous signs of heart failure with some quite serious and complicating sequela. The pulse was rapid and intermittent throughout, and as soon as the heart's action became sufficiently quiet to allow accurate observation, a reduplication of the first sound was heard, which continued until thoroughly convalescent. The sounds would be represented by lub-ud-tip, but I quite often for days would hear the fourth sound like this lub-ud-te-tip. But the first was the more frequently heard. About the second week serious œdema of the lungs took place, and for nearly a month he was obliged to spend his time in a chair. During most of his illness marked dropsy of the lower

limbs was also present. All of these conditions slowly improved, and he went about his work for a few of the summer months and was occasionally in the saddle. In the early autumn he again failed, showing many of the same signs as in his winter attack; walking became well nigh impossible with bad digestion and worse nights. In desperation he spent six weeks in New York under the most favorable auspices and the most eminent medical advice, but failed gradually and surely.

On the morning of the 11th inst., after passing a fair night and eating a light and well-relished breakfast, lay gently back upon the pillow, and with scarcely a moment's warning expired.

The autopsy was performed 48 hours after death, in the presence of Drs. Burwell, Folwell and Cary. The right pleural cavity contained three pints of fluid, but showed no other signs of pleurisy. The left pleural cavity was normal throughout, save slight adhesions between the pleural surface in the interlobar fissures. The lungs were normal. The pericardium contained 13 drams of clear fluid, but no signs of inflammation. The heart was large, weighed twenty-three ounces, and the aortic valves held water. The endocardial surface was mottled with light colored spots.

In the cavity of the left ventricle was an old thrombus, firm to the touch, gray and laminated, oval in shape, larger than a silver dollar, and at its center a sixth of an inch in thickness. This was firmly adherent throughout, and when detached left an irregular spot of from one-half to two-thirds of an inch in diameter, denuded of endocardial membranes.

The entire wall of this ventricle, in the locality, showed typical signs of fibroid degeneration. The valves were normal in shape, but all showed the results of inflammation. Microscopic examination demonstrated marked fatty degeneration.

The liver weighed five pounds, the kidneys nine ounces each, and were all granular and over firm to cut and feel.

This case seems worth recording as a typical instance of the remarkable fatality among our active men of 60 to 65 years of

age. Among the prominent families of our city we see a community of widows, the large majority of whose husbands have died between the years just mentioned.

Again, the case singularly illustrated the persistence of certain diseased tendencies. The subject was a man of remarkable judgment and unusual self-discipline. He was perfectly aware of his peculiar inheritance, and in general his life was ordered with the hope of keeping the evil tendencies of that inheritance in check. His occupation and tastes were favorable to the promotion of health. He had been remarkably preserved from the depressing effects of poverty, care, reverses, or disappointments. He had been loved and honored at home and abroad, and yet he was cut off in the zenith of his old age, with the visceral manifestation of his family's enemy, "inherited gout."

On looking over his life and habits, there was nothing I could find to criticize, save the fact that he was over fond of sweets, pies, preserves and candy, and his use of them amounted to intemperance. Then he was for years quite intemperate in the use of ice water, but we would hardly make of this a serious dietetic error.

The condition of the kidneys was that of chronic Bright's disease, and yet up to the last week of his life his urine contained no albumen. This fact is worthy of note in connection with the importance attached to the presence or with the absence of albumen from the urine. Plainly, the absence of albumen gives no warrant for the opinion that the kidneys are healthy; and it seems to be equally plain that in the presence of inherited gout there are no such things as "trifling dietetic errors."

TREATMENT OF HERPES ZOSTER.

Reported by John Boardman, M. D.

Case—M. D. came into my office with an interrupted band of herpes zoster, extending on the right side the vertebræ to near

the pubis, which he discovered two days previous. I ordered him to use the following prescription :

℞ Carbolic acid ℥ii.

Ol. oliv ℥i.

Signa : Rub well on the parts two or three times daily.

I did not see him for a week when the eruption had disappeared, only a few dry crusts remaining. He stated that after the second application the burning of the parts was relieved.

My purpose in this brief report is to direct the attention of the profession to the use of carbolic acid in the treatment of "shingles," as it has been very successful in my hands.

Translations.

CONTRIBUTION TO THE CAUSISTRY OF HEREDITARY SYPHILIS, BY DR. W. LEWIN, OF FRIEDRICHSBERG.

From the German by P. W. Van Peyma, M. D.

In No. 3 of the *Berliner Klinische Wochenschrift*, 1876, Prof. Lewin in his article upon hereditary syphilis, calls attention to a very characteristic symptom of this disease, the separation of the epiphysis from the diaphysis of the tibia. Since the number of cases in which this condition was recognized during life is still limited, I take the liberty of reporting the two following cases. The first of these, I observed in January, 1876. On the 20th of the month mentioned, I was called to see a child four months of age. As I entered the room, a noisy snuffling of the child attracted my attention. There existed a purulent discharge from the nose, with erosion of the nostrils and the upper lips, and rhagades at the corners of the mouth. The eyes were inflamed, the forehead glistening, indicated a former eruption. The skin was generally dry and scaly. Both arms were enclosed at their lower third in cotton batting. A physician previously called having declared both arms to be fractured, and in truth

an exquisite crepitation was obtained upon moving the epiphyses upon the diaphyses, proving that the former had become separated from the latter.

That this condition was a result of congenital syphilis admitted of no doubt. The subsequent anti-syphilitic treatment failed to ward off death, the child dying ten days after from exhaustion, having been unable to nurse on account of the rha-gades about the mouth.

The second case I observed during December of the preceding year. At eight in the morning I was called to the house of coachman L., of Berlin, whose child had been ill for a considerable time. I found the same to be four months old, and extremely cachetic. The skin was dry and scaly. The extremities presented a limited scaly eruption. The nostrils as well as the upper lip were eroded, the conjunction swollen so that it was with difficulty that the orbit could be uncovered. The palms of the hands and soles of the feet were characteristically glistening, as I have often observed after the healing of syphilitic eruptions. For these reasons I was convinced that the case was one of congenital syphilis. This conviction was strengthened to absolute certainty when the mother of the child informed me of the fact that the left arm as well as the right knee presented a tumefaction. Upon rubbing the epiphysis of the left humerus against the diaphysis of the same, a distinct crepitus was felt. A similar result was obtained upon moving the lower epiphysis of the right femur against the diaphysis of this bone. Both epiphyses were also decidedly enlarged. By percussion I could not determine that the liver and spleen were enlarged.

Upon remarking to the mother that the child must have suffered from an eruption some weeks after birth, she replied that the child had been covered with red spots which later had desquamated. The child died after twenty-four hours.

The first of the cases reported, presented some additional points of interest. The mother of this child lived in concubin-

age with a man in whom, upon examination, I was unable to find any indications of syphilis. An examination of the mother gave likewise negative results. She, however, informed me that she had previously had a child by another man, which child, according to the attending physician, had died of enlargement of the liver and spleen. With good reason it may be assumed that this child was syphilitic. If this was the case, it furnishes a confirmation of the views first advanced by Furth and Caspary that "women who bear syphilitic children by syphilitic fathers, are themselves infected, even though they present no apparent symptoms of syphilis." For the father of this child was without doubt perfectly healthy.

A similar observation that I had opportunity to make sometime since confirms this view.

On the twenty-eighth of December, 1874, I was called by B., by occupation a potter, to see a seven months' fœtus which had died one-half hour after delivery. It presented a well-developed syphilitic pemphigus of the palms of the hands and soles of the feet. Upon closer inquiry I learned that the mother had previously aborted at three months. Neither she nor her husband, who willingly submitted himself to examination, presented symptoms of a former infection. The woman, however, informed me that she was married for the second time, and that her first husband died of syphilis in a Hamburg hospital.

Here also the wife of a syphilitic husband remained apparently healthy, notwithstanding which she afterward gave birth to a syphilitic child by a healthy husband.

Selections.

TREATMENT OF PUERPERAL HEMORRHAGE.

By Dr. T. Gaillard Thomas, of New York.

Certainly no one can reasonably doubt that either of the subjects—hæmorrhage before labor, hæmorrhage during labor, and hæmorrhage after labor—is more than can be properly managed in one evening, and it is next to impossible to do justice to any one of them in the short time which I shall feel at liberty to occupy.

I hardly know how to group these varieties of hæmorrhage, for there are so many differences between them, but the only way in which, as it seems to me, they can be grouped, is to touch upon the general features which they have in common.

I suppose we all agree that the pathology of post-partum hæmorrhage is this: that those influences by which nature ordinarily seals the large sinuses of the uterus, which pass through the uterine wall and enter the placenta, fail to act, and that those influences which ordinarily prevent hæmorrhage from taking place in every case of labor, are these and no others.

In the first place, every one of these sinuses is surrounded by uterine muscular fibres, circular and longitudinal, which contract and ligate the vessels so that, to a certain extent, each vessel is closed by uterine contraction. This influence resembles the ligature which our old teacher, Ambrose Pare, taught us to apply to the mouths of bleeding vessels. But there is another influence, and that is, coagulation of blood in the mouths of bleeding vessels; the formation of thrombi which hang into the uterus, and which are the cause of after-pains in multiparous women, because they act as a foreign body in the cavity, and irritate the organ into contraction.

I presume no one will doubt that these are the influences, and the only ones, which ever prevent uterine hæmorrhage; and it seems to me that upon the mind of the student the fact should

be so firmly fixed that he can never forget it, *that there are no other* influences which prevent uterine hæmorrhage.

But in ante-partum hæmorrhage—that hæmorrhage which occurs before labor, and also that which takes place as accidental—unavoidable hæmorrhage when labor comes on—another influence is brought to bear which does not exist in post-partum hæmorrhage, namely, pressure and counter-pressure, pressure of the bleeding placenta and the bleeding wall of the uterus directly against the resisting body of the child. So in ante-partum hæmorrhage there are three influences which act in arresting the flow of blood:

1. The contraction of uterine fibre causing constriction of blood-vessels.
2. The formation of thrombi, and
3. Pressure of bleeding points directly against the resisting body of the child.

In post-partum hæmorrhage there are only two influences acting:

1. Constriction of blood-vessels by uterine fibre and
2. Coagulation of blood.

This being the case, we have, in the study of the etiology and treatment of this complication, to keep these points clearly and distinctly before our minds.

Just here I must say—and I hope I have not arrived at the time of life when I have become *laudator temporis acti*—I believe that we have not advanced very much from olden times. So many individual remedies have been brought forward that the student is entirely dazed when he comes to the scene of action. The number of remedies dances through his mind, and he loses sight of the pathology and of the landmarks which should guide him. Dr. so-and-so injects hot water, doctor so-and-so injects a solution of persulphate of iron; doctor so-and-so compresses the aorta; and he loses sight of the real condition which he meets.

The point which I wish to make is this: I believe so much has been written upon this subject that even men of large exper-

ience are often seized with hesitation concerning the common-sense line of practice which dictates itself, and by which they should be guided at the bedside.

Now, with regard to the etiology of this condition. As Dr. Stuart has hinted in his paper, hæmorrhage which occurs after delivery is commonly due to hasty action on the part of the obstetrician, in effecting rapid delivery. I think that a good obstetrician will have, in his own practice, but very little experience in post-partum hæmorrhage, and for the reason that well-managed cases of labor will rarely be attended with this complication. It occurs much more frequently in cases managed by men who do not allow nature to deliver the child; who do not superintend the third stage of labor, and who do not fix in their minds the fact that the third stage of labor consists, not in the delivery of the placenta, but in *persistent uterine contraction*. The man who has this fact imperfectly fixed in his mind will often have to deal with uterine hæmorrhage; while the man who feels it to be his duty to turn his entire attention, not to the dressing of the navel or arranging the bed or the patient, but to seeing that the third stage of labor—persistent uterine contraction—is thoroughly completed, will have only a slight experience in this direction.

But this remark does not apply to ante-partum hæmorrhage; for when the placenta is so located that it is torn off, hæmorrhage is inevitable, and no man, or method of cure can prevent it from occurring. With regard to prognosis, I think, as a rule, it depends very much more upon the physician in charge than upon the condition which he is called to treat. I think that a case of puerperal hæmorrhage, well managed from the beginning, whether ante-partum or post-partum, will generally end well. There are many cases, such as mentioned by Dr. Stuart, in which women will die from the loss of a very small quantity of blood. There are women who have the hæmorrhage diathesis, and who will die despite everything which can be done, for they would die from bleeding of the gums, from epistaxis, or have fatal bleeding sweat; but such cases are only very rarely seen, and altogether exceptional.

The rule, I think, is this: That a case of puerperal hæmorrhage, whether ante-partum or post-partum, if managed carefully and thoroughly in the beginning, will almost invariably recover.

Now, with regard to treatment. Time will allow of only a superficial review of this part of our subject, and I shall, therefore, deal almost entirely with leading principles, and avoid speaking of details.

Dr. Stuart made the remark that if we would look upon uterine hæmorrhage as subject to the same general principles of treatment as other hæmorrhages were, the question would become a very simple one. Upon that point I agree with him entirely, and I think that is just what we all should do. To go back to the pathology of our subject, let us suppose that we have to deal with hæmorrhage from any part of the surface of the body. By way of illustration, I will take one of the most difficult parts in which we are called upon to treat hæmorrhage, namely, a deep incised wound of the palmar arch. What are the principles upon which hæmorrhage is controlled in that region? The first old woman who sees the bleeding would put into the wound something—such as cobweb, shavings of leather, pieces of lint or cloth—which would clot the blood, and when the surgeon arrives he usually finds that the hæmorrhage has been controlled; for the old hussey has favored the formation of a clot which naturally seals the bleeding vessels. Now, this is one of the methods by which nature checks the hæmorrhage. The surgeon, however, when he comes, ligates the divided blood-vessels; and so does the uterus, by its contraction, ligate the open vessels; and so does the obstetrician, who meets these cases intelligently, ligate each vessel; and he does so by forcing the uterus to contract by the treatment which he adopts.

But suppose all the divided vessels in the palm of the hand cannot be ligated; one, two, or three are secured, but still oozing of blood goes on. It is said by surgeons that one of the best methods of procedure under such circumstances is to place a billiard-ball, or some similarly-shaped hard body in the palm,

and strap it there firmly by means of a bandage. Although you do not see the vessels which are open, you control hæmorrhage by making pressure and counter-pressure in their immediate neighborhood.

Gentlemen, every one of these principles is applicable in the treatment of uterine hæmorrhage. Let us begin with the treatment of hæmorrhage occurring in a woman whose labor has not yet begun. This woman has a child or children and liquor amnii in her uterus, the os of which is undilated, and she is bleeding. The first remedy which should be adopted in such a case, unless the hæmorrhage is furious, which it is not usually, is the tampon. The tampon is a perfectly safe remedy while the uterus is filled with a child and liquor amnii. Of course there is such a thing as internal hæmorrhage, but if the uterus be watched and brought into firm tonic contraction, such an hæmorrhage is impossible. How do we stop the hæmorrhage with the tampon? It is by causing coagulation in the blood-vessels of the uterus and the placenta. Just here I will say that I disagree with Dr. Stuart concerning the occurrence of hæmorrhage from the placenta; for, through a speculum, I have seen the blood distinctly oozing from the organ. The tampon stops that; but the obstetrician must not put in a tampon and go away, for internal hæmorrhage may take place, which will kill the woman. But by watching the uterus, and keeping it in firm contraction, the tampon can be used with perfect safety; and in fifteen out of twenty such cases the tampon will be all that is necessary.

When I speak of the tamponing, however, I do not mean that painful and efficient measure known to our grandfathers, which consisted in stuffing a silk handkerchief into the vagina, or in using the kite-tail structure which accomplished nothing towards obtaining the desired result, but I mean the tamponing which is secured by placing the woman upon her left side with one arm thrown behind her, and, with Sims's speculum or the two fingers of an assistant, lifting the perineum and depressing the anterior wall of the vagina, removing all blood from the vagina, and then

taking balls of wet cotton, not containing any astringent whatever, and stuffing them all around the cervix so as to make a collar, and then thoroughly filling the entire vagina with this wet cotton. You will then prevent distension of the uterus with blood by having it kneaded, and adopting other means ordinarily employed to secure tonic uterine contraction.

But suppose the hæmorrhage goes on, and, despite your efforts, the uterus is becoming distended? Suppose the method you have adopted is a failure? You will then sweep away the cotton from the vagina, pass the uterine sound in the os, plunge it into the bag of waters, allow the liquor amnii to escape, and then you will have a billiard ball in the form of the body of a child, pressing against the placenta. Then irritate the uterus by external pressure and kneading, administer ergot or ergotine hypodermically, and you will cause it to drive the body of the child against the bleeding placenta, and in most cases, check the hæmorrhage at once. But suppose these two operations are both failures; the woman has become pallid, perhaps is rapidly sinking away, what then? Empty that uterus at once; tie its blood-vessels, just as you would cut open these tissues, get at the bleeding vessel, and secure at all hazards. Now you will open the mouth by means of Barnes's dilators—do it rapidly—accomplish complete dilation by means of the hand folded into a cone, open the fingers and spread the tissues out, pass the hand safely into the uterus, draw out the child, remove the placenta, and instantly ligatures are applied to the mouths of the bleeding vessels, and hæmorrhage ceases in most cases. But the question may be asked: Is that all there is of the treatment of ante-partum hæmorrhage? I will answer, absolutely, all that is of any value. You might inject hot water, but, *cui bono*? I think you are wasting time by resorting to other measures, and, besides, they are not applicable when the child's body is within the uterus.

Now, what is the treatment for hæmorrhage occurring—the placenta being separated—as labor is progressing? The woman

is in labor and she gets up, walks across the room and strikes against the table, and immediately begins to bleed; what shall be done? The plan of treatment is identical with that just described. Tampon the vagina and let the labor go on; and if that does not answer, break the bag of waters; and if that fails, empty the uterus, remove the placenta and so ligate the vessels. But there is another kind of parturient hæmorrhage which differs from this entirely. It is where the placenta is eccentrically placed. In that case not one of these principles can act. In the first place, the mouths of the vessels cannot be sealed with coagulated blood so as to arrest the hæmorrhage permanently, for the reason that no sooner is one set of vessels closed than another is freshly opened, and unless something more is done, the woman dies in the first stage of labor. Consequently, coagulation of blood and the formation of thrombi cannot be counted in placenta prævia.

How about pressure and counter-pressure? The child is clear above the placenta, and we cannot depend upon that, for the head is out of reach.

How about ligation of blood-vessels by means of uterine fibre? The cervix contracts very badly at best. Besides, nature wishes to have it open; consequently, we are cut off from all three resources, and thus it is that hæmorrhage with placenta prævia is the most difficult form to treat.

In placenta prævia all the forces of nature are prevented completely from coming into action. There are no thrombi, practically, in the mouths of the bleeding vessels; there is no constriction in the mouths of bleeding vessels, and there is no pressure and counter-pressure. Now, the first stage of labor with placenta prævia is one of danger, while in the second stage, when pressure and counter-pressure exists, the rules for its treatment are just as simple, if common-sense is followed, as are the rules which apply to the ante-partum period. In the first place, stop the flow of blood, make coagulation complete as rapidly as possible by means of the tampon. When the tampon is used in the pro-

per manner, it not only favors rapid coagulation in the mouths of bleeding vessels, but it does something more—It makes direct pressure as you would do with a billiard-ball in the palm of the hand.

My plan is, when I wish to tampon a woman for placenta prævia, to take an ordinary piece of linen, make a comical bag, stuff it with carbolized cotton until it is quite hard, and sew up the base. I then turn the woman upon her left side, introduce a Sims's speculum, remove all the blood I can, and then push the apex of that cone into the uterus as far as I can make it go. It can do no harm. I then tampon around it, fill the vagina, and put on a strong T bandage, which keeps the compress against the cervix constantly, and when the uterus contracts it is forced upon this cone, and gradually three things are accomplished; *First*, coagulation of blood is favored; *second*, the cervix is dilated by the pressure of the elastic plug; and *third*, direct pressure is brought to bear upon the bleeding vessels.

Suppose the tampon is left in the vagina for three hours, and the labor is going on all the time; the good it does is, that it allows the first stage of labor to be completed without the woman dying. When the first stage is accomplished, delivery can be effected at once.

Suppose the os has become fully dilated, or is completely dilatable; the hand can be passed, and if the woman is still bleeding, the next thing to do is to empty the uterus at once, cause firm contraction to follow, and the case is usually at an end.

But let us suppose, despite the tampon, that the woman bleeds so much that, by the time the os is fully dilated, both mother and child will be dead. I think the thing to be done under such circumstances is to adopt Simpson's method—remove the placenta and leave the child to be delivered by nature. The labor may cease for awhile, but in the meantime the woman is resting; you are giving nourishment and stimulants, perhaps bandaging her legs and applying tourniquets, in order to give the greatest possible supply of blood to her brain; and, finally, labor is re-

vived and completed. The child you say will be dead; and so it would have been if delivered by version.

Now, gentlemen, I must apologize for taking up so much of your time; but really, it is your fault and not mine. But you will permit me to say that I believe, if the general practitioner, who not infrequently loses sight of principles and becomes frightened when he meets a case of post-partum hæmorrhage, will bear in mind the fact that he is to secure immediate ligation of bleeding vessels, his task will be comparatively simple. If he fails, he must try something else; and it seems to me that the great rule is this: Put your hand up to the fundus uteri, turn out everything—a second child, if there be one—the placenta, clots of blood, and then, passing the palps of the fingers rapidly over the walls, scraping the walls with them; and I believe if this is done thoroughly, there are but few cases in which you will be obliged to inject iron, or hot water, or adopt any other measure for arresting the hæmorrhage.

I have not met with but one case in which I have injected astringents into the uterus, and then the patient was nearly in *articulo mortis*.

The particular point which I wish to make is this: In ninety-nine out of one hundred cases of post-partum hæmorrhage, seen before the woman's nervous system is entirely prostrated, if the hand is properly introduced to the fundus of the uterus, everything turned out, and the walls of the organs irritated with the palps of the fingers, firm uterine contraction will take place. I do not believe there is any remedy to be compared with it, any more than I believe there is any remedy in the treatment of malarial fever to be compared with quinine.

But let us suppose that in the one hundredth case it fails to accomplish this result. Then it is said there are other agents which stimulate the uterus more than the hand. I do not believe a word of it. I believe there are things which have stimulated the uterus to contraction where the hand has failed; but I also believe it was the hand of a man who has not used it properly.

With reference to the injection of a solution of iron, as recommended by Dr. Barnes, I reject the measure entirely and absolutely, except as a *dernier resorte*. Hot water may be injected to the fundus with perfect safety, or put there in a sponge, and it will be very likely to stimulate the uterus; but not nearly so well as the hand. How did Dr. Stuart's sponge effect the result which he mentioned? I do not believe that it was the hot water which it contained, but the sponge itself, which, as a foreign body, was brought in contact with lax fibres of the uterine wall, and stimulated them to contraction. Another substance which has been used is the tincture of iodine; and still another, which I regard as better than iodine, and which has been highly recommended by Dr. Penrose, of Philadelphia, is common vinegar. One advantage which vinegar possesses is that it can be obtained in any house. It may be carried in upon an ordinary handkerchief, or bit of soft cloth, swept over the walls of the uterus, and two things are accomplished: 1. The introduction of a foreign body causes the uterine fibre to ligate the bleeding vessels; and 2. The vinegar probably has some influence in causing coagulation of blood. But I am not sure that it is not the hand even then which accomplishes the end desired.

In the hypodermic use of ergot we have a most valuable measure to aid us in securing uterine contraction. To give this remedy by the rectum is hardly practicable, and if administered by the mouth, the woman will almost certainly vomit at once; and besides, if it remains in the stomach I doubt if it is absorbed under such circumstances.

The hypodermic injection of 15, 20 or 30 drops of sulphuric ether stimulates the nervous system, and in that way arouses the uterus to accomplish its work.

But there is one remedy which has been overlooked. In works on obstetrics it is scarcely mentioned, and it has received very little mention in periodical literature. It is the Faradic current applied directly to the uterine wall. I have employed it in only one case, but others have used it successfully, and in my

case it was either a coincidence or an extraordinary result. Almost everything had been used except Dr. Barnes's method, and without permanent result; but when I took one flat spongy electrode and carried it into the uterus, and placed the other upon the nape of the patient's neck and allowed a strong current to pass, firm uterine contraction immediately ensued, which seemed to save the woman's life. Although this is but a single case, I think the remedy is worthy of a fair trial. The question arises, Why has it not been tried before? Chiefly because a battery was not at hand and could not be obtained, and when obtained, as a rule, it would not work, never under any circumstances. But those days have passed. Nearly every physician has a battery now, and a good battery can be obtained much more rapidly anywhere than good ergot, except in Brooklyn.

Now, in conclusion, Mr. President, I will say that in the treatment of post-partum hæmorrhage the rule should be this:

If the hæmorrhage is slight, and for good reasons you do not wish to pass the hand into the uterine cavity, try the hypodermic use of ergot; apply excessive cold or excessive heat to the fundus, force the uterus into firm contraction under your hand, and never let go of it until the woman stops bleeding. How long shall you hold the uterus? I have repeatedly held it, under such circumstances, for twelve hours.

But suppose it fails and the hæmorrhage continues? Then wash the hand and arm thoroughly with soap and water, use a nail-brush thoroughly; dip the hand and arm in warm, strong, carbolized water, and, without wiping them, carry the hand up to the fundus uteri, sweep everything out, and keep the hand there until the uterus contracts. Pass the palm of the fingers up and down the sides of the uterus in any direction, and at the same time make counter-pressure from the outside with the other hand upon the wall of the abdomen.

If you fail with this, what next? It is a bad case, and you may resort to anything which produces a decided shock to the nervous system; give hypodermics of ergot; brandy and ether

hypodermically ; and, lastly, give a fair trial to Faradic current. —*The Proceedings of the Medical Society of the County of Kings, N. Y.*

Editorial.

“ BY THEIR FRUITS YE SHALL KNOW THEM.”

The necessity for a higher standard of medical education has long been recognized by the enlightened and progressive members of the profession, and a steady advance in this direction is the outgrowth of the discussions, which, during the past decade, have occupied so much of the time and attention of medical societies. This movement for a more thorough preparation of the men who are sent forth from our medical colleges, duly invested with the legal authority to practice medicine and surgery, has arisen from the necessity that with the growth of the country in wealth and population, the standard of the learned professions should keep apace with the progressive ideas, prevailing in social as well as in scientific circles. The public also have recognized, in common with the profession, the dangerous consequences of the laxity, heretofore prevailing in the education of those to whom their sanitary interests are intrusted. The pressure, therefore, from without, and the plain defects acknowledged to exist within the profession, have begun to yield fruits through the advanced curriculum, adopted at Harvard and several of our leading medical schools.

We refer to this subject at this time, because circumstances have of late arisen in this city, which demonstrate forcibly the disastrous effects of a disregard of the interests of the community in the character and the professional attainments of those sent forth to guard and protect its sanitary interests. A better illustration of the danger to communities of empowering irresponsible parties with authority to determine

the qualifications of candidates for the degree of Doctor of Medicine, has rarely been afforded than is at present witnessed in the northern portion of this city, in which prevails an endemic of Variola, arising from one or more cases of this loathsome disease, which had passed through the successive stages until convalescence was well assured, without being diagnosed by the practitioner, to whom the medical care of the patients was committed. One of these cases had been sick nearly three weeks, and during this period had exposed the entire neighborhood which was in ignorance of the true character of the disease with which they were surrounded. These patients were under the care of one Von Schulenberg, who holds a degree from the defunct College of Physicians and Surgeons in this city, the charter of which, by the late decision of the Supreme Court, was declared null and void.

We have heretofore refrained from any criticism of this institution, or reference to the real dangers to the public, to which its establishment and continuance have given rise. This illustration of the ignorance of one of its graduates more forcibly demonstrates its true character than any argument we could present. It justifies the action of the county society in taking steps to test the validity of its charter, which happily for the public resulted in closing its doors. It exposes the true character and motives of its faculty in turning loose upon the community, under the assumed authority of its illegal diplomas, ignorant men, to swell the army of imposters and quacks who play upon the credulity of the public, often with more fatal consequences than is experienced in the present endemic. In the minds of the community at large, it depreciates the high and noble purposes of the science of medicine, through the lamentable deficiencies of those who are mere pretenders, without either legal, professional or intellectual qualifications for its duties.

While the profession have been alive to the dangers which were surely to flow from such a source, the law in its operations

has been slow to interpose its authority, and serious mischief has been perpetrated through which human life is sacrificed, and the legal safeguards upon which the public depend for its protection against infectious diseases, made of no effect. It is only a pestilence which devastates communities and scatters death upon every side, that awakens a realizing sense of prevailing dangers. This instance shows that there are agencies requiring the strong arm of the law, and the force of an enlightened public sentiment for their control. We hope this, among many others which we could mention, may serve to elucidate the need of higher medical education, and the abolition of medical schools which, with sinister motives, foster professional ambition at the expense of human life.

It is only necessary to direct attention to the wanton ignorance of the pretender through whom an entire community has been needlessly exposed to one of the most loathsome of the infectious diseases, to enable the profession and the public to trace the responsibility to its rightful source; while we may entertain the hope, that, through such experiences a higher appreciation of legitimate medicine may result, and the dependence of the public upon its skill and knowledge in the guardianship of the public health more fully demonstrated and acknowledged.

THE ERIE COUNTY MEDICAL SOCIETY.

THE ANNUAL MEETING.

On Tuesday, January 10th, the annual meeting of the Medical Society of the county of Erie will be held at the Buffalo Medical College. The business, coming before these annual gatherings of the profession, possesses little of general interest, but the meetings being required by statutory provision, bring together members from city and towns alike, and through mutual inter-

change of thought and feeling lead to a better acquaintance and to a wider sympathy and more earnest interest in the general interests of the profession.

The most important matter to be considered at this meeting is the action of the Board of Censors in relation to the new medical law. At the last annual meeting authority was given to institute legal proceedings to test the validity of the charter of a medical school, located in this city, which was issuing diplomas without due warrant of law. We have published the result of the trial, as given in the able decision of the Hon. Geo. Barker, Judge of the Supreme Court, and published in full in the September number of this journal. The Censors, successful in their first step against a dangerous source of bogus diplomas, have, as far as we are informed, ceased from their labors, to await, we presume, further instructions from the Society. But the inquiry is a pertinent one; why wait for the annual meeting? Is the medical law, from which so much was expected, so loosely drawn up that imposters and quacks can slip through its meshes with impunity and defy both law and decency by continuing their nefarious traffic with human life? Is there no protection for legitimate medicine except that which proceeds from its own inherent merits, and the recognition of its earnest labors, and its sacrifices in behalf of the maimed and the suffering from the enlightened and intelligent sentiment of the public? We confess to a feeling of distrust for all and every movement inaugurated for the special purposes for which past legislation has been enacted, if this effort fails to accomplish anything, either to protect the public or to benefit the profession. To the Board of Censors we look for an explanation of their long silence, which we do not wish to construe as due to apathy towards the great interests involved in the vital questions intrusted to their charge, and we hope their report will present the entire subject, and their action in the premises in a satisfactory light before the Society. Until that time we refrain from further criticism as to the law and its operations.

THE SUCCESSOR OF PROF. JAMES P. WHITE.

We are happy to announce that Dr. M. B. Mann has been selected to fill the vacancy in the staff of the Medical College, caused by the death of Prof. White. He delivered his first lecture on the 27th ult. His style is quiet and impressive, his reasoning close and argumentative, his voice is clear and distinct. He was evidently quite at home with his subject, and by a persuasive, conversational, didactic manner, without any attempt at oratory, conveyed his instruction in the way best calculated to make it understood and remembered. Altogether he made a very favorable impression. Dr. Mann is about thirty-six years of age, he was for three years the assistant of the eminent Dr. Thomas, of New York, who recommended him very highly for the position, to which he has been called. Dr. Mann has been the Professor of Gynecology in the medical school of Yale college for several years, and has practiced exclusively as a specialist in diseases of women, at Hartford, which city has been his residence during his connection with Yale. He has left a successful and lucrative business, to come to a larger field both of teaching and population. He does not design to engage in general practice, but will confine himself to consultations in midwifery, and to the treatment of gynecological disorders. He will bring his family here in the spring. In the meantime he has taken offices at No. 7 W. Chippewa street. We are glad of his accession to the medical profession of this city and extend to him a most cordial welcome.

EDITORIAL NOTES.

Malignant scarlatina is prevailing in the eastern portion of our city to quite an alarming extent.

Dr. B. H. Grove has left for Europe, to prosecute his studies in ophthalmology and otology, to which specialty he intends to devote himself in the future.

We learn that our talented young friend Dr. F. Peterson is in Vienna, studiously engaged in the lectures and clinics of that great medical centre, and improving the vast advantages there offered.

The many friends of Dr. Miner will be gratified that his health is so far restored that he has been able to deliver his lectures on Special Surgery, and to attend to the surgical clinics at the Hospital.

We offer no apology for furnishing among our selections the able paper on "Puerperal Hemorrhage," by Prof. Thomas. The subject and the manner in which it is presented by the scholarly writer, call for an attentive study by our readers.

The Report of the Engineers to whom the plans of the Great Trunk Sewer were submitted, affords renewed hope that this work, demanded by the sanitary condition of Buffalo, will not be long delayed. The sewer should be constructed as soon as possible. Human life is more valuable than the millions which the sewer may cost.

The changes in our municipal government, with the advent of the new year, will retire Dr. A. H. Briggs, the Health Physician, from the direction of the sanitary interests of the city. We take pleasure in bearing our testimony to the zeal and energy of Dr. Briggs in the position he has filled for the past two years. Under a very inefficient Health Board, it is a matter of surprise that so much has been done to guard the sanitary interests of the city, for which great credit is due the retiring Health Officer.

The lectures at the Buffalo Medical College are progressing favorably, with a large and excellent class in attendance. In our editorial columns we have noticed the appointment of Dr. Mann, of Hartford, Conn., as Lecturer on Obstetrics. Prof. Doremus has completed his course in chemistry, and left for New York. Dr. Andrews has closed his admirable lectures on Insanity. Dr. Lothrop finished his lectures on Hygiene on the 12th. Prof. Mason is occupying the latter half of the term with daily lectures on Physiology.

Reviews.

The Practice of Medicine and Surgery, applied to the Diseases and Accidents incident to Women. By W. H. BYFORD, A. M., M. D., Professor of Gynecology in Rush Medical College, etc. Third edition, thoroughly revised and rewritten, with one hundred and sixty-four illustrations. Philadelphia: Lindsay & Blackiston. 1881.

The favor with which this valuable contribution to gynecology has been received by the profession, is best demonstrated by the fact that the third edition has been called for within a comparatively brief period. Prof. Byford's reputation as a writer in this specialty is the best guaranty that the work here offered is fully abreast with the more improved ideas and methods in the diseases and displacements of which it treats. This work, issued about the same time with Emmett's and Thomas', has passed the ordeal of comparative criticism, and is regarded as an equally valuable reference and reliable as an authority. This is the most flattering compliment that can be paid to the work, and to the profession which has utilized the opportunities offered by a western city and its surroundings, in the careful study and observation of an important department of medicine. We regard the library of the specialist incomplete which fails to contain this important contribution, and therefore recommend it to the profession.

Indigestion, Bilioussness and Gout in its Protean Aspects.—Part I, Indigestion and Bilioussness. By J. MILNER FOTHERGILL, M. D., Member of the Royal College of Physicians of London, etc., etc. New York: William Wood & Co. 1881.

The accomplished author presents in this work an exposition of functional disturbances of digestion and assimilation from a physiological standpoint. We have felt the want of such a work in the daily routine of practice, and find here a clear and logical discussion of disordered function, the most satisfactory of any yet published. Nothing could be expected of the writer after a

perusal of previous contributions from his pen, but a valuable and thoroughly scientific production. It meets a want the practitioner often experiences, and will receive an appreciative response from the profession. We have not time to review its contents, but earnestly commend it as the best work on the subjects of which it treats, we have yet examined.

The Wilderness Cure. By MARC COOK, author of "Camp Lou." New York : William Wood & Co. 1881.

This little book of about one hundred and fifty pages, octavo, gives the experience of a consumptive patient in the Adirondack region. It includes a paper by Dr. Loomis, of New York, upon the advantages of this region to those affected with pulmonary disease, in which he gives the results of about fifteen cases. Of these but two fatal results are recorded, both tubercular phthisis. The great majority were decidedly benefited. Dr. Loomis speaks highly of this locality as a resort for those suffering from catarrhal or fibrous phthisis. The book is very interesting; this testimony is based on the fact that, on taking it up for the purpose of reviewing, we laid it down only when every word was read. The author's experience was remarkably satisfactory, and is detailed in a very entertaining manner. The book as a whole is very convincing as to the advantages of this resort.

A Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, etc. Fifth edition, thoroughly revised, with illustrations. Philadelphia: Henry C. Lea's Son & Co. 1881.

That a book has reached the fifth edition is, per se, a sign, both that it has gained the favor and confidence of the profession, and that it deserves it. It is therefore hardly necessary to do more than to announce the appearance of the fifth edition. The

author has rewritten portions of the book, and added especially to the therapeutics of the various diseases, but the work, although its usefulness is increased, is not materially enlarged by it.

The Anatomist, being a complete description of the anatomy of the human body, intended for the use of students preparing for examination at the Royal Colleges of Surgeons, and other medical bodies. Second edition improved and enlarged by the addition of 171 wood engravings. BY M. W. HILLES, formerly lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine. New York: S. P. Putnam's Sons. 1881.

A convenient little compendium, by aid of which students may easily recapitulate the whole anatomy.

Antiseptic Surgery: The Principles, Modes of Application and Results of the Lister Dressing. By Dr. JUST LUCAS, Champienniere Surgeon to the Hospital Tenon, etc. Translated from the second and completely revised edition, with the special sanction of the author, and edited by FREDERICK HENRY GERRISH, M. D., Surgeon to the Maine General Hospital, etc. Portland: Loring, Short & Hardon. 1881.

For more than a decade the antiseptic method of Joseph Lister has been known and appreciated on the continent. From England it has been introduced into almost every country, and uniformly the results have been the same, disappearance from the large hospitals of purulent infection as a complication of wounds, less frequency of erysipelas, rapid healing of wounds and a security and safety in operations, formerly considered dangerous or unjustifiable. In America the method is used only by the minority of surgeons, and its adversaries are many, often on account of disappointing results from incorrect use. We hail therefore with pleasure this little work, from which a perfect knowledge of the whole method may be acquired. A method by which such remarkable results as those of Volkman in Halle and many others have been accomplished, deserves to be known by every surgeon, and if we do not say, with Lorin, of Bale, "that every subject of amputation, who dies of purulent

infection or erysipelas, is a victim of ignorance, lack of skill, or neglect of the surgeon," we shall still maintain, that only in the antiseptic method is there security, and that the surgeon, who does not use it, subjects his patients to an unnecessary and often fatal risk.

A System of Surgery, theoretical and practical, in treatises by various authors. Edited by T. HOLMES, M. A. Cantab, Surgeon and Lecturer on Surgery at St. George's Hospital, etc. First American, from second English edition. thoroughly revised and much enlarged. By JOHN H. PACKARD, M. D., Surgeon to Episcopal and St. Joseph's Hospital, Philadelphia. Assisted by a large corps of the most eminent American surgeons. In three volumes with many illustrations. Vol. II. Philadelphia: Henry C. Lea's Son & Co. 1881.

The second volume of Holmes's Surgery, which has just made its appearance, is divided into four parts. Part I, treats the surgical diseases of the organs of special sense; eye, ear, nose and tongue. Part II, the surgical diseases of the circulatory system; veins, arteries (including a long treatise of Holmes on aneurism) and the absorbent system. Part III contains treatises on diseases of the digestive tract, being diseases of the mouth, teeth, intestines, rectum and also hernia. Part IV gives descriptions of diseases of the genito-urinary organs, including diseases of urinary organs by Sir Henry Thompson, urinary calculi and lithotomy, lithotripsy, diseases of the male organs of generation, gonorrhœa and surgical diseases of women. The articles are written by well known men, and revised by an able corps of American surgeons. The profession has therefore a guarantee that the work will represent the opinions of the best surgeons of both the old and new world.

A Hand-Book of Uterine Therapeutics and Diseases of Women. By EDWARD JOHN TILT, M. D. Fourth edition. New York: William Wood & Co., 27 Great Jones street. 1881.

The enterprising publishers of the Library of Standard Medical Authors could not have done a more valuable service

to the American profession than in furnishing this valuable work on uterine therapeutics. It needs no introduction to our readers at our hands, while words of commendation are superfluous. Dr. Tilt is an acknowledged authority in the special field in which he has labored, and his views and opinions have always received careful consideration in all English-speaking nations. We regard this reprint a most valuable addition to the library of the practitioner, even if he makes no pretense to the special treatment of the class of diseases it discusses. The book is furnished in the usual style of this series, but in plainer print than some of the preceding volumes. It deserves the endorsement of the profession.

The Science and Art of Midwifery. By WILLIAM THOMPSON LUSK, A. M., M. D., Professor of Obstetrics, etc., Bellevue Hospital Medical College. With numerous illustrations. New York: D. Appleton & Co., 1, 3 & 5 Bond street. 1881.

The appearance of this work at this time will be regarded with special interest by the profession, for the reason that the high estimate formed of the late Prof. Elliot, wherever either the man or his writings were known, will naturally inspire a widespread interest in whatever proceeds from the pen of his successor in the obstretical chair of Bellevue. There is too marked a tendency to book-writing, and this is especially so among the profession in this country. Prof. Lusk's work, however, shows a careful and painstaking labor, with evidences that his rare opportunities have been industriously improved. The result, as unfolded in the work before us, is highly creditable to the author, who presents an accurate statement of the practice and art of midwifery, as existing at the present time, with all the modern improvements and investigations. We have been rather skeptical as to the necessity of further additions to the already numerous authorities upon midwifery, but, in carefully reviewing this work, there is found sufficient to warrant the author to enter upon its preparation, and we are gratified with the manner in

which the task has been accomplished. The publishers present the work with fine paper and excellent type, making it especially attractive and worthy of a place in the library of the obstetrician. We are confident this fruit of the labor of Dr. Elliott's successor will maintain the high reputation which Bellevue has heretofore enjoyed, both as to the ability of its faculty and the professional soundness and erudition of their teachings,

The Therapeutics of Gynecology and Obstetrics, comprising the Medical, Dietetic and Hygienic Treatment of Diseases of Women. Second edition, thoroughly revised and enlarged. Edited by WILLIAM B. ATKINSON, M. D., Lecturer on Diseases of Children at Jefferson Medical College, etc. Philadelphia: D. G. Brinton, 115 South Seventh street. 1881.

The great favor with which the medical profession received Naphey's *Modern Therapeutics and Surgical Therapeutics*, induced the enterprising publisher to undertake the compilation of a like work in the special department of gynecology and obstetrics, and Dr. Atkinson's wide experience was utilized in preparing this work, which rapidly passed through the first edition. The second edition is much improved by numerous corrections in the text, and also by the addition of nearly two hundred pages of new matter. The work is equally valuable with those to which it is really supplementary, although in an allied department of medicine, and furnishes to the practitioner a compendium which economizes his time, and supplies such data in regard to the special morbid and surgical conditions of which it treats, as are called for by the daily demands of an active professional life. A careful review of the work makes a most favorable impression of its merits, and enables us to commend it to the profession.

A Manual of Ophthalmic Practice. By HENRY S. SCHELL, M. D. Philadelphia: D. G. Brinton, Publishers.

The recent appearance of one or two other hand-books on the same subject seemed to make a new one entirely uncalled for. The writer of this, however, has chosen his facts with strict

regard to their practical bearing, and arranged them in an attractive and instructive order, evidently intending to make it quite equal to any other work of similar size and scope. A very brief description of the anatomy of the eye introduces the reader to the subject, and then the various diseases are considered in detail. There is no striking originality in the manner of detailing the symptoms which accompany the different morbid conditions; and the methods of treatment advised, are usually such as have been confirmed by long experience. Moreover, the wood cuts, with which it is illustrated, are frequently recognized as figuring in older and larger books. But a manual is none the worse for presenting only classical views. Indeed, it should aim to present a clear and concise statement of the whole topic to those who are not already familiar with it, and as such, this one answers its purpose admirably. If a practitioner cares to study a case more thoroughly, he will turn to Wells, or Stellway, or other more complete treatises, but this little book is compact, it is practical, it is cheap, and thus recommends itself especially to students and to those busy in the details of professional routine.

Eczema and its Management—A Practical Treatise, based on the Study of two thousand five hundred cases of the Disease. By L. DUNCAN BULKLEY, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, etc. New York: G. P. Putnam & Sons, 27 and 29 West 23d street. London: J. & A. Churchill. 1881.

This important addition to the literature of dermatology represents the views and experience of the author, and in its pages there is observed, as a rule, an omission of references to the opinions and statements of other writers, the work consisting of personal experience, and the enunciations of principles, based upon wide observation, and careful and accurate study. The author takes the constitutional view of eczema, and many other diseases of the skin, a conversion from the views formerly held as to the local pathology of skin diseases, which he affirms is confirmed

by daily experience and study. The work is a most valuable one, giving an exhaustive discussion of one of the most intractable of structural changes met with by the profession. To the practitioner, whose field of observation is limited, but who is called upon to combat a chronic eczema, the present work affords a resource, from which can be gleaned valuable experience and practical aid in therapeutics, while the pathology of eczema, herein enunciated, leads to a rational basis upon which to establish a successful treatment. We herald such works with pride, inasmuch as they demonstrate that American dermatologists are taking front rank in a most interesting and difficult department of medicine.

Test-Book of Modern Midwifery. By RODNEY GLISAN, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Willamette University, and late President of the Oregon State Medical Society. With one hundred and thirty illustrations. Price, cloth \$4.00; sheep \$5 00. Philadelphia: Presley Blakiston, 1012 Walnut Street. 1881.

The publication of a work in any department of medicine by a writer residing in the far west, especially on the Pacific coast, is reversing the order to which the profession has been heretofore accustomed, hence we have perused this work with quite a critical spirit, but with the impartiality which we endeavor to bring to this important journalistic duty.

In the preface the author pleads, as the necessity for the work he presents to the profession, the demand for "a work which shall more thoroughly represent American obstetric practice," and thus endeavors to convey the impression that the reprints of the works of Playfair and Leishman, and the translation of those of Cazeaux and Schroeder are too strictly European to be adapted to our western ideas. We fail to find where the excellent works to which we have referred, have been improved upon in the work under consideration. If it is characterized by an

independence and vigor of expression, peculiar to the locality from which it originates, and by a boldness of practice and fertility of resource, the offspring of the free and vigorous spirit of the far west, we may expect to find a want of that fullness and accuracy, which the intellectual atmosphere of England and the Continent engenders. Prof. Glisan, however, presents a very excellent work. We doubt if it supplants the standard authors to which American obstetricians have been accustomed to refer. We commend it to the profession as an auxilliary to well-known authorities in this important department, not, however, fearing that its precepts will supplant the teachings of the old authors:

Essentials of the Principles and Practice of Medicine. By HENRY HARTSHORNE, A M, M. D. Fifth edition, thoroughly revised, and improved, with one hundred and forty-four illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1881.

The former editions of the "Essentials of Practice" are probably better known and more widely distributed than any other medical work, with the exception, perhaps, of "Gray's Anatomy" and one or two similar works. This being the case, we have only to note the changes to be found in the present edition. In the words of the author, "several hundred brief additions have been made throughout the work; a number of new subjects have been written upon, especially in connection with the pathology of the nervous system; the illustrations have been considerably added to, and a large number of new and carefully selected formulæ have been introduced. An account is given, also, for the first time of the method of prescribing according to the metrical system; and a section is added upon eyesight, its examination and correction."

To bring within the space of six or seven hundred pages octavo an amount of information so large and of such widely extended scope, of course necessitates great brevity and condensation. It follows that upon no subject can this volume be expected to furnish an exhaustive treatise. To give the out-

lines of our present knowledge and beliefs regarding the broad subjects of disease and therapeutics is the evident object of the author. In this he is remarkably successful. To the general practitioner, who is fully abreast with the times, the book may not present much that is new. Still there are few such, and when we consider the daily and too rapidly increasing number of medical students, no one can doubt that the book finds a large field of usefulness.

The Nurse and Mother: a manual for the guidance of monthly nurses and mothers. By WALTER COLES, M. D., Consulting Physician to St. Ann's Lying-In Asylum. St. Louis: J. N. Chambers, Chicago, Ill., St. Louis, Mo., Atlanta, Ga. 1881.

The title gives a sufficient idea of the scope and objects of this little book. It is really a very valuable little work, giving all that is important for the mother and nurse to understand, and doing this in a clear, common sense manner, devoid of all the little superstitions which cling so tenaciously to the subjects herein treated. We strongly recommend it to the attention of physicians, who, it is hoped, will do the same to their patrons. Every physician appreciates the annoyance of being continually obliged to combat absurdities of belief and practice as exemplified in the majority of nurses and in even a large proportion of mothers. This book will, if generally circulated and read, tend greatly to dispel these vagaries.

Library of Medical Classics. New York: Benningham & Co., 1260 and 1262 Broadway.

We have received the first three numbers of these pamphlets, treating respectively upon diseases of the rectum, diseases of women and venereal diseases. The author of No. 1 is Henry Smith, T. R. C. S.; of No. 2, J. Mathews Duncan, M. D., LL.D., T. R. S. E., &c., and of No. 3, Berkeley Hill, Prof. of Clinical

Surgery in University College, London, &c., with the assistance of Arthur Cooper, late house surgeon to the Lock Hospital. The names of the several authors are a sufficient guarantee of the classical character of these monographs. They are issued in pamphlet form, the prices ranging from 20 to 30 cents. No. 3 has also been published by William Wood & Co., under the title of "The Students' Manual of Venereal Diseases." The practitioner is recommended to give these monographs his favorable consideration, as by so doing he can inexpensively obtain a library, very valuable and of a comprehensive character.

Lectures on the Diagnosis and Treatment of Diseases of the Chest, Throat and Nasal Cavities. By E. T. INGALS, A. M., M. D., Lecturer on Diseases of the Chest and Physical Diagnosis, and on Laryngology in the Post Graduate Course, Rush Medical College, &c., &c. With one hundred and thirty-five illustrations. New York: William Wood & Co. 1881.

In the preface we find that "these lectures are designed to present a complete exposition of the subject of physical diagnosis so far as it relates to diseases of the chest, throat and nasal passages; to give the essential symptoms of each disease; to point out the symptoms and signs which are of most value in a differential diagnosis, and to outline briefly the proper treatment for the various affections. . . ." In the preparation of these lectures, the author says that he has availed himself of every source of information at his command, and he hopes that little has been overlooked which would be of value to the student and practitioner.

Our impression upon a more or less thorough examination of the book is that it fairly represents and elucidates the various subjects. The treatment of the sphygmograph is hardly equal to the importance of the subject. To those who have not already one of the many similar works, we recommend its purchase.

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CEPHALIC VERSION IN THE POSTURAL POSITION.

ADDRESS OF DR. JOHN HAUENSTEIN, PRESIDENT OF THE ERIE COUNTY MEDICAL SOCIETY. READ AT THE ANNUAL MEETING, JANUARY 10, 1882.

Gentlemen—The few remarks which I intend to make, in an attempt to fulfill the requirements of an established usage, I commit on paper at a time when I contemplate, after a residence in this city for fifty years, the realization of a hope I long entertained, once more to see my native country, and to enjoy a few days of recreation and also of profit if opportunities present.

Confident that the gentleman whose duty it will be to officiate as president in my absence, is well qualified for the position, and that the interest and welfare of the society will be represented by him with intelligence and prudence, the apology which I owe you for deserting the post of duty, need therefore but reflect my undeservedness of the honor you have conferred upon me. If my greetings to you are anticipated, I will repeat them in thought from afar, when my friend Dr. Bartow, whom I have delegated to present this paper at the proper time, will be granted the opportunity to read it. I sincerely hope that upon

my return, I shall find the good feeling of fellowship of the members of this society unimpaired, and that not a single one be missing.

It is customary on occasions like this to treat upon some popular subject, so that not only the physician, but also the public in general, may profit by the labor and efforts of him, who so happily may have chosen his theme. Most of such subjects, however, in order to attract attention, must be treated by those who wield an abler pen than mine. I will therefore confine myself to narrower limits, and say, although not without diffidence, what I have to say, on the subject which I have chosen, to my colleagues, and if it have any merits it will alone interest them.

In the course of my obstetrical practice it has been my lot to meet with a number of face presentations, mostly in consultation with the family physician, or to supersede a midwife in attendance; and ever since the postural treatment of the cord came into vogue, I have adopted a method in the management of face presentations, that invariably gave me satisfactory results. This method is *cephalic version* in the *postural position* or knee and chest position.

Authors on midwifery make no mention of the postural position in connection with the treatment of face presentations as far as I am aware, although I have searched quite a number of works; with but few exceptions, the modern accoucheurs do not favor cephalic version, but, on the contrary, there are some who denounce it most emphatically as a dangerous operation. There is no doubt in my mind that the condemnation of bringing down the vertex, regardless of posture, has arisen from the difficulty attending its execution, and the frequently complete failure of its accomplishment; and that, therefore, the older practitioners who thought active interference in face labors absolutely necessary, preferably performed podalic version.

Dr. Ramsbotham says: "Nor can we, indeed, succeed in producing the same alteration (to a vertex presentation) by the introduction of the hand over the vertex, the adaptation of the

points of the fingers to the occiput, and the application of gentle traction, as some have recommended." "When it is possible to push the whole mass back," writes Dr. Meigs, "and bring down the vertex, let it be done, if deemed really necessary, but the opportunity to do this good action will rarely occur in practice."

Says Dr. Cazeaux: "I am now convinced that this manœuvre (bringing down the vertex) will rarely prove successful, therefore it should be attempted very carefully, and pelvic version substituted for it without much delay." Dr. Playfair in passing stricture on Dr. Hodge, who is one of the very few that think cephalic version, in all cases of face presentation, should be made, if called early, the presentation recognized, the os uteri dilated, and before the presenting part has passed this opening, says: "It may, however, be allowable in certain cases in which the face remains above the brim, and refuses to descend the pelvic cavity. Even then it is questionable whether podalic version should not be performed, as being easier of performance." Dr. Leishman, referring to cephalic version, makes the following objection: "It was therefore a totally erroneous impression of the nature of these labors which led Baudelocque to suggest, and so many of his followers to adopt, an operation which is scarcely less objectionable than turning." It is needless, however, to quote authorities on this point, since it is generally agreed by them that it is a difficult operation, and that it had better not be done, except under very favorable circumstances.

But the case is changed at once when the woman is placed in the knee and chest position; an operation which before was most difficult to execute, becomes now one of comparative ease. The head of the child, which before applied itself firmly to the brim of the pelvis, has now receded so that the hand can readily be passed-by it; or if it have already engaged in the upper strait, it can be made to recede by gentle pressure of the hand, all this in consequence of gravitation, the sinking of the gravid uterus forward and away from the brim, the cervix being no longer the most dependent portion.

But why attempt an operation of this kind, however easily performed, when writers on obstetric practice tell us that face presentations are natural labors, and that the female can expel the child with but little more difficulty in this case than in the vertex position; that if the child be not large, and the pelvis of the mother is well formed, little apprehension need be entertained by the accoucheur as to the result. Encouraging as are these words for the young physician, I venture to say that the practitioner who has met with a number of cases of face labor (particularly if in primiparas) in his practice, will hesitate before giving his endorsement to such views; and I am inclined to believe that such opinions are asserted and taught with some hesitation and distrust even by those who originate them.

Thus we find in the following statements made by authors, after having expressed opinions such as have been quoted, conclusive evidence that they consider face presentations occurrences of much more serious character than would permit them to be classed, unqualifiedly, among natural labors. Dr. Cazeaux says: "Nevertheless we must remark that, as a general rule, the labor is more tedious, more painful, and more dangerous, both to the mother and the child, and that it much oftener demands the intervention of art."

"We think, therefore," says Dr. Hodge, "that face presentations, although often accomplished with safety to the child and the mother, should be placed under the head of complicated labor; for in all cases there is necessarily a loss of power from the direction in which the bearing-down efforts operate, rendering labor tedious and painful to the mother. This tediousness is augmented whenever the head descends transversely, and especially when the os frontis is towards the anterior part of the pelvis; while in those cases where the os frontis comes directly to the pelvis, the dangers to the mother are excessively great.

Dr. Playfair remarks: "As regards the mother, in the great majority of cases the prognosis is favorable, but the labor is apt to be prolonged, and she is, therefore, more exposed to the risks

attending tedious delivery. As regards the child, the prognosis is much more unfavorable than in vertex presentations. Even when the anterior rotation of the chin takes place in the natural way, it is estimated that one out of ten children is still-born; while if not, the death of the child is almost certain."

As to the appearance of the child after birth, Dr. Meigs says: "There can rarely be met with a more disagreeable spectacle than that of a new-born child's face, born after a bad face labor. It is frightfully soggillated, and often covered with blebs filled with yellow or bloody serum, the lips are completely extrophied, the eyes closed by infiltration of the palpebræ, and the nose enormously swollen." A face, let me add, suggestive of a brutal pugilistic encounter; the members of the mother's family pointing the finger of scorn at the physician in attendance as having had his fist in the fray.

Quotations could be multiplied *ad libitum*, if it were necessary farther to show that face labors are frequently the most unwelcomed occurrences in the practice of the accoucheur.

After a careful consideration of what has been said by writers on midwifery on face positions, and upon reviewing my own limited experience on the subject, I am forced to the conclusion, that cephalic version ought to be made in all cases, whenever it is practicable to do it without injury to the mother or child; and, furthermore, I am convinced that this operation can be performed in the *postural position* in a great many cases, where it were useless to attempt it should this precaution be neglected.

As regards the mode of procedure, you have, doubtless, anticipated the remarks that I intend to make on this part of my subject. The woman in labor is placed on her knees and chest, so that her trunk forms an inclined plane, the pelvis being the height and the knees and chest the base of the incline; and if unable herself to retain this posture, she is to be assisted and held in the required position by attendants. There are some who prefer resting the chest upon their hands, with their elbows extended sideward, in order to steady their bodies: in cases

where we have reason to believe that version can easily be accomplished, the strictly knee and elbow position may be permitted, although, in most cases, it will not give the body the necessary degree of slope most favorable to insure success in the required manipulation.

The woman being thus placed in the *postural position*, and it having been ascertained whether the chin be to the left or to the right—accepting, as I shall, only the two fundamental positions of face presentations, viz: one with the chin toward the left, and one with the chin toward the right, as being sufficient for the practical purpose of cephalic version—that hand is introduced whose palmar surface embraces the vertex most readily, which will be the *right* hand when the chin is toward the *left* side, and *vice versa*. Pass the hand as far as to grasp the occiput with the four fingers, then flex the head on the chest, when the position is converted into one of the vertex. This procedure, however, is more easily described than accomplished, since the round ball-like surface now clasped is lubricated with more or less sebaceous matter, causing the hold of the hand to easily slip; yet, by the persistent exertion of flexion and drawing upon the occiput, the effort will, after a short time be successful.

But it occasionally happens that the waters have broken many hours before the arrival of the physician, and the uterus has contracted somewhat firmly upon the child; the head, perhaps, is already engaged in the cavity of the pelvis to some extent. In such a case version becomes more difficult; and it may even be necessary in order to secure a firm hold, to impress the points of the fingers upon the child's scalp to effect the purpose—a procedure in the manipulation, that, in my opinion, can be conscientiously adopted, inasmuch as a few impressions or even abrasions on the scalp bear no comparison to the harm to a child's face, born after a face labor. Force, judiciously applied, is necessary in most obstetric operations; and, although it may shock the sensitiveness of some highly susceptible person, the accoucheur is nevertheless justified in the use of considerable force to convert a face position into one of the vertex.

When the face has passed the superior strait and is lodged in the cavity of the pelvis, where its farther progress is interrupted, either by uterine inertia, or by some abnormal impediment, giving rise to non-rotation of the chin forward, various methods are recommended in books to correct the difficulty. Among these may be mentioned, the introduction of the finger into the mouth of the child and drawing the chin forward during a pain; again, the passing of the finger up behind the occiput and pressing it backward during the pain. Penrose, in the belief that non-rotation is generally caused by the want of a *point d'appui* below, applies the hand, or the blade of the forceps, so as to press on the posterior cheek. If, however, rotation does not take place, notwithstanding these devices, then podalic version is advised to be tried; next in order comes the vectis, after which the forceps are recommended to effect rotation, and, if unsuccessful, an attempt is to be made with them to draw the face downward. Finally, if all these measures should fail, the operation of craniotomy is a last expedient.

Such are the resources, which I find mentioned in obstetric works, and from which we are to select the particular method most applicable in the case on hand, in preference to an attempt at dislodging the head from the pelvic cavity and bringing down the vertex.

The following condensed report of a case of difficult face labor, however, would almost imply criminal neglect of the means at our command in desperate cases, if an attempt at reduction and version of the head had not been made. Of posture nothing is said, and I therefore take it for granted that the operation was made without its advantage. Dr. Jno. S. Parry, the editor of the American edition of "Leishman's System of Midwifery," in a paper read before the Obstetric Society of Philadelphia, reports: "In this (the paper) was related a case of face presentation, with the chin behind and to the right side, seen in consultation with Dr. Elliot Richardson. The face was almost at the inferior strait. All attempts to flex the head, to

rotate the chin in front, or to deliver by traction with the forceps failed. The woman was completely exhausted, and there seemed to be no alternative but to perform craniotomy. Before resorting to this, however, I passed my whole hand into the pelvis, and placing the thumb over the brow and the fingers over the superior maxillary bone, and pushing forcibly upward the head was easily raised above the brim of the pelvis. It was then flexed without any difficulty, and a mento-posterior of the face was converted into an occipito-anterior of the vertex. Wallace's forceps were promptly applied, and a few minutes later we had the satisfaction of delivering a living child."

If then, in so desperate a case as the one cited, reposition and version of the head could be accomplished in the manner heretofore practiced, I have strong reason to believe that a case would have to be a very hopeless one if it could not be corrected with the additional advantage of posture. Yet, no one will deny but that cases will occur when all efforts to dislodge the head from the pelvic cavity and to force it above the brim will fail.

I will now relate a few cases which happened within less than two years, to which I was called in consultation by a very intelligent physician,—one who has a large practice in midwifery. I might report several cases that happened years ago, but having kept no record of them will content myself by reporting briefly, but three cases, the facts in which can be corroborated by my friend Dr. Ring. That the three cases should have occurred in the practice of one physician, within the short period of less than two years, may appear somewhat unusual; but coincidences are not infrequent in connection with the other accidents to which the parturient is liable,—the accoucheur may meet with a number of cases of eclampsia, placenta prævia, &c., within a few weeks or months, and then, perhaps, see no more of such cases for several years.

Case I. Mrs. Van V., aged 31 years, tall, with well marked lateral curvature of the spine, was taken with labor pains with

her first child at 9 o'clock P. M. on the twentieth of June 1879, and in the absence of Dr. W. Ring, his son, Dr. Chas. A. Ring, attended her during the night. In the morning, Dr. W. Ring called and found the os uteri dilated to the size of a half dollar, the face presenting with the chin toward the left side. At 10 o'clock the following morning I first saw the patient in consultation with Drs. W. and Chas. A. Ring. An examination confirmed their diagnosis, and detected at the same time a marked projection of the sacrum forward, and consequent diminution of the conjugate diameter of the pelvis. The membranes had ruptured and the face was pressed firmly against the brim. It was agreed to attempt version of the head. The woman was placed in the knee and chest position, and I then passed my right hand into the uterus as far as enabled me to grasp the occiput, then flexing the head upon the chest, I succeeded in bringing down the vertex. In consequence, however, of the deformity, the head did not engage in the pelvis, and three hours after the version of the head the forceps were applied and the woman delivered of a healthy child. The mother's convalescence was natural, and the child was thrifty in appearance.

Case II. Dr. W. Ring sent for me at 10 o'clock A. M., December 8, 1880, to assist him in a case of face labor. The woman, Mrs. S., 29 years of age, with her first child, had been in labor twenty-four hours before I saw her. An examination proved the chin to be to the left side, and not yet engaged in the upper strait. In consultation it was agreed, in order to expedite the labor and to relieve the woman of her sufferings, to resort to cephalic version. She was placed in the postural position, and my right hand was then passed over the occiput, and the face presentation was converted into one of the vertex. Labor was completed by the natural powers two hours after version. Mother and child made a good recovery, although the mother needed more than ordinary care to guard against inflammation.

Case III. Mrs. C., aged 35 years, fleshy and strong, commenced her fourth labor at 5 o'clock A. M., March 17, 1881.

Dr. Ring was called at 8 o'clock, and found membranes ruptured, the child presenting face downward, chin toward the left sacro-iliac symphysis but more nearly to the sacrum, child's head very large. At 10 o'clock A. M., Dr. Ring sent for me, and upon my arrival I found the condition as stated. The woman had powerful labor pains, and the face of the child was pressed with great violence against the brim of the pelvis, causing it to swell considerably. As soon, however, as the woman was placed in the postural position, my hand could readily be passed into the uterus; I found the foetal head to be free and very movable, so much so that in order to fix it, I had to grasp the occiput with the points of my fingers. Version being completed, the child was born twenty minutes after; the effects of pressure were shown by a swelled face and closed eyes for several days, consequent upon the strong labor pains. The child weighed twelve pounds. Mother and child made an excellent recovery.

Such being some of my experience in face presentations, I concluded, after some hesitation, to acquaint my professional colleagues of this society with the facts of a mode of procedure in such cases, that I have not found mentioned in the writings of obstetricians. For any merit that there may be in this method of correcting face presentations, I can truthfully say I am under obligation to no one for hints or suggestions in its adoption. The claim for originality, however, is immaterial; if I have succeeded in calling your attention to a practice which you will recognize and acknowledge after trial as an improvement in the management of face labors, *my labors* are compensated.

Clinical Reports.

CEREBRAL TUMOR INVOLVING THE NERVES OF THE SPECIAL SENSES.

By Lucien Howe, M. D.

On the 21st of August, 1880, I was consulted by A— M—, a man 27 years old, on account of the imperfect condition of his vision. For a year previous he had been troubled with headaches, always located in the frontal region, and with the hope of finding relief from them, he had applied to several physicians. Among others he consulted Dr. Mynter, who, observing the faulty vision, referred him to me.

Externally, there was nothing abnormal about the eyes, except that the pupils were rather large; but a glance with the ophthalmoscope at the retina and optic nerve showed these to be much inflamed. In the fundus of the right the abnormal changes were especially well marked, the outline of the optic disk being ill-defined, the vessels enlarged and tortuous, and when traced from their starting points, were often lost from sight, covered at intervals by the œdematous and swollen retinal tissue. With this eye, however, the patient could still count fingers five feet distant and could read No. 14 of Jaeger's test types.

The interior of the other eye presented a similar appearance, except that the nerve had not become involved to so great an extent. With this, the vision for the distance was still one-fifth of the normal, and for near objects was no worse than its fellow. The general health of the patient seemed to be quite good. In early youth he had suffered from disease of the hip-joint, and the resulting lameness had led to sedentary habits, so that his muscles were rather flabby and the skin pale; but he had an excellent appetite, slept well, could hear perfectly, and but for the headaches and imperfect vision, would have had few complaints to make. He denied ever having had syphilis, and there were no outward appearances to indicate it. A very unfavorable

prognosis was given, and the patient, becoming alarmed, disappeared temporarily from under my observation, and partly neglected the few therapeutic measures which were advised. Subsequently he returned, and an effort was made by means of complete protection from the light by counter-irritation, depletion and alteratives, to lessen the inflammatory process going on in the retina and optic nerve, with the hope that even if the cause of the trouble could not be reached, at least that its effect might not be so injurious.

Such expectations, however, proved groundless, and as the vision grew gradually worse, it was evident that no improvement could ever be obtained, and that the case was interesting only from a pathological standpoint.

On the 14th day after his first visit, the vision of the right had been reduced to mere perception of light, and later was lost entirely. On the 33d day the vision of left had sunk to less than one-twentieth of the normal; on the 37th day he could only count fingers at four feet, and before the end of the third month this eye, like its fellow, was totally blind. At the same time the hearing began to be affected. It was difficult to determine on which side this commenced, but the morbid process involved the auditory nerves more rapidly than the optics, and before the end of the sixth month he was also completely deaf. The sense of smell was likewise impaired, and Dr. Mynter informs me that he has held beneath the patient's nostril a vial of aqua ammonia without any sign being given to indicate that it was at all disagreeable or irritating.

Finally the taste evidently was lost, one article of food being relished quite as much as another. There remained, of course, only the sense of touch with which to communicate with those about him. In this miserable condition the patient lingered for nearly nine months, gradually becoming incoherent in his speech, growing more emaciated and losing strength, till at last he died, on the 28th of December.

A post-mortem examination was made by Dr. Mynter and others thirty-six hours afterwards. The calvaria was found to be remarkably thin, and the lining membrane denuded in various portions. In attempting to dislodge the front part of the brain it was found to be adherent to the underlying dura mater, especially on the right side, and in the vicinity of the cribriform plate of the ethmoid. Further inspection revealed in this locality a well-defined tumor, involving the inferior portion of the right anterior lobe. This tumor was about the size and shape of a large egg, the longer diameter lying in an antero-posterior direction and the side of the tumor extending to the longitudinal fissure. It was of rather a dark-red color as compared with the neighboring brain tissue, and firm and unresisting upon pressure. There was naturally considerable hyperæmia in that vicinity, but the vasularity could not, with the naked eye, be seen to extend further back than the anterior part of the pons. A microscopical examination of the tumor showed its structure to be that of a fibro-sarcoma. The point of interest in connection with this case is the extent to which the nerves of the special senses were affected, while others in the immediate vicinity were apparently healthy. From the location of the tumor it is not surprising that the sense of smell was lost, and if care had been taken in this part of the examination, probably some defect would have been found at an earlier stage. It was also natural that the optic nerves should have become involved in the order, and to the great degree noticed.

But it will be remembered that the portio mollis emerges from the brain substance posteriorly to the third, fourth and fifth nerves, externally to the sixth, and in very close proximity to the portio dura and glosso-pharyngeal, and then passes onwards to its destination in the labyrinth. It is therefore difficult to understand how this nerve on both sides could have its function entirely destroyed, while those just mentioned, viz, the motor oculi, patheticus and trigeminus, the abducens, the portio dura and the glosso-pharyngeal, were apparently in perfect condition.

Not the least sign of paralysis about the muscles of the eye, nor elsewhere, nor any diminished acuteness of sensation could be perceived during life, and after death these nerves appeared also to be in a healthy condition. It is, of course, not supposed that the tumor itself had any specific action in producing these effects upon the nerves of special sense, but it is strange that these, and particularly the auditory nerves should be thus singled out among their neighbors; and I am not aware of a similar condition having been before noticed.

NOTES FROM PRACTICE—OBSTRUCTION OF THE BOWELS, WITH
HISTORY AND AUTOPSY OF THREE CASES.*

Reported by Thomas Lothrop, M. D.

The term "Obstruction of the Bowels" comprehends a wide range of seemingly diverse diseases, such as formation of membranous bands, rotation of the intestine upon its own axis, compression from tumors, enlarged ovaries, intussusception, stricture, foreign bodies, paralysis, spasm, etc., all of which tend, under favorable circumstances and conditions, to one result, obstruction. While not aiming to present anything original, the history and progress of three interesting cases of this very serious and often fatal disease, in which the autopsy revealed intestinal lesions, which it was difficult to positively diagnose, especially in its early stages, and for which neither surgical nor medicinal measures afforded relief, may be suggestive and indeed profitable.

The first case occurred in July, 1867. The patient, Mrs. B., aged 40 years, had been the subject for many years of that most common ailment among women, constipation, and for its relief had resorted to laxatives, at first selecting the milder remedies of this class, and, gradually, as the intestines became accustomed to their use, using the stronger cathartics. For two weeks previous to my attendance, patient was under the treatment of a well-known botanic physician of this city, whose remedies failed to afford any

* Read before the Buffalo Medical Club.

relief from present suffering, nor any hope from the impending fate awaiting her. In closely interrogating the patient, it was found that for many months the fæces had been less in quantity and greatly diminished in size, as if the tube, through which the intestinal contents passed, diminished in diameter, had elongated the fæces in their passage; cathartics also aggravating the obstruction they were administered to overcome. The patient was suffering from intense pain to the left and below the umbilicus; the abdomen was tender to the touch and tympanitic; there was nausea, vomiting and great depression of the vital powers. Calling in consultation the late Dr. Sanford Eastman, the seat of the obstruction was located at or near the sigmoid flexure of the colon, and the introduction of the rectum-tube and the injection of large quantities of warm water recommended, with the internal administration of opiates to relieve pain. The patient gradually sank and died three weeks after presenting positive symptoms of intestinal obstruction.

The autopsy confirmed the diagnosis, the obstruction being at or about the middle portion of the flexure, and was caused by a fibrous constriction, making the canal impervious. The colon above the constriction was filled with hard fæcal masses, evidently the accumulation of many weeks or months, while the intestinal walls presented the usual dark-red hue.

The second case occurred in October, 1867, at the Erie Co. Penitentiary, while I was attending physician to that institution. The patient, aged 45, a native of Ireland, like the most of those sent to penal and reformatory institutions, had depreciated his vital forces by prolonged dissipation. The usual symptoms of pain, tenderness, tympanitic abdomen, nausea, vomiting, etc., were present. But little could be learned of the previous history of the case. As soon as I became satisfied of the nature of the disease, I summoned Dr. Rochester, who confirmed the diagnosis of obstruction of the bowels at or near the sigmoid flexure, advised the continuance of opiates, large enemata, the warm-bath until symptoms of relaxation were manifest. The

rectum tube was also used in this case, but our efforts to pass it through the sigmoid flexure were unavailing, the injections passing away almost as they were thrown up. The patient lived about ten days after admission.

The post-mortem examination revealed extensive disease of the entire sigmoid flexure, occlusion of the intestinal canal at that point, thickening of the intestinal walls with hard deposits in the mesentery and between and involving the intestinal coat. The disease was evidently scirrhus. Many interesting points in this case I failed to obtain, and much of its value in a professional point of view is lost from the impossibility to learn anything positive of his former history and previous symptoms. The importance of the case in this connection rests in the cause of the obstruction, scirrhus, and the failure or impossibility to accurately diagnose its precise nature.

The third case is of more recent date. Wednesday, April 12, 5 P. M., was called to Fred. A. G., aged 20 years. Symptoms: pulse 96; tongue slightly coated; nausea; vomiting; palor around the mouth; pain in umbilical region, with the usual exacerbations and remissions, peculiar to colic. Inquiry as to diet disclosed the indiscretion of his having eaten a quantity of orange peel before breakfast the previous morning. The day before the patient had attended to his ordinary duties, not manifesting the usual mental vivacity and physical activity peculiar to him. With these symptoms and such other data as could be gathered, I diagnosed colic from indigestion; gave $\frac{1}{4}$ gr. morphia subcutaneously, and waiting one-half hour, during which relief from pain was experienced. I order morpia $\frac{1}{4}$ gr., to be administered by the stomach during the night, as often as was necessary to subdue pain, with hot fomentations over abdomen, etc., etc.

Thursday, 12 M. Pulse 70; pain almost entirely absent; no tenderness of abdomen or tympanitis; nausea and vomiting subsided. Diagnosis of the day previous confirmed; prognosis favorable. Ordered a cathartic of Seidlitz pd. the following morning, in case the bowels failed to be moved. At about 4

o'clock, P. M., the pain returned with greater severity, the abdomen became tender, and tympanitis, nausea, and vomiting returned; the palor around the mouth, which was not noticable at noon, became more marked, with indeed all the severe symptoms of obstruction of the bowels. Ordered morphia, hypodermically, and per stomach, with hot fomentations. The patient passed a comfortable night under the influence of full doses of the opiate.

Friday, 9 A. M. Pulse, 108; temperature, 99°; pain not severe; tympanitis not excessive; nausea constant, and frequent vomiting, and at irregular intervals; no action of the bowels. The injections followed by increased nausea and vomiting, but morphia, $\frac{1}{4}$ gr. internally, to be again tried, repeated ad lib.

Friday, 10 P. M. No improvement; pulse, 106; temperature, 99; morphia continued; hot fomentations; enemata of warm water, with castor oil and turpentine.

Saturday, A. M., 7 o'clock. Pulse 130, with marked depression of the vital powers; stercoraceous matter ejected from stomach during the night, in increasing quantities as morning approached. I immediately threw into the rectum one gallon of warm water, and by means of a compress, firmly held to the anus, retained the fluid until 8.50 when it was ejected, somewhat colored with fæcal matter. At 9 o'clock the same quantity of warm water was repeated with 2 oz. whiskey and 1 oz. of ol. tereb., which was soon evacuated without trace or odor of fæces. Calling Drs. Wetmore and Harrington in consultation, it was decided to continue morphia hypodermically and per stomach with champagne. At 3.40 P. M., patient died. Autopsy 24 hours after death; liver, kidneys, stomach, healthy; entire colon normal. The small intestines natural until the ilium was reached, when the dark-red color, peculiar to obstruction, was detected, and at a point 10 inches from the ileo-cæcal valve, a constriction of the intestine was found, perfectly occluding the canal, and the gut invaginated for eight inches, from the point of constriction. A close examination revealed the fatal nature of the obstruction and the impossibility of rendering more than temporary relief.

These cases reveal three distinct types of obstruction. The first was evidently the result of constipation of long continuance, which, with the accumulation of fæcal matter and the influence of drastic cathartics, produced the fatal constriction.

The case is not without interest, in view of the frequency with which attention is directed to constipation, especially in women of nervous temperament, among whom the practice of drugging is resorted to, in preference to the more philosophical or rational adoption of hygienic and dietetic measures. The sigmoid flexure being the more contracted and tortuous portion of the colon is the principal seat of obstruction from this cause. The differential diagnosis is facilitated by the accumulation above the point of constriction, detected through the abdominal walls, and the failure to force the injection of water above the point, and also its rapid evacuation.

The second case from *scirrhus* of the sigmoid flexure, I am unable to obtain a full and complete history upon which to base an opinion, as to the period of its existence. The patient complained of symptoms on his admission, which in a short time assumed the alarming character—peculiar to permanent obstruction—and the case progressed rapidly to a fatal issue, only the autopsy revealing the exact nature and location of the disease.

The third case from intussusception of the ilium is one of rare interest, as much on account of the rapidity of its course as from the subsidence of all active symptoms the day following my first visit. In closely interrogating the family in regard to the habits of the young man previous to the attack, a clue was obtained to the real cause of the invagination, and a rational explanation afforded of its inception. In the rear of his residence, in excavating the gravel, a ditch or canal had been formed from 12 to 15 feet in width, with an embankment on the distal side. On Monday evening, April 10th, Mr. G., for the purpose of exercise, made several attempts to jump to the opposite embankment; and the violent effort of running the distance of two or three rods in order to acquire the impetus necessary to perform the

feat, while the leap, with the sudden concussion following, evidently produced the invagination of the intestine of which he died. This explanation is strengthened by the want of his usual sprightfulness of mind and body observed by his relatives on the day following the exercise, although he made no complaint of pain on that day. The case also presents another feature of interest in the rapidity of its course, only three days and six hours intervening between the time of the first complaint of pain and the fatal issue, in striking contrast to cases No. 1 and 2, in which death occurred after many weeks.

A few words as to the general and local treatment of obstruction will appropriately supplement the history and autopsy of the cases which constitute the basis of this paper. The principal indication is the relief of pain. Opium and its alkaloids meet this requirement, and they should be used freely, the limit of their administration being reached when the abdominal pain, of which the patient mostly complains, is so far overcome that rest, general and local, is secured. Special emphasis may be given to this principle in the therapeutics of all enteric diseases of an inflammatory type, and special dependence may be placed upon opium, both as an anodyne and as an antiphlogistic. With the same emphasis we would warn against the use of cathartics, which may be one of the factors in the causation of the obstruction as in the first case, cited above.

Reaching the obstruction through the rectum is often the only avenue for the introduction of remedies. In case the seat of the obstruction is in the small intestines, medication per rectum is not as efficacious as when located in any portion of the large intestines, and for very obvious reasons. But even here it is important to make the attempt by introducing the rectum tube as far up the colon as possible. The difficulty in passing the sigmoid flexure cannot always be overcome, but having carried it as high as possible, the gradual and slow injection of warm water, even to the amount of a gallon or two gallons until the canal will hold no more, will in some cases, prove efficacious.

These injections should be repeated at intervals, adding whisky in case the powers of life give indications of failure. Dr. Watson mentions a successful case from the inflation of the gut with air, by means of bellows, two hours after which the patient passed a natural fæcal stool and recovered. The use of the induced and constant current has been followed with success in cases of obstruction, due to impacted fæces. The injection of a quart of cold ice-water has proved successful. Inverting the body by taking the patient by the feet over the shoulders of an attendant has been resorted to.

Tobacco enemata are advised, but in their use, extreme caution should be observed.

After these measures have failed our only resort is to gastro-tomy or enterotomy, and the formation of an artificial anus.

It is plain that the insuperable obstacle in the way of success in enterotomy is the uncertainty of the real cause of the obstruction and of its precise location.

Taking either of the three cases, recorded in this paper, as a fair test of the feasibility of the operation and viewed in the light thrown upon them by the autopsy, the operation would have been a useless expenditure of time and labor. That cases may be presented in which, if the operation be performed in time, success may be attained, cannot be doubted, but as a general rule the operation is delayed until the vital powers have become well-nigh exhausted, and it is then suggested as a dernier resort. The delay is fatal to success in the majority of cases, and the late hour at which it is performed, destroys almost the last hope for the patient. But in case after carefully weighing all the symptoms, especially the vital forces of the patient, it is deemed proper to make the effort to overcome the obstruction by cutting through the abdominal parietes, how shall it be done? For gastrotomy, the simply crucial incision, the longitudinal commencing just below the ensiform cartilage, and extending three inches downward, and the transverse extending from the middle of the longitudinal, one and an half

inches on either side; carefully seizing the stomach, the organ is drawn forward and stitched with silver wire to each limb of the cutaneous flap, after which an opening is made into the organ, and the cause of the obstruction removed.

For enterotomy, the operation is performed at or near the seat of obstruction, if it can be definitely determined, by making an incision of adequate length in the direction of the muscular fibres—and an examination of the intestine made. If the construction is firm, the only resource is an artificial anus, and all the subsequent inconveniences resulting therefrom in case the patient survives.

Surveying the intestinal track, its structure and important functions in the animal economy, surprise may be excited, not at the infrequent occurrence of fatal organic lesions of this important viscus, but in view of its extensive surface or area, that so few serious obstructions should come to our notice. As the principal avenue through which the body is nourished, and also from which the excrementitious matter is carried away, the alimentary canal assumes an importance, inferior to none other, in its relations to the living organism, both in health and disease. It bears the most severe strain upon its functions through unnatural appetites and artificial aliments, but resents with fatal effect any interference with the integrity of its structures or the proper performance of its duties.

This paper has been purposely confined to practical considerations connected with the subject under discussion. While aiming to draw rational deductions from the cases presented, the object in view has been to make the path clear to those of the Club who may have to combat one of the most unpleasant and fatal of the morbid conditions, which in future may come under your professional observation.

Selections.

VAGINAL CHANCRES.

Dr. M. P. Binet reports two cases of true vaginal chancre. The first was a girl of 18, who showed an erosive syphiloderm of the fossa navicularis, slight swelling of the right labium majus, which was more red than the other, and multiple adenitis of the right inguinal region. On examination, the meatus of the cervix uteri was slightly open and eroded; there was double adeno-lymphitis toward the lateral culs-de-sac on the sides of the uterus. On the right vaginal wall, at the junction of the upper and middle third, the finger could perceive a depressed erosion, rounded in contour, sharply circumscribed, not painful. On examination with the speculum, the cervix showed follicular erosion, together with the glutinous mucous discharge of metritis. The vaginal erosion showed all the characteristic signs of indurated chancre, the floor red, smooth, shining, non-purulent; the edges slightly elevated, and passing without a ridge into the floor of the erosion and into the surrounding tissues, of which the color was normal; not excavated or everted. The lesion was about the size of a ten-cent piece, and was seated upon the right vaginal wall, near the inferior extremity of the os uteri. It was difficult to make out the induration, on account of the laxity of the vaginal walls and the distance of the lesion from the vulvar ring. However, in passing the finger lightly over the surface in the neighborhood of the erosion, a slight resistance could be perceived, as of a more resilient surface. In addition, by passing two fingers deeply into the vagina a foliaceous induration could be perceived. The lymphatics running along the walls of the vagina were enlarged; they appeared to leave the erosion and run toward the indurated post-pubic ganglia. Small ganglia could likewise be perceived in the neighborhood of the obturator foramen. On the body an eruption of roseola, with some circular erythematous patches

and discrete squamous papules, could be perceived. Under a mercurial and tonic treatment the various symptoms, including the chancre itself, disappeared without any local applications having been made.

Binet's second case was that of a girl of 19, who entered the hospital for erosions about the labia and anus. To the touch there could be perceived on the posterior wall of the vagina, just within the carunculæ myrtiformes, an eroded, non-painful, finely rugous surface, of which the floor gave the sensation of greater resiliency. On ocular examination, the lesion presented the characteristics of chancre. Its floor was grayish, the edges slightly raised, not everted or excavated, and passing imperceptibly and without a ridge into the surrounding tissues. The lesion was roundish in shape, and was the size of a quarter-dollar. Parchment induration under and around the sore could be distinctly made out with the fingers; permitting it to be enucleated, so to speak, from the surrounding tissues. There was some vaginitis in the culs-de-sac, and there were also follicular erosions about the os uteri, with the muco-glutinous discharge of metritis. No eruption on the general surface. The patient was under observation for two weeks, during which time (probably under the influence of treatment, though this is not stated) the chancre became almost completely cicatrized, presenting a smooth, pale, violaceous tint, with a slightly depressed surface.

In discussing the causes of the extreme rarity of chancre of the vagina, Binet attributes this to the fact that the virus must either be deposited in some abrasion or in a follicle. But the vaginal mucous membrane, with its thick layers of epithelium, is extremely resistant, and is rarely eroded in sexual intercourse. Moreover, it has no open glandular orifices. Vaginal chancre is extremely rare. Fournier, in 249 chancres of the female genital organs, saw only one in the vagina, and that doubtful. Binet, in 128 chancres of the female genitalia in Martineau's wards at the Lourcine, only observed the two above given. No other observers have reported the lesion.—*La France Med.*

IODOFORM AS A DRESSING FOR WOUNDS.

Mikulicz (in *Wiener Med. Wochenschrift*, 1881, No. 23) gives results of the use of iodoform in Billroth's wards. He claims that it is in antiseptic qualities equal to carbolic acid, is more easily used, and less apt to cause constitutional disturbance by absorption. Symptoms of poisoning are, however, seen in rare cases, and in the *Deutsche Med. Woch.*, 1881, No. 34, A. Henry describes two fatal cases. The symptoms are of the narcotico-irritant type.

In open wounds the iodoform is sprinkled on the surface and covered with lint and gutta-percha tissue, fixed by a bandage. The results have been very satisfactory; the dressings require changing but seldom, discharge is slight, decomposition never occurs, and there is rapid formation of healthy granulations. In incised wounds healing is even more certain than with carbolic acid, and there is much less fear of absorption causing constitutional disturbance.

Wounds implicating mucous surfaces, as of the mouth or rectum, are usually very difficult to treat antiseptically. In such cases iodoform, applied on gauze compresses, has been found to completely prevent offensive smell, and to cause no discomfort to the patients.

In a case of removal of an abdominal tumor iodoform was sprinkled into the cavity, and the wound closed at once. The patient recovered without a bad symptom.

In septic, gangrenous, or sloughing wounds the results were especially satisfactory. Sprinkling with iodoform removed all smell in from four to six hours, and the wounds healed rapidly and without discharge, even in some cases where severe constitutional symptoms had already appeared.

In strumous diseases iodoform is said to give such brilliant results as almost to entitle it to the rank of a specific. (See also V. Moseitig-Moorhof in *Wien. Med. Woch.*, 1881, No. 13.) Fun-

gating ulcers with spreading undermined edges and offensive discharge healed rapidly and completely under a thick layer of iodoform.

In lupus also its effects are gratifying. Riehl (*Wien. Med. Woch.*, 1881, No. 19) gives the results of twenty cases in Kaposi's clinique. The epidermis, when necessary, having been removed by the application of five to ten per cent. solution of caustic potash, the iodoform is laid on in a layer several millimetres thick, and fixed as above described. On removal of the dressings in from three to eight days the disease is found completely removed, redness and swelling gone, and the sore skinned over.

In deep wounds, when the powder would be difficult to apply, Mikulicz recommends pencils composed of one part of iodoform to two of cacao butter, and for injection a twenty per cent. ethereal solution. The smell of the drug can be overcome by adding one minim bergamot to ten grains of the iodoform, or moistening with an ethereal or alcoholic extract of Tonquin bean. Local irritation can be effectually prevented by previously oiling the sound skin near where the iodoform is to be applied.
—*Centralbl. f. Chir.*, 1881, Nos. 32 and 39.

OBSTINATE VOMITING IN PREGNANCY.

At a meeting of the Obstetrical Society of Boston, Dr. Fifield said that for several years he had prided himself on being able to subdue this symptom either by the administration of the bromide of potassium or by the injection of chloral hydrate, one half drachm, into the rectum. These had never failed him till about a week before the meeting, when the case of a woman, three or four weeks pregnant, fell into his hands. She had been vomiting for several weeks before he saw her, and then was rejecting everything. Dr. Fifield first tried the bromide, then the chloral, with the simplest diet, then ingluvin, ten grains at five or six A. M., fifteen at nine o'clock, iced milk bubbled with water from the siphon, and a slice of bread; the second morn-

ing the same plan, the third day three grains three times, as directed by an English gynæcologist. Meanwhile, so far from amending the patient got into an alarming state, and began to vomit blood. On the morning of the day before the meeting Dr. Fifield applied Sims's speculum, drew down the cervix, a little excoriated, and covered it thoroughly with nitrate of silver. He then ordered bromide of potassium, ten grains, every two hours. The next day she was well.

Dr. Blake remarked that the most obstinate cases of vomiting in pregnancy had been associated with abrasions of the cervix.

Dr. Benjamin Cushing said he had seen in his own practice of twenty-eight years two cases only which threatened a fatal termination. In the first case the patient seemed in danger of starvation, she also had convulsions. Dr. Cushing gave as the last, and apparently effectual, remedy fifteen drops of Smith and Melvin's elixir of opium, twenty minutes before each meal. The vomiting ceased, and the patient went her full time. In the second case all remedies taken internally failed. The os uteri was dilated with sponge-tent, miscarriage followed, and the patient recovered.

Another case was mentioned where long, obstinate vomiting, not due to pregnancy, was followed by relief on using suppositories of sulphate of morphine. One quarter of a grain was given at bed-time for a few nights, and then the quantity gradually diminished. The morphine was used for about three weeks.

Dr. W. Symington Brown remarked that he had seen two fatal cases of the vomiting of pregnancy, one of which was reported in the *Journal* of the Gynæcological Society of Boston, Vol. II, p. 208. The other occurred in the practice of the late Dr. Wm. F. Stevens. Abortion was induced by means of a sponge-tent, but the patient died. The emesis was somewhat relieved by the operation.

Dr. Abbot had seen one fatal case, in which the most relief had been found from large doses of morphia and dilatation of the cervix. He called attention to the fact that abortion is not

allowed the Catholic patient as a means of relief. The patient referred to belonged to that church.

Dr. Lyman referred to a severe case which was treated by Copeman's method; abortion accidentally ensued, and the patient got well.—*Boston Medical and Surgical Journal*.

INUNCTION OF SAPO VIRIDIS IN SCROFULA.

Dr. Kormann, of Dresden, reports several cases of scrofula treated by the inunction of potash soap. The pathology of scrofula being essentially an overproduction and accumulation of lymphatic material in the lymphatic glands, treatment has aimed at the dispersion of this over-accumulation of lymph, before the process of cheesy metamorphosis sets in, a change to which such accumulations are especially prone, and which puts an end to the possibility of their removal by anything short of mechanical evacuation. The methods of treatment hitherto in use have not been eminently successful, and the opportunity for some advance in this direction is offered by the inunction of saapo viriditis. The author considers the good effect of such inunctions to be due possibly to the absorption of potash soap through the skin, and consequent liquefaction of the masses of lymphatic material by reason of direct contact with the soap. The inunctions were made once daily, just before bedtime, the amount of soap used being about a teaspoonful. The next morning the portion of the body to which the soap had been applied was carefully cleansed. In from three to four days, sometimes not until later, there was disquamation. A severe erythema was the exception, and eczema did not once result from the inunctions. As soon as much redness or itching was produced, the region chosen for inunction was changed, the skin nearest to the diseased glands or other lesion being used. Finally the soap was applied to the skin of the breast and back. In the meantime the skin directly over the diseased glands, to which the first applications of soap were made, had returned to

its normal condition, and could be again used for inunction without causing pain. Under this treatment the infiltration of scrofulous glands disappeared with hitherto unknown rapidity, and the duration of scrofulous eczema also was decidedly shortened.—*Fahrbuch f. Kinderheilkunde.*

HYPERTROPHY AND DILATATION OF THE HEART DURING SCARLET-FEVER NEPHRITIS.

Dr. Oscar Silbermann in an elaborate article on this subject speaks of the comparatively few observations which have been made in this direction up to the time of Friedlander's investigations during the year 1881. This author found, on examining a large number of cases of nephritis occurring during attacks of scarlet fever, decided hypertrophy of the heart combined with dilatation, in some cases both sides of the heart being equally affected, but usually only the left side; he also made a careful comparison of the weights of hearts in healthy children with those who had died of scarlet-fever nephritis. In only a few cases was there found a partial fatty degeneration of the muscular fibres; the endocardium, pericardium, and blood vessels were normal. There was no doubt according to these observations that the cardiac affection was related to the postscarlatinal nephritis and not to the scarlet-fever process itself, as the hypertrophy was never found where the children died in the early weeks of the disease. Silbermann draws attention to the short period which intervened between the first appearance of the nephritis and the consecutive heart hypertrophy, in many of the cases the time being not much longer than a week, and he refers to the physiological observations of Beneke and Gerhardt, which showed that the heart between the third and eighth year is relatively larger than in adult life, and that at this age there exists a physiological hypertrophy of the left ventricle, caused by a continuance of the aortic narrowing in the neighborhood of the ductus Botalli, and Silbermann thinks that this tendency to phy-

siological hypertrophy between the ages of three and eight may account for the speedy dilatation and hypertrophy following the acute nephritis of scarlet fever, the cases in which it occurred being respectively four, five, six, three and a half, and six years old.

—*Boston Medical and Surgical Journal.*

TREATMENT OF ACNEIFORM RASH DUE TO BROMIDE OF POTASSIUM, WHILE CONTINUING THE REMEDY.

Duckworth reports the case of a woman, 20 years old, subject to epileptic attacks, and in whom sixty grains of bromide of potassium caused the appearance of a confluent acne which was very painful. The treatment consisted of the local application of the lotio sulphuris cum camphora; viz., ℞ Sulph. precip. ʒ ii, Spts. camphoræ ʒ i, Aquæ calcis ʒ ii, ℥ et ft. lot. Gruel was used instead of soap. There was improvement in a week, and in two weeks the hard and sluggish papules had disappeared; the bromide was taken as usual, with no return of the eruption. Mention is made of the fact of arsenic given together with the bromide controlling the eruption produced by the latter drug. Sangster, however, has found that a sudden increase in the dose of bromide has caused a rash, even though arsenic was being taken at the same time.—*St. Bartholomew's Hosp. Repts.*

SULPHIDE OF CALCIUM FOR SUPPURATING BUBOES.

Professor Otis, following the suggestions of Ringer, employs (*New York Medical Journal*, May, 1880) sulphide of calcium, with the best results, in cases of threatened suppuration in phlegmonous swellings, 0.005 gramme every two hours, or 0.003 gramme every hour during the day. Furuncles and abscesses are arrested; suppurative processes of the mucous membranes, on the contrary, not. Absorption of pus already formed, and resolution of the tumor, occurred in fifteen out of eighteen con-

secutive cases of inguinal buboes associated with chancroid, this resolution tending to prove (in accordance with the popular teaching) that the buboes were of sympathetic and not of chancroidal origin. Applying to these cases of inflammatory buboes, the concomitants or immediate sequelæ of well-pronounced chancroids, the old rule that chancroidal buboes always eventuate in chancroidal abscesses, always suppurate, and require evacuation, then we must hold that only three out of eighteen cases of inflammatory buboes, associated with chancroids, were the result of transference of the suppurative process from the chancroid to the adjacent lymphatic gland. Or the influence of the drug may extend to the true chancroidal bubo. At all events its successful use invites a trial of its efficacy in all instances of threatened granular suppuration.—*Boston Medical and Surgical Journal*.

NASCENT IODIDE OF SILVER IN THE TREATMENT OF CONJUNCTIVITIS.

According to Sedan (*Recueil d'Ophthalmologie*, May, 1881). M. Brame, of Tours, was among the first to advocate the use of iodide of silver in conjunctivitis. Dr. S. instituted a series of observations, with this remedy, in Algeria, where cases of chronic conjunctivitis are very numerous, and found it decidedly efficacious both as a prophylactic and in the cure of acute and chronic cases.

Two solutions are requisite for the manufacture of the nascent iodide. One of these is a solution of the iodide of potassium, 3 grm. and 32 ctgr. in 10 grm. of distilled water. The other solution is composed of nitrate of silver, 3 grm. and 56 ctgr. in 10 grm. of distilled water. Both solutions are preserved in bottles made of colored glass. The nascent iodide of silver is prepared by dipping separate glass rods into either solution, withdrawing a drop of each and subsequently mingling them on a

piece of porcelain. The resulting precipitate of nascent iodide is placed upon the erected lower lid and thence allowed to diffuse itself over the entire conjunctiva. The iodide thus prepared dissolves very slowly in the ocular fluids, and produces much protracted pain. This inconvenience may be obviated by the employment of glycerine as the menstruum. The border of the lids should be anointed with vaseline to prevent them from becoming adherent. Dr. Sedan had constant, rapid, perfect, and permanent results in more than three hundred cases subjected to the treatment in question. He states that a single application will often cure simple cases, while in ninety-two out of one hundred cases, selected at random, less than four applications were necessary to effect a cure.—*The Medical Record*.

CHLORATE OF POTASH POISONING.

The use of chlorate of potash as a household remedy, especially for children, is so common, that it is well to note the somewhat frequent occurrence of the fatal effect of overdoses of this drug. Dr. Satlow, of Leipzig, reports the case of a boy fifteen and a half years old, convalescent from diphtheria, who was attacked with symptoms of poisoning after swallowing a solution of chlorate of potash and water amounting to from twenty-five to thirty grammes of the salt. On the night of December 24th, after drinking the mixture, he was seized with frequent vomiting of dark green masses very similar to thin fecal discharges; at midnight a small quantity of dark urine was passed; at daybreak the patient was noticed to be jaundiced. December 25th, 9 A. M., the temperature was 37° C.; pulse 124, weak; respirations 40. Skin cyanotic; lungs normal; heart sounds normal, excepting that the first sound was somewhat prolonged; some epigastric tenderness; liver enlarged and palpation both in this region and over the spleen, which was also enlarged, caused great pain. There was suppression of urine, none having been excreted since

the small quantity passed in the night, the bladder having been found by the catheter to be empty. The patient complained of weakness, præcordial anxiety, and dyspnœa; the mind was clear; the vomiting continued every fifteen minutes. The anuria continued until December 26th, 4 A. M., when a few drops of dark-red, dense urine were passed accompanied by burning pain; the vomiting continued. Temperature 38.2° C.; pulse 104; respirations 28. At 4 P. M. the patient felt a little better, but a slight convergent strabismus of the left eye was noticed. The symptoms continued, although stimulants were freely given and transfusion resorted to twice, and on the morning of December 28th the patient died, his mind remaining clear to the last, and death resulting gradually from increased weakness of the heart, accompanied by dyspnœa and subjective feelings of coldness and paralysis of the feet progressively extending upwards. The post-mortem appearances, besides showing intense catarrh of the gastro-intestinal canal and enlargement of the liver and spleen, were especially interesting as showing the effect of the chlorate of potash on the blood, which was similar to the results obtained by the experiments of Marchand with this salt, the blood having the characteristic brown color (lackfarbig) and the density of syrup and the red corpuscles being especially affected, becoming pale and glutinous and gathering together in irregular clumps. A large quantity of reddish-brown fragments, supposed to be hæmoglobin, had been found in the urine passed on December 26th, and on examination of the kidneys these same masses were found in large numbers, especially in the convoluted and straight tubules, only sparingly in the glomeruli, and not at all in the interstitial tissue. It was also noticeable that there was no sign of an inflammatory condition anywhere in the kidney, the interstitial tissue being absolutely normal, and the epithelial cells of the tubules, although compressed by the masses of hæmoglobin, showing no trace of cloudiness or infiltration.—*Boston Med. and Surg. Jour.*

PYROGALLIC ACID IN PHAGÆDENIC ULCERATION.

M. Vidal, after using pyrogallic acid with care in the treatment of psoriasis, has tried a salve with good effect to heal phagædenic ulcers and to cicatrize chancres. He applied it to a phagædenic ulcer daily for three days, and states that the pain caused is only moderate, and lasts but from eight to ten minutes. The formula he recommends is acid pyrogallique 20 grammes and axonge or vaseline 100 grammes.—*Bull. Soc. de Therap.*

NOTE ON A NEW ANTIPRURITIC REMEDY.

Dr. Bulkley has directed attention to a very important point which is often a source of great anxiety to the practitioner, viz.: the difficulty in relieving persistent and wearing itching in skin affections. He points out that the drugs we certainly rely on, viz.: opium, morphia, chloral, bromide of potassium, aconite, and carbolic acid, when administered internally, often fail to stop the unconscious scratching, and he was led from the known effects of gelseminum to try that drug. In certain cases he has found it decidedly efficacious. He begins with ten drops of the tincture, and, if in half an hour there is no relief, he gives twelve or fifteen drops, and so on, until one or two drachms have been reached in two hours.—*N. Y. Med. Journ.*

SOOTHING OINTMENTS AND THE INDICATIONS FOR THEIR USE.

The oleates, comprising Crocker's zinc oleate, Martindale's lime oleate, and Sawyer's lead oleate, constitute undoubtedly a very valuable addition to our means of healing inflamed surfaces and soothing irritable skins, and they are very justly coming into extensive use. Dr. McCall Anderson has lately proposed a bismuth oleate of which the following is the formula, and to be prepared in a similar manner to the well-known zinc oleate. ℞ Bismuthi oxidi, ℥i; acidi oleici, ℥viiij; ceræ albæ, ℥iiij; vaseline, ℥ix; olei rosæ, ℥v; M. et. ft. ung.—*The Specialist.*

LOCAL MERCURIAL FUMIGATION.

The subject of local mercurial fumigation has lately been attracting some attention in Great Britain. Dr. F. H. Kane (*Dublin Fourn. of Med. Science*, Nov. 1874) described and figured a simple apparatus by which the vapor of sublimed calomel could be readily and with precision directed on any desired region, such as the nose, mouth, pharynx, or skin. In 1872 (*Brit. Med. Journal*) surgeon Moffitt described a very similar apparatus, and renewed attention was directed to the subject by a correspondence in the same publication in 1880 (vol. ii). Moffitt volatilized from three to five grains of calomel, and directed it by means of a stream of air as in the spray-producers. Quite recently, Dr. Walter G. Smith read a paper on the results obtained by him since the publication of Kane's paper. He has used it frequently, and claims for it exceptionally gratifying and rapid curative results in similar cases to those in which iodoform is applicable, that it is painless even when directed on most sensitive surfaces, that it is easy of application, and capable of precision in use, and that it does not salivate.—*Brit. Med. Journal*, May 7, 1881.

 FCETID SWEATING OF THE FEET.

Willcox, referring to the above article, says that he does not believe that the bad odor is occasioned by any putrefactive changes in the sweat, and says that the same odor does not occur in sweating of the axilla, scrotum, or perinæum. He claims to have been successful in treating bromidrosis of the feet by means of the application of strips of emplastrum saponis, or emplastrum plumbi. The plaster should be changed every three or four days, and, in bad cases, two layers applied. At the end of a week he has found the skin of a natural color and dry; the odor ceasing from the first.

Thin, in a subsequent article, while confirming much of what Willcox says, finds that the local application of adhesive plaster has failed in his hands. He says that the offensive odor is occa-

sioned by the mixture of serum with the sweat, and also that the same smell would be found in sweating of the perinæum, or scrotum, if the parts were chafed.

Clement Hawkins orders a foot-bath every night, to which an ounce of alum has been added. Afterward a lotion is to be applied to the red patches, made as follows: ℞ Plumbi oxidi rubr. gr xv, liquor plumbi subacetatis (French Pharm.) ℥i; pound the red oxide of lead in a mortar until finely divided, and then gradually add the subacetate. H. says that a cure will be effected in from two to three weeks.—*British Med. Journal*.

VACCINATION A RELIC OF BARBARISM.

Such is the heading of a diatribe against vaccination, in a journal before us professedly devoted to medical reform. Comment: In three of the local governments of India, the total deaths by small-pox in the year 1878 were 226,946. This was the happy result of comparative exemption from the "Relic of Barbarism." During the same year the number of deaths from small-pox in all Europe and America within the range of advanced civilization, was certainly not more than ten thousand—probably much less. So much for the "Relic of Barbarism." We advise our anti-vaccinationists to travel off to the Punjaub, where they may enjoy the fruits of exemption from the Jennerian curse. Civilization and humanity can well dispense with their reformatory service.—*Pacific Medical and Surgical Journal*.

RAPID CURE OF LICHEN RUBER BY HYPODERMIC INJECTIONS OF ARSENIC.

Köbner reports the cure of what seems to be a well-marked case of lichen ruber, by means of hypodermic injections of Fowler's solution. The eruption was more or less general. That the rapidity of cure was due to the hypodermic method is proven by the facts that the case had already been ordinarily treated, but without benefit; and also once during treatment the

patient rebelled against the plan, and the solution was then given by the mouth, but improvement failed to continue. The injections were then renewed, and a rapid recovery followed. The intense itching present yielded to the first few injections. The injections were made at intervals of one or two days, and in all but one fluid drachm of the solution, each injection averaging about four minims of the solution with two parts of water. Six months afterward there had been no reappearance of the eruption.—*Deutsche Med. Wochenschr.*

“THE SUN DO MOVE.”—ANTI-VACCINATIONISTS.

Poor old John Jasper is dead. John was a sable Virginian, of devout spirit, concerned for the welfare of his brethren. John found it to be a prevailing belief that the sun was stationary. His eyes told him the contrary. He had never heard of Copernicus, but it was plain to him that a great popular delusion overspread the land. So John undertook to reform the opinions of the people, and preached sermons from the text: “The Sun do Move.” And he had a large following. His arguments and demonstrations were irresistible. He had none to oppose him, for all the astronomy known to his brethren had entered their understanding through their own eyes.

The mantle of Jasper has fallen on anti-vaccinationists. Opening their tender vision on the world in which they happen to be thrown, they find society protecting itself from small-pox by vaccination. Observing a few exceptional cases of failure to protect, or of reputed evil effects, they settle the whole question mentally without looking into it further than the length of their nose. Blind with prejudice from the start, they are incapable of seeing more than one side, or one class of facts. And having once switched off the track of rational enquiry, they diverge farther and farther from it as their brains become intoxicated with the shallow draughts of muddled knowledge. After the fashion of nostrum mongers collecting testimonials, they throw

their drag-net into pools and sewers, and fish up everything—fact or fiction—on the blind side of the question, carefully ignoring the incontestable and overwhelming mass of evidence on the side of vaccination. They have their societies and periodicals both in England and America, more particularly in England, where the opposition to vaccination depends, more than on anything else, on the pig-headed crosswiseness of human nature which is aroused to action by the compulsory laws. Had a law been enacted prohibiting vaccination, a majority of these crooked people would have organized on the other side and vaccinated themselves and their children at least once a year, out of sheer spite and contrariness. One honest fool in Ireland breaks up house and home to get rid of compulsory legislation, and transports his family to Pennsylvania, there to plant a colony for the infection and cultivation of small-pox among his neighbors. An English paper contains the announcement of the birth of a child who “will never be vaccinated”—the stupid father thus attempting to impose on his infant a life-long compulsion for the purpose of proclaiming his hostility to compulsion. To this crusade against common sense and universal experience, quite a number of titled individuals give the use of their names—lords and nobles, perhaps one-tenth as many as took stock in the South Sea Bubble or built up the London Perkinian Institution for the cure of disease by magnetic tractors many years ago.

Apropos to this topic, there comes to us by mail a roll of anti-vaccination literature, newspaper clippings, extracts, etc., with written references—quite a mass of interesting trash. The unknown friend who sends it has taken infinite pains with a view no doubt to the salvation of our soul. We shall preserve the curious mess for future use, with thanks for it, suggesting, however, that when written matter is wrapped and mailed as if printed, it requires letter postage, and that a conscientious advocate of reform, in anything from vaccination to polygamy, should not defraud the government.—*Pacific Medical and Surgical Journal.*

Society Reports.

ERIE COUNTY MEDICAL SOCIETY—ANNUAL MEETING.

The annual meeting of the Erie County Medical Society was held at the Medical College, Tuesday, January 10, the session opening at 10.30 A. M.

In the absence of the President, Dr. John Hauenstein, who is in Europe, the Vice-President, Dr. Thos. M. Johnson presided. Dr. A. M. Barker was at his post as Secretary.

The minutes of the June meeting were read and approved.

Dr. E. T. Dorland, as Chairman of the Committee on Membership, recommended the following for admission to the society: Drs. Clayton M. Daniels, Mary E. Runner, Edward Clark, Edward H. Ballou, John A. Hoffmeyer, Irving M. Snow, N. T. Keifer and C. G. Chaplain. The report was received and adopted.

Applications for membership were received from the following named gentlemen: Drs. A. H. Crawford, W. W. Potter, H. D. Ingraham, G. T. Brown, C. C. Frederick, G. W. York, C. A. McBeth, Walter D. Green, Floyd S. Crego, and M. D. Mann. They were referred to the Committee on Membership.

Action in regard to the application for membership of Dr. J. D. Bonnar was postponed until the semi-annual meeting in June next.

The Board of Censors presented the following report, which was received and adopted:

REPORT OF THE BOARD OF CENSORS.

At the annual meeting, January 11th, 1881, the society instructed its Board of Censors:

First—To furnish the District-Attorney of this county with a list of the names of persons practicing in this county, medicine or surgery, who have failed to register their names in the County Clerk's office, in compliance with the new medical law of this State, and others who are known to them to practice in violation of the law, and urge their prosecution.

Second—To appeal through the legal firm of Messrs. Lewis & Rice to the Attorney General of this State for an order to bring the case of the "College of Physicians and Surgeons" of this city before the proper court, in order to determine the legality of the charter of this institution.

Your board would respectfully report: By the amendment passed by the last Legislature to the medical law of 1880, the time for registering was extended to the first of October last; we did not therefore deem it advisable to commence any action before that time.

In order to make up the list of names of persons practicing medicine illegally in this county, for reason of having failed to register, or an illegal registry, or practicing under cover of an illegal diploma or a diploma illegally obtained, the Board of Censors have appealed to the members of the medical profession of the county to aid them in securing the names and the proofs necessary to bring the cases before the grand jury. Your board regrets to state that the profession has shown no interest in the matter, and with but one or two exceptions, the appeal has been entirely ignored. Since the first of October Mr. Hatch, the District Attorney, has been busily engaged with important criminal cases and could not devote the necessary time for preparation to bring any of our cases before court except with extra legal help at our expense, and as the board had no such authority and no appropriation had been made for this purpose by the society, we deem it desirable to defer further action for the time being, not for the reason of "apathy towards the great interest in the vital questions entrusted to our charge," but simply for the want of funds.

In regard to the legal action brought against the institution that existed in this city under the name of "Buffalo College of Physicians and Surgeons," we beg leave to report:

The appeal for "an order" was granted by Attorney General Ward. The suit was brought before the Special Term of the Supreme Court, June, 1881, to test the question of validity of the charter of this institution. Judge Barker of the Supreme Court in this decision has overruled the demurrer of the defendants, "and gives leave to answer the complaint in twenty days on payment of costs; otherwise absolute judgment will be awarded to the plaintiff."

The very able, elaborate opinion of Judge Barker has been published in full in the *Buffalo Medical Journal* and the public press of the city. The defendants have appealed from the decision of Judge Barker to the General Term. The case is on the court calender for this term and will be argued on our side by Mr. Rice, who has now sole charge of our case. The whole expense for costs on our side will not exceed much the amount appropriated by the society. However large this expenditure for this purpose may seem, your board deem the money well and legitimately applied, if we take into consideration the great importance of the question involved, for the medical profession of the whole State.

The decision of Judge Barker, which will unquestionably be sustained by the General Term, will settle, beyond a doubt and for all time, the question whether

this institution, that had been created in our city by some "philanthropists" and "humanitarians," a "benevolent, charitable, scientific and missionary society," and other kindred institutions in the State, can with a charter obtained under the law of 1848, "create and maintain a medical college, as such institutions are known to the laws of the State, and to confer honorary degrees and grant diplomas to its graduates," or whether they shall be compelled by authority of the law to close their doors as bogus institutions.

EDWARD STORCK,
H. R. HOPKINS,
A. H. BRIGGS,
P. W. VAN PEYMA,
The Board of Censors.

BUFFALO, January 10th, 1882.

Dr. Storck, as Chairman of the committee regarding a Board of Health, reported progress.

The report of the Treasurer showed that some \$300 had been expended during the past year, leaving only a balance of about \$55 on hand. The report was received; a committee was appointed to audit it, and they subsequently reported it correct.

The report of the Librarian, Dr. J. B. Samo, was received and placed on file.

Dr. F. F. Hoyer presented a series of resolutions relative to the prosecution of persons practicing medicine or surgery contrary to the provisions of the new medical law. By vote of the society they were referred to the Board of Censors.

THE ELECTION OF OFFICERS

for the ensuing year resulted as follows: President, Dr. T. M. Johnson; Vice-President, Dr. S. E. S. H. Nott; Secretary, Dr. A. M. Barker; Treasurer, D. F. W. Abbott; Librarian, Dr. J. B. Samo.

Board of Censors—Drs. E. Storck, H. R. Hopkins, A. H. Briggs, P. W. Van Peyma, and F. F. Hoyer.

Committee on Membership—Drs. E. T. Dorland, Herman Mynter and T. M. Johnson.

Delegates to the State Medical Society—Drs. F. F. Hoyer, S. E. S. H. Nott, A. M. Barker, and H. R. Hopkins.

The annual address of the retiring President, Dr. John Hauenstein, was read by Dr. Bernard Bartow, and is published in full in this number of the JOURNAL.

After transacting the usual routine business, the meeting adjourned.

Editorial.

THE BOARD OF HEALTH.

The management of sanitary interests in great centres of population is among the most important questions now occupying the attention of the profession. Preventive medicine is at last regarded of more vital importance to the public than all the curative and palliative measures adopted to eradicate disease or to mitigate human suffering. We join, therefore, in the expression of an earnest and active interest in this or any other movement, which has for its object the healthfulness of our city and the correction of the many abuses which through selfishness and indifference prevail in this and every other community. It is not our purpose, however, in directing attention to this subject, to discuss the principles of sanitation in their application to our city, but rather to criticize the agencies authorized by the charter through which the community is protected against the introduction of disease from without or the generation of disease within. This agency we call the Board of Health, and whether by definite statutory provision, or through powers granted under the common law, is invested with authority to maintain and guard the sanitary concerns of our municipality.

In the organization of such Boards, some consideration is usually given to the fitness of its individual members, but the framers of our city charter, we presume with a view to economy (certainly not to efficiency), constituted a Board of three *ex-officio* members, the City Engineer, the Comptroller and the

President of the Common Council. If it had been the object to make a Board absolutely worthless, they could not have been more successful. In making this statement we mean no disrespect to the gentlemen referred to, who, in addition to the onerous duties of the positions to which the people elected them, are, by law, empowered to undertake a work for which they have no aptitude and less inclination; but we wish to say that a board with less knowledge of sanitary matters could not have been formed. What is the result? The executive officer of the Board, the Health Physician, is frequently compelled to assume great responsibilities, in order to meet the exigencies of the hour, trusting to this nondescript Board for endorsement, at a meeting at which he himself may be the only person present.

An effort has been made within a few years to correct this state of things by framing an amendment to the charter in which a new Board would be formed. For reasons which we cannot understand this effort has not been successful. It is time, however, that our city, with its broad area and its rapid increase of population, should be placed under strict sanitary control; and with that end in view, we would encourage the inauguration of a movement to amend the city charter in order that this important object shall be secured. If the question were presented what suggestions have we to offer in the organization of such a Board, we would not hesitate to express our conviction that a Board of Health should be composed of at least five members, of which three should be medical men, to serve without compensation. This Board should serve for at least five years, and should be appointed by the Mayor. To this Board should be entrusted large powers, under wise restrictions, in the management of the sanitary concerns of the city, in the correction of abuses, in the abatement of nuisances, in the maintenance of proper safeguards against infectious diseases, and also in enforcement of ordinances enacted to protect the lives of our people. Such a Board would have the merit of both permanency and efficiency, and being placed beyond the political influences which enter into

the administration of municipal affairs, would yield positive results in the special field assigned to it. We have not space to enter into the details of a plan which should be early adopted to supplant the system now in operation, but under judicious guidance, we are assured that a movement with this end in view would be received with favor by the public and the profession.

“THIS, THIS IS BLISS.”

When our country was electrified, last summer, by the dastardly attack on President Garfield, when scarcely a dry eye read the last sad dispatch, or an unsympathetic ear heard the tolling of the fatal bell, how little could it be conceived that such a tragedy would be “concluded,” as the play-bills have it, by such a revolting farce as Guiteau’s trial has proved, or that a few months would witness a ghoulish struggle among two or three physicians and attendants to secure a good and sufficient share of spoils from the dead. To the honor of many, and those the most eminent, who were called upon for consultation or advice, it may be said, that, their services being ended, they retired from before the public, and were no more heard of in connection with the case. But the same refinement of feeling has not, unfortunately, been displayed by all. Within a very short time one, at least, is said to have urged his claim to an amount which unblushingly announces the value he places upon his professional duties, and has calmly appropriated to himself “the lion’s portion” of the expected congressional fees. To claim for himself as much as for both the distinguished consulting surgeons together, is a wand to conjure up notoriety, even more potent than formerly was condurango. No one will deny that “the laborer is worthy of his hire,” nor the well-known fact that physicians, as a rule, render more gratuitous service, and experience more difficulty in obtaining their just compensation, than almost any other class of men; but the recent extravagant petition so far exceeded the legal due of the petitioner, besides giving him

such unwarranted prominence above others, that it grates harshly on the feelings of a public who were led to believe, by many expressions in those days of illness, that friendship alone for the honored patient was the chief prompter of the devotion and care bestowed.

EDITORIAL NOTES.

We regret to announce the serious illness of Dr. Wm. Gould, of this city, which has confined him to his bed for several weeks.

An important change has taken place in the firm of Geo. I. Thurstone & Co., druggists, 416 Main street, Buffalo, Mr. C. M. Lyman retiring, and his place filled by E. H. Hutchinson. We wish the new firm deserved success.

Under Clinical Reports in our last issue we inadvertently made the prescription recommended by Dr. Boardman for herpes zoster read two drams of carbolic acid to two ounces of olive oil, when it should have read, two scruples of carbolic acid. This correction should be heeded by the profession in using this valuable prescription.

The present term of lectures at the Medical College is drawing to a close, the commencement being announced to take place probably on Tuesday, Feb. 21. The present senior class is made up of excellent material, and will prove a valuable accession to the Alumni of the college and to the profession into which they are soon to be introduced.

We are pained to announce the death of Mrs. Dr. White, which occurred January 23, not four months after the death of her distinguished husband. The Alumni of the college and the profession will join in the expression of deep sorrow that this estimable lady, borne down under her severe affliction, and also under severe physical suffering, should be so soon taken away.

In our last number, we referred to the probable retirement of Dr. A. H. Briggs as Health Officer. We are gratified to announce that the Board of Health have made a wise selection in appointing to fill this important position Dr. W. C. Phelps, who brings a large

experience and good executive ability to the discharge of its duties. We express the sentiment of the profession when we say that a better appointment could not have been made.

The epidemic of variola, prevailing in this city, seems to be effectually checked, thanks to the energy of the Health officers, to whose efforts great credit is due. We chronicle with pleasure the eminent success of our friend, Dr. Marcley, to whom the care of all cases at North Buffalo has been intrusted, in the treatment of this loathsome disease. It only remains for the Board of Health to amply compensate him for his labors.

The Board of Censors desire to call the attention of the profession to the fact that they are now ready to test the new medical law. They therefore seek information concerning any instance of persons practicing illegally with evidence to prove the same. The apathy of the profession in this very important matter may well be the subject of severe criticism. We hope hereafter the efforts of the Board of Censors to suppress quackery will be earnestly seconded by the profession generally,

The secretaries of the International Medical Congress, which met in London last August are to be congratulated upon the promptness with which the transactions are to appear. These are contained in four royal octavo volumes, of 2,400 pages, and relating as they do to almost every branch of medicine and surgery, form indeed quite an encyclopædia. Each member is, of course, entitled to a set, and those who are not, can obtain the volumes by purchase. Moreover, as few physicians would care for all the papers, but many would probably wish to read those of special interest to themselves, the very wise plan has been adopted of publishing in compact form a limited number of the transactions of each section separately. These may be obtained from a Mr. Kolckmann, 2 Langham Place, London, at a moderate price—six or seven shillings, and will probably be much in demand.

Reviews.

Landmarks, Medical and Surgical. By LUTHER HOLDEN, Consulting Surgeon to Saint Bartholomew's and the Foundling Hospitals, etc. Assisted by James Shuter, M. A. Camb, Assistant Surgeon to the Royal Free Hospital, etc. From the third English edition, with additions by William W. Keen, M. D., Professor of Artistic Anatomy in the Pennsylvania Academy of the Fine Arts, etc. Philadelphia: Henry C. Lea's Son & Co. 1881.

It is as important for the student of anatomy to make himself acquainted with the exterior form of the living human body as to dissect the cadaver. Hand and eye must work together if we want to insure ourselves against a faulty diagnosis. How often we see that a dislocation is overlooked because the surgeon is not familiar with the outer appearance of the human body. This little book is a good guide to the study of this branch of anatomy, and will be found of value not only by the student, but also by the practitioner.

Suppression of Urine; Clinical Descriptions and Analysis of Symptoms. By E. P. FOWLER, M. D. Ninety-three clinical cases, with illustrations, tables, and diagrams. New York: William Wood & Co. 1881.

This book is an entertaining monography, originally presented as a paper to the New York Medico-Chirurgical Society. The author reports first a very interesting case of anuria of ten days' duration, produced by pressure of a cystic degeneration of left kidney on the right renal artery, and gives as his impression "that sudden and total urinary suppression, in absence of other acute illness or of poisoning, is nearly always co-existent with the presence—physiologically at least—of but one kidney." The author has collected 93 cases from the literature of the last 100 years, and arranged them in tables according to the causes given statistics respecting symptoms, duration, age, sex, etc. Altogether the little book is a very valuable contribution to the medical libraries, so much more, as it, as far as we know, is the only one on this subject.

The Opium Habit and Alcoholism. A treatise on the habits of opium and its compounds: alcohol, chloral hydrat, chloroform, bromide of potassium and canabis indica, including their therapeutical indications, with suggestions for treating various painful complications. By DR. FRED. HEMAN HUBBARD. New York: A. S. Barnes & Co.

This remarkable title is borne by a neatly bound book of 259 pages, which the author claims in his preface was written for the benefit of the profession. It is in fact a sensational description of the evils of the opium habit, mixed up with all sorts of topics foreign to the subject, and written in a style to please the vulgar rather than the professional reader. The book is valueless to the medical man, injurious in its influences upon the layman, and profitable only (if at all) to the author as an advertisement, for which it is probably intended.

Aids to Rational Therapeutics. By T. MILNER FOTHERGILL, M. D., M. R. C. P. New York: G. P. Putnam's Sons. Paper, 25 cts.; cloth, 50 cts.

This little book is one of the student's aids series, and is one of the best of them. The young graduate particularly will find many hints in this little book which will help him greatly when first attending patients himself.

A Pocket Book of Physical Diagnosis for the Student and Physician. By DR. EDWARD T. BRUEN, one of the Physicians to the Philadelphia Hospital, &c., &c., with wood engravings. Philadelphia: Presley Blakiston. Price, \$2.00.

This volume aims to give to the student and physician a condensed reliable manual on physical diagnosis. The arrangement is original; the illustrations are drawn especially for the work, and the author has succeeded in producing a book of considerable merit. It is a work which we would especially recommend to students, as of value in welding together information gleaned from didactic lectures and reading with that obtained by observation at the bedside.

The Physician's Clinical Record, for hospital and private practice, with memoranda for examining patient's temperature, chests, etc. Philadelphia: D. G. Brinton.

Accurate records of his more important cases are of value not only to the physician himself, but to the profession; but it is practically impossible for him to keep such records with the needed accuracy and desirable brevity, unless he uses a regular form and one that he can have always with him. To this end the present volume contributes. It is small enough to be carried in the pocket, complete enough for all the essential entries and comments, and large enough for over a hundred cases. A small stencil plate accompanies it to be used for sketching an outline of the thorax and abdomen, in which may be marked by shading the seats of effusion, the size of organs, the position of tumors, etc.

Chemical Analysis of the Urine, based in part on "Casselmann's Analyse des Harnes." By E. F. SMITH, Ph. D., Professor of Chemistry in Muhlenberg College, and John Marshal, M. D., Demonstrator of Chemistry, University of Pennsylvania. Illustrated Philadelphia: Presley Blakiston. Price, \$1 00.

There is no want of hand-books on urinalysis. Those who are not already supplied will find this one of the best of the smaller works; the arrangement is good and the illustrations excellent.

Lectures on Electricity (Dynamic and Franklinc) in its relations to medicine and surgery. By A. D. ROCKWELL, M. D., Electro-Therapeutist to the New York State Woman's Hospital, &c. New York: Wm. Wood & Co.

This is a second edition of a manual which has met with general favor. A number of additions have been made; especially a description of the galvanic accumulator for storing electricity for surgical uses, and of the induction-balance for locating the position of bullets in the body; also a lecture on Franklinc Electricity. Those who have not the larger work of Beard & Rockwell will find this almost a necessity if they use electricity at all.

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Original Communications,

VARIOLA IN BUFFALO.

By J. I. Marcley, M. D.

The following cases of small-pox occurred in my practice at Black Rock, during the period of my service as assistant to the Health Physician. As it is a disease seldom met with, a short history of the cases may be of interest to the profession.

The first case was that of Lewis Schreiber, who was taken sick on the 15th of November, 1881. Whether this was the beginning of the fever or of the eruption, I am unable to say. He was attended by a "Rational" Doctor, one Von Schulenburg. The case was diagnosed as one of scarlet fever. It was *not* reported as small-pox.

This young man's father was taken sick on the 4th of December, and was also attended by the same party. The father died, with symptoms of acute œdema of the glottis, on the 10th, after a sickness of six days' duration.

On the 7th of December, Albert, aged six years, was taken sick; I first saw the family on the 11th; I found the father dead in the house; Lewis, the first affected, was then well; de-crustation being almost completed; but from the great number

of pigmented maculæ on the *face*, breast and arms, and later from the pock-marks resulting, the case must have been of the coherent form on those parts mentioned.

Albert was then in the beginning of the fifth day of the disease, the third of the eruption; disease was of the coherent form, which terminated in recovery. All three had been successfully vaccinated in infancy. In this house were three other persons who escaped, viz., mother and two children aged 18 and 9 years, all vaccinated in infancy only. From this family arose all the other cases, and all but one can be traced directly to them.

Where the Schreibers contracted the disease I was unable to learn; they claim that none of them were away from home, and no visitors had been to see them. The boy Lewis was employed in the Malleable Iron Works up to the time of his sickness.

The next case was that of Mary Koch, aged 9 years, a cousin of the Schreibers, at whose house she had been visiting during the time of Lewis' sickness. She was taken sick on the 14th of December, with the ordinary symptoms of fever, headache, vomiting, etc.; the disease proved confluent in form and terminating in recovery; she had been vaccinated only once, about four months previous, *not* successfully.

Lewis Koch, aged 6 years, a brother of the above, began at the same time with similar symptoms; never vaccinated; disease confluent, ending in recovery.

Katie Koch, aged 3 years, a sister of the above, was taken sick on the 21st of December, disease being confluent; never vaccinated; recovery.

Adam Koch, aged 39 years, father of these children, began on the 21st of December; the disease mild varioloid; vaccinated once when a child. In this house, and in constant contact with the sick ones, were Mrs. Koch, aged 38 years, vaccinated only once, that in infancy, and two other children aged 12 years, and an infant of six months. The former was vaccinated when an

infant, and the latter not until the disease was discovered in the family, and then it proved very successful; these escaped.

Wm. Metz, aged $7\frac{1}{2}$ years, was the next one discovered, who, although he had never been in the Schreiber house, was a constant playmate of young Schreiber during the time his elder brother was sick. Willie began on the 22d of December with sore throat, chills, fever, headache and vomiting. The eruption appeared on the 25th, proved confluent in form; never vaccinated; recovery slow; decrustation not completed until the end of the fifth week.

Albert Metz, father of the boy Willie, aged 31 years; began on January 8th with chills, high fever, headache and backache, eruption not appearing until beginning of the fifth day, then only a few spots, constituting a mild case of varioloid. Mr. Metz was successfully vaccinated when an infant; I re-vaccinated him as soon as the disease was discovered in his son, but it did not "take;" Mrs. Metz, his wife, who escaped, I re-vaccinated at the same time, it taking very nicely. The virus used in each case was perfectly fresh, ivory points, prepared by myself from a cone obtained from the New England Vaccine Co., whose virus I have found to be the most reliable of any stored virus I have used. I think it proves as often successful as in the arm to arm method.

Jacob Stinner, aged 19 years, came next. After the death of Mr. Schreiber, and before the nature of the disease became known, Mrs. Schreiber took some dress goods to the Stinner boys' mother, who is a dressmaker, to be made up. The goods were taken to her on Saturday the 10th; on Sunday, the 11th, the disease was pronounced small-pox in the Schreiber family. Mrs. Stinner at once returned the goods, but not until after her son had contracted the disease. He was taken sick on the 22d of December with fever-chills and very severe headache, the eruption appearing on the afternoon of the 25th, and proving coherent in form, terminating in recovery. He had been successfully vaccinated once in infancy.

Lewis Stinner, aged 14 years, a brother of the above, developed symptoms of the disease about twelve days later, it proving to be very mild varioloid, not over a dozen spots appearing in all. This boy had been vaccinated more than once successfully. In this house, and in more or less constant contact with the patient, were Mrs. Stinner, who had varioloid when a child; Miss Stinner, aged about 24 years, vaccinated eight years ago and who had a "very sore arm" at that time; also two other children, aged about ten and twelve years. The eldest had been successfully vaccinated once; the youngest not until a day or two after her brother was taken sick, when I vaccinated the whole family. None "took" however, except this one. All escaped.

The next case was that of Dr. C. G. Champlin, who was taken sick on Sunday, the 25th of December. The Doctor was so sick during the initial fever, with symptoms resembling severe typhoid, that his life was despaired of, but when on Tuesday, the 27th, the eruption appeared, his condition at once improved, and the disease proved to be not very severe varioloid, running its course in a short time and without special trouble. Dr. C. was exposed to the contagion at the Schreiber house on Sunday, the 11th of December. He had been successfully vaccinated when a child, and after exposure it was repeated three different times, but did not take, although the virus was good, as proved by the fact that his brother was successfully vaccinated at the same time. His sister, who was in constant attendance on him, was successfully vaccinated and escaped the disease.

Frederick Roesch, aged 45 years, sat up with Mr. Schreiber the night he died. He was taken sick on the evening of the 23d of December; complained of headache, nausea, chills, fever, and intense backache; this was the only case in which backache was very severe. The eruption appeared on the 26th; with the appearance of the eruption, active delirium came on, and on the night of the 27th the patient escaped from his nurse and ran out on the street, through a sharp rain, and in no other clothing

than a shirt. For some days after this it was necessary to have two men in attendance to restrain him; disease confluent in form; the eruption ran its course normally up to the seventh day, when the pocks began to change color, growing of a reddish hue; in places where there were no pocks, petechiæ appeared, gradually changing to a deep purple over the whole of the body, face and extremities, except the hands and feet, which were of a coal-black color. The pulse became slow (40 per minute) and very weak and irregular; tongue dry and cracked; sordes formed upon the teeth; the gums were swollen and bled easily; the mouth remaining partly open; delirium now became less active, and assumed a low muttering character; patient in a semi-comatose state all the time; liquid food and medicine were swallowed with difficulty when introduced into the mouth.

The treatment of this case was mainly tonic and stimulant, consisting of quinine, ergot, morphia, beef tea and milk. Whiskey in form of strong egg-nog being administered every half hour, night and day, for some time; patient made a slow and tedious recovery; decrustation not complete until sixth week. Roesch was successfully vaccinated once, about twenty-five years ago.

In this house, and in more or less constant contact with the sick man, were Mrs. Roesch and five children. The wife was once vaccinated in infancy; the children all successfully within four years, with the exception of one which had not been done in six years. I re-vaccinated them all, only one taking, the last mentioned; *all remained free from the disease*. This case illustrates the protective power of recent vaccination; these people it was impossible to isolate, all the children being with their father a good portion of the time.

Jacob Brown, aged 47 years, in company with Mr. Roesch, sat up with Schreiber the night he died. On the 23d of December he complained of chills, fever, headache, pain in abdomen, nausea and slight backache. The eruption appearing on the 27th (four days from the commencement of the fever) and proving to be confluent; rather active delerium began as soon as the eruption

was in full bloom, lasting for several days; decrustation took place slowly, face not clean at end of fifth week. In this connection I will state that in only one or two cases did the face clear off first. The rule was body and limbs first, hands and face several days later. In all these cases the eruption appeared simultaneously upon the face and arms. In all cases it could be early noticed in the mouth, especially on the roof just anterior to the soft palate. In two of my cases the eruption was very severe in the mouth, throat and nasal passages. And in all cases it appeared there to a slight degree, the inside of the cheeks and tongue being free from eruption in most all cases.

Mr. Brown had been vaccinated once when a child. In this house were Mrs. Brown and one son, aged 20 years. Mrs. B. was successfully vaccinated at the age of 18; the son when a small child, again at the age of 14, and at this time by myself; each time successfully; both escaped.

Mrs. John G——, aged 26 years. In this case I have been unable to trace the point from which they received the contagion, but there can be no doubt that it arose from the one common source. There is no evidence of Mrs. G's ever having been vaccinated, nor can she remember of its having been performed. Mrs. G. was pregnant between three and a half and four months. On the 23d of December she complained of being chilly; had headache and some backache, and nausea. On the morning of the 27th the eruption appeared, at which time she was taken with labor pain and hæmorrhage, followed soon by the expulsion of the contents of the uterus. The disease proved to be of the confluent form, and coherent over most all the body. At no time during the normal period did the lochia cease. Mrs. G. made a good recovery; desquamation not completed until fifth week. In this house Mr. O., aged 65 years, who had been vaccinated when a child, and who was in constant attendance on the sick, escaped the disease.

John G., aged 29 years, husband of Mrs. G., was taken sick on the 10th of January, fourteen days from the time eruption ap-

peared on his wife. Symptoms were fever, chills, headache, backache and very severe and almost incessant vomiting; for this I prescribed 1-32 grain iodide of potassium with one drop of wine of ipecac, hourly. This gave great and almost immediate relief, stopping the vomiting after two or three doses.

Mr. Ghruler was vaccinated when a child, and again as soon as his wife's disease was diagnosed, but at that time it did not take. Disease of confluent type; throat, mouth and nasal passages were filled with the eruption; patient made a fair recovery.

John Staubits, aged 48 years, vaccinated successfully when a child; disease of the distinct form and mild; recovery good. Mr. S. was in the habit of stopping at a certain saloon on his way home from work where the Schreibers frequented; here it is, in my opinion, that he contracted the disease. In this house were his wife and one son, aged 13 years; both had been successfully vaccinated in childhood and both escaped the disease.

Mrs. Chas. Steinhauser, aged 36 years, a daughter of the man Schreiber, was at her father's house for about three hours the morning he died; was taken sick December 22d, twelve days after exposure, with a mild form of varioloid, so mild in fact that they kept the case to themselves, her husband continuing at his work until by some means the report was noised about that his wife had small-pox. I visited the house on the eighth day of her disease and put up the usual sign. In this house were her husband and two young children. The man had been successfully vaccinated when a child and escaped. One child, a boy aged 4 years, was taken sick on the 2d of January; complained of headache and vomited towards night, but still continued to play around; on the morning of the 3d, at about 9 o'clock, he had a severe convulsion lasting for over an hour; at 11 A. M. it was repeated, ending in death in about half an hour; no eruption appeared; this child had never been vaccinated.

The baby aged 6 months was also taken sick on the 2d, and on the 4th the eruption began to appear. Although this child

had never been vaccinated, the disease was mild of the distinct form, coherent only around the neck in places, and the child made a good recovery.

George Hohl, aged 11 years, was the last case. He began January 1, '82, with headache, vomiting, etc.; eruption appeared on the 4th; disease confluent, considerable throat trouble; good recovery. This boy had been vaccinated a number of times, but never successfully. In this house were the parents of the boy, both of whom had been vaccinated in childhood and both escaping. There were also three children, a girl aged 19, never successfully vaccinated, although it had been tried a number of times and twice by myself with perfectly fresh virus; one girl, aged 18, vaccinated successfully five years ago, and a boy, aged 12 years, never successfully vaccinated. They were all in contact with the sick boy and all escaped.

This completes the list. I have tried to give the main points of interest in each in as short a manner as possible. I will now give a brief summary of some of the interesting and instructive features of these cases.

First, in regard to the occurrence of the different symptoms.

Chills were present in all cases, in some quite severe.

Headache of a more or less violent character was present in all.

Backache occurred in ten, but was violent in only one, the hæmorrhagic.

Nausea was present in all; vomiting in eleven; violent and long continued in only one case.

The tongue was much coated in all cases, but was not the seat of much eruption, only in two.

Sore throat was complained of in eight, severe in only two.

Delirium was present in four, very violent only in the hæmorrhagic case.

Abdominal pain in one case.

Constipation was marked in all cases; convulsions occurred in only one case.

Itching was distressing in two or three only.

Conjunctivitis was present in four cases, severe in only one.

Pain in hands and feet was complained of in six cases, severe only in the hæmorrhagic.

Œdema of lower extremities was marked in only one case.

Loss of hair occurred only in one, to any extent.

Pulse, owing to the difficulty in getting at this symptom, on account of swelling, it was neglected.

In regard to the period at which the eruption appeared in those cases that I could follow closely, it varied from two to five days from the beginning of the initial fever.

The period of incubation was twelve days in seven cases, and in three fourteen days. These were all I could actually date.

In regard to vaccination; thirteen had been vaccinated, none, however, within a number of years. Eight had never been vaccinated. Of those vaccinated the disease assumed the form of varioloid in five cases. Distinct in one, coherent in four, confluent in two, and hæmorrhagic in one case.

Of those not vaccinated, distinct in one, confluent in six. One died before the eruption appeared. In only one case was there any history of a successful (or non-successful) re-vaccination. This one had the disease the lightest of any, only a dozen spots appearing.

Although these cases are few in number, they speak very strongly in favor of vaccination and especially re-vaccination.

I have experienced a great deal of opposition among the German people to vaccination. This seems strange, for it is very seldom you will ever find a person, born in Germany, who has not been vaccinated, as there it is compulsory. The moment they land on our free soil, they imbibe the spirit of freedom, especially as regards vaccination.

The treatment of these patients was very simple. Anodynes (in form of morphia or Gregory's bromated syrup of Dovers, which I found very good) and cathartics, or rather laxatives and stimulants, as required. Potass chloral was found very good in the sore throat of this disease. Locally I found nothing so

agreeable to the patient as olive oil, and as far as preventing the pitting goes, I do not see but it proves as satisfactory as anything else.

The method followed in disinfection, was the burning of sulphur in tightly closed rooms, leaving them so for several hours, then thoroughly airing them; washing the floors, walls, ceilings, wood-work, and all wooden articles of furniture with a strong solution of carbolic acid, and by burning all cloth goods (bedding, curtains, carpets, etc.) that were in the least infected.

Clinical Reports.

FOREIGN BODIES IN THE INTESTINES.*

Reported by Thomas Lothrop, M. D.

Well-authenticated cases of obstruction of the bowels, from the presence of foreign bodies, are sufficiently rare to make the following a case of much professional interest.

Early in December, 1881, I was called to Maggie Joyce, aged 14 years, from whom I gathered the following history: Until within two years the child had enjoyed very good health, and exhibited the sprightliness and vivacity of mind and physical activity usually observed at that age. But from causes which were inexplicable to her parents, she began to fail in strength and to depreciate in weight, thus interfering with her attendance at school. Nothing very satisfactory either to parents or friends was gathered from the physicians who were consulted. During the winter and spring of 1881, the emaciation became more rapid in its progress, the bowels were alternately constipated and open, and every symptom of marasmus was present. In June last, after the administration of a laxative, the patient discharged a cherry stone with the fæces, and continued to expel these stones at intervals of a few days until my first professional visit. At

*Read before the Buffalo Medical Club Feb. 15, 1882.

that time the patient was emaciated to an extreme degree, the pulse was almost imperceptible, the abdomen tympanitic, the evacuations from the bowels occurring four times and often more a day. A stethoscopic examination of the lungs failed to reveal the presence of either inflammatory or tubercular disease of those organs; œdema of extremities was marked, and a passive infiltration of serum in and about the eye-lids gave evidence of great physical prostration and anæmia. Surveying the previous history of the case, with the candid statements made by both patient and mother, I could not doubt that the foreign substances were veritably discharged from the rectum, and that to this important factor should be attributed the causation of the long train of morbid phenomena which had brought the little patient to her present dangerous state. The mother showed me a considerable number of cherry stones, which she stated were only a portion of those gathered from the fæces evacuated by the patient, among which were also a few plum stones, all of which were blackened in their passage through the intestinal canal.

In the extreme condition in which the patient was found at my first visit, but little hope of recovery was held out, and only such remedies prescribed as would support the vital forces already nearly exhausted by the long-continued drain which the frequent alvine evacuations had occasioned. Cod-liver oil supplied the want in nutrition, and bismuth and pepsine assisted in gastric digestion.

The evacuation of cherry and plum stones continued, often daily, sometimes two or three days intervening between the time of their discharge. Sometimes two would be discharged a day; then again, after the lapse of three or four days, three or four stones would come away at a time. The patient failed to respond to the nutrients administered, and gradually sank, death occurring Jan. 30.

Autopsy forty hours after death, performed by Dr. Burt Hoyer, a recent graduate of the Buffalo Medical College, in the presence of Dr. D. Macniel and the writer.

The adipose tissues were almost entirely absorbed ; the abdominal cavity was greatly distended with the flatus contained in the intestines, and with serum in the cavity itself. The stomach and small intestines were healthy, until we examined the *ilium* at a point six inches from its junction with the cæcum, where the cause of all the trouble, which brought the patient to her death, was found. The intestine was black, or very dark in its dependent portion, the intestinal walls thickened from inflammatory deposits, and the canal so far contracted that it was almost impervious, etc. At a point about four inches from the cæcum a collection of plum and cherry stones were found, some of which were deeply incased in the intestinal walls. The cæcum at its junction with the *ilium*, and for an inch below the junction, was thickened, dark and also contained imbedded in its walls the foreign bodies above referred to ; the ilio-cæcal valve was nearly obliterated through inflammatory and ulcerative action. Three perforations were also found ; one in the cæcum, and two at the ilio-cæcal junction. Within the *ileum* and cæcum seventeen plum stones, three cherry stones and seven small bones were found. The cæcum and colon were otherwise in a healthy condition, and none of the foreign bodies were found in transitu in the large intestine. The appendix vermiformis was in a healthy condition, and also the portions of the cæcum around its orifice. The internal coats of the *ileum* and cæcum were ulcerated at points where the foreign bodies were in contact with the mucous surface, while, as stated above, the entire intestine between the distance above named was in such a condition as we would expect from the influences of the inflammatory action, which the foreign bodies must have produced.

The writer cannot vouch for the correctness of the statements of the patient and attendants, although no reasonable doubt can be thrown around the results of the very close and direct inquiries which were instituted in regard to the time at which the plums and cherries were swallowed. With a positiveness, which savored of truthfulness and sincerity, the patient assured me

that neither plums nor cherries were eaten during the summer of 1881. The fact that cherry stones were evacuated in June, 1881, before the season of these fruits, corroborates this statement. The circumstances of the family are not such as to warrant the use of canned fruits, now so much used by house-keepers; hence we can safely eliminate this source from which to trace these foreign bodies. The patient again and again affirmed that she had not eaten these fruits since the summer of 1880, or nearly a year prior to the time the stones appeared in the evacuations. There is so much of truthfulness in all other statements made in regard to the history of this case, not only by the sufferer, but by the mother, that I am inclined to accept as truth this assertion. If this be so, then the stones to the number of at least one hundred must have remained in the intestines for nine months before any evidence of their presence was given. Those that were found in the ileum and cæcum, according to this computation, were retained at least fifteen months after they were swallowed, an instance of tolerance upon the part of the intestinal canal of unusual occurrence and indeed almost incredible.

The case here reported is suggestive of the dangers caused by the presence of foreign bodies in the intestinal canal, introduced through the ingesta, and also of the difficulty of a correct diagnosis unless the foreign substances show themselves in the fæces. The tolerance of the bowels, for a comparatively long period, to agencies which cannot be appropriated to the specific purposes of alimentation and nutrition, is a feature forcibly illustrated in this instance. Foreign bodies generally pass through the intestines, with little or no inconvenience and suffering, and unless they are pointed, as in the case of pins or needles, they generally prove innocuous.

The case here reported demonstrates that the quantity of fruit stones (at least one hundred in number) was so great a source of irritation that a few, having become interrupted in their passage along the canal, and probably impacted, produced the intes-

tinal lesions, which finally, after many months of suffering, led to a fatal issue. We could not find any evidence of stricture of the gut, nor is it probable that any such constriction existed prior to the swallowing of the fruit stones, hence it is reasonable to assume that the large number of stones was the chief factor in the problem, rather than the prior existence of any unusual impediment to their passage. The perforations were evidently of very recent date, and may have been the result of post-mortem changes, inasmuch as peritoneal inflammation had not taken place.

In the experience of the practitioner, attention is often directed to the swallowing of foreign substances, and symptoms of their presence in the alimentary canal are rarely if ever noticed. A dose of castor oil or some other laxative will usually in twenty-four or forty-eight hours expel the foreign body and relieve the patient and friends of anxiety. There are exceptions to this rule, and the case I have cited proved to be such, the only fatal result from this cause observed in quite a large experience. Even in this case, unless verified by the autopsy, doubt would have arisen as to the real source of the fruit stones, and to the credibility of the testimony of the patient and her attendants. The differential diagnosis in the various varieties of gastric and intestinal irritation, inflammation and obstruction, must always remain a problem, the solution of which is only made through the autopsical examination.

The license practiced by many in their ingesta, the results of which are daily brought to the attention of the profession, fails to create surprise that the alimentary canal at times yields to the indigestible character of its contents, and puts on a morbid action. How it withstands the abuses of gluttony, the ingestion of indigestible food, the almost limitless varieties of aliments, are certainly greater sources of wonder than is unfolded in the fact that nature fails to appropriate to any purpose in the economy, substances such as the patient, whose case I have reported, originally swallowed.

The case is not without its valuable suggestions, which it would be profitable to heed: First, in dispelling the doubt as to the influence of foreign bodies in the production of diseased action in the intestine, concerning which there exists in the profession a certain amount of skepticism, and, second, as to the dangers which must follow in case the foreign bodies in their passage along the intestinal canal are interrupted in their progress, and thus forms the nidus for fatal disease.

REPORT OF TWO CASES OF OVARIOTOMY SUCCESSFULLY
PERFORMED.

By Matthew D. Mann, A. M., M. D., Professor of Obstetrics and Gynecology,
University of Buffalo.

Case I.—Miss L. B., æt. 27, single. Has always menstruated regularly. Seven years ago she had a large abdominal swelling which lasted some months; was considered to be dropsical in its character, but disappeared under the use of a quack remedy. Since that time has always been in good health. First noticed present abdominal enlargement 18 months ago. She has never suffered under any pain from it, only inconvenience from its size. During the last six months it has grown very rapidly. On examination the patient presented the appearance of a woman in the last stages of pregnancy. The abdomen was distended by a large fluid tumor, which presented the usual characteristics of an ovarian tumor. The walls were very thin and fluctuation very distinct. The uterus was pushed upwards and forwards by the tumor and was not enlarged.

The diagnosis was first made by Prof. Thomas F. Rochester, who referred the case to me for operation.

Before operating, in order to remove, if possible, all doubts as to the nature of the swelling, a small quantity of fluid was drawn off by an aspirator. This fluid coagulated under heat and contained the cells usually found in ovarian fluids.

The patient having been prepared by a thorough clearing out of the bowels, the operation was performed January 4, 1882,

before the medical class of the University, with the aid of Professors Rochester and Cary and the house staff of the hospital. Professors Moore, Miner, and a number of other gentlemen were present.

The carbolic spray was dispensed with, but in other respects the antiseptic method was carried out. The patient being etherized, an incision was made through the abdominal walls about half way between the pubes and navel. The incision was made with a scalpel and grooved director. When the sack was reached, an exploration of the abdominal cavity with a sound, passed between the tumor and the walls, showed no adhesion in the anterior surface. The tumor was tapped, but only a small quantity of fluid would pass through the trocar. The patient was therefore turned on her side. The cyst wall was seized with forceps, and the portion of it, around the hole made by the trocar, drawn into the abdominal wound. By enlarging the opening a little a considerable quantity of fluid flowed out, but it was found necessary to enlarge the abdominal wound, and the opening into the cyst, enough to allow of the admission of the hand. It was then discovered that the cyst was multilocular, and that the trocar had been stopped by some small pedunculated cysts getting into the end. These were held back, the patient turned again on her side, and the cyst soon emptied. On attempting to draw the sack out of the peritoneal cavity, it was found to be strongly adherent to a portion of the small intestines, to the omentum and to the sides of the pelvis. At this point two methods of procedure presented themselves for adoption. Either to attempt to enucleate the cyst, or to cut off all the unattached portion and to stitch the pocket that was left to the edges of the abdominal wound, insert a drainage tube into it, and treat it as an open wound. The former method was decided upon. After cutting into the band connecting the intestine to the cyst-wall, it was peeled off and the process of peeling carried deeper and deeper until the bottom of the attachment was reached. The sides and remaining portions were then de-

tached by the fingers, in the same way, all except one very large and firm adhesion to the uterus. This was transfixed and tied with a strong silk ligature. The attachment to the omentum was tied with carbolized cat-gut and cut.

After the cyst was removed, the abdominal cavity was cleaned with the greatest care; all blood clots were removed, and bleeding points searched for and tied. A glass drainage tube was then passed down into Douglas' cul-de-sac and the wound closed with silver wire.

The patient stood the operation remarkably well, considering its severity and the length of time (one hour and a half) which it lasted.

She recovered from the ether quickly and well, and eight hours afterward was found to have a pulse of 102, temp. $102\frac{1}{2}^{\circ}$. The next day the pulse reached 130 and the temperature $103\frac{1}{4}^{\circ}$, but both soon fell, and after the second day the temperature but once went above $101\frac{1}{2}^{\circ}$ and the pulse above 120, and most of the time both were considerably lower. It was not, however, until the tenth day that the evening exacerbations ceased, and the pulse and temperature became normal.

The diet for the first thirty-six hours consisted entirely of small quantities of brandy and ice. The urine was drawn, and pain and restlessness quieted with occasional small doses of opium or chloral.

The tube was removed on the evening of the fourth day, all discharge through it having ceased. The lower part of the sinus left by its removal closed at once, but when the patient was last seen, a small opening about two inches deep, just large enough to admit a probe, still remained. The rest of the wound closed by primary union, and the stitches were removed at the end of a week. The patient made steady progress. Bowels moved on the ninth day by enema. On the fifteenth day there was a slight diarrhœa; on the 18th day she sat up in bed, and a few days afterward sat in the chair. At the end of four weeks she left the hospital perfectly recovered.

Case II.—Mrs. R. C. S., æt. 35, married two years, was delivered of a seven-month's fœtus last September. She first noticed the tumor about a year ago, about the time that she became pregnant. She enlarged very rapidly, and in July had some abdominal pain for which a physician was called. He diagnosed the case as one of dropsy. Two weeks later Dr. S. D. Freeman recognized the presence of an ovarian cyst and of pubic pregnancy. Later in the month she felt life, and in September the waters broke. Three weeks afterward labor came on; it was rather long, but normal. After the child was born she diminished only two inches around the abdomen; present measurement 46 inches.

On examination a fluctuating cyst could be felt, and there were the usual signs of ovarian tumor. On inspection the abdomen presented a somewhat peculiar appearance. It was rather flattened on top and spread out on the sides, presenting very much the appearance found in ascites. A portion of the fluid was drawn off by the aspirator and found to contain the same elements and to have the same reaction as that of the first case.

The operation was performed February 1st at the General Hospital, with the aid of Drs. Cary and Mynter and the house staff, and in the presence of Profs. Moore and Miner, Drs. Gay, Wyckoff, and a number of other gentlemen. An incision was made in the usual manner through the abdominal walls. A few adhesions were found near the liver, between the cyst and abdominal wall. The fluid flowed freely through the trocar, and after it was emptied, there was found a mass of small cysts growing into the main cyst from its walls. These were too large to bring through the wound, and were therefore broken up by the hand introduced into the cyst. After this the sack was easily pulled out, the adhesion broken and the pedicle exposed. This was found to be small, and was transfixed, tied with silk, and dropped. On examination the right ovary was found to be enlarged and to contain a cyst the size of a horsechestnut. It was therefore thought best to remove it. The pedicle was tied with cat-gut

and an incision made so as to leave a certain part of the ovarian structure, a part which seemed perfectly healthy. The abdomen was carefully cleansed, clots removed, and the wound closed with six silver sutures.

The patient stood the operation remarkably well. Soon after it was over the pulse was found to be 84, and it never rose above 90. On the second day the temperature went to $100\frac{1}{2}$. The next day it fell to 100, and never went above that point again. Since the sixth day it has been normal. Three sutures were removed on the sixth day, and the remainder on the eighth. The wound was perfectly united. The after-treatment was the same as that carried out in the other case. The patient is now sitting up (twelfth day) and steadily gaining in strength. Good appetite, regular bowels, and normal pulse and temperature. She still complains of a little pain over the right ovary.

Remarks. About the second case there is little to be said. The only difficulty was the diagnosis, which was slightly obscured by the appearance and shape of the abdomen. This peculiarity was accounted for by the fact that the abdomen had been very much stretched by the presence of the foetus, and that being removed the tumor was not large enough to fill it. Hence the peculiar flattening and bulging at the sides.

As to the propriety of removing the other ovary, it may be said that the cyst which had developed was probably an enlarged Graafian follicle, and such tumors do not generally reach any great size. Still it was better to remove it than to run the risk of having it develop, especially as its removal did not to any great extent increase the risk of the operation.

The method adopted for the removal of the cyst in the first case is certainly the best. This plan was first brought to the notice of the profession by Dr. Miner, and is declared by Thomas to be "one of the most valuable of all the contributions to ovariectomy which have emanated from this country." The alternative leaves a large portion of the cyst to be treated as an open wound. This closes very slowly and leaves the patient con-

stantly exposed to the danger of septic absorption. In one case where I employed it the patient made a good recovery from the operation, but died some months later from septicæmia, due to a failure to keep the cyst well cleansed. Had the tumor been enucleated, I have no doubt that she would have remained well.

The use of the drainage tube was indicated from the very extensive oozing surface, which was left by the enucleation of the tumor. During the first two days a considerable quantity of bloody serum flowed away. To Drs. Fredericks and Pryor, of the General Hospital, my thanks are due for the skillful way in which they carried out the after-treatment.

Selections.

THE TREATMENT OF SYPHILIS BY SUBCUTANEOUS INJECTION.

The history of this mode of treatment is short but interesting, and its latest developments instructive and promising for good. Scarenzio, of Pavia, was the first to employ this method, about 1854, using calomel suspended in glycerine. (*Annales Universelles de Medicine, 1864.*) His formula was :

Calomel—o gr. 20 ctgr. to o gr. 30 ctgr.

Glycerine (or Mucilage, or Water)—1 gramme.

M.—For one dose.

One or two such injections caused the lesions to disappear after eight to fifteen days. He published eight cases with good results, except that a few times abscesses were formed.

Scarenzio's method was taken up later on, in 1864-65, at the Venereal Hospital in Milan, by Dr. Ambrosoli, who fully corroborated Scarenzio's results. Later on, still in Italy, Riccordi, Monteforte, Soresina, and Bertarelli used the same, or similar, methods with satisfactory results.

In Great Britain, Berkely-Hill seems to have used, about 1866, injections of the corrosive chloride in eleven cases of syphilis, with a dose of one milligramme, and with good results. If the dose was increased, abscesses at point of puncture, salivation, colic and diarrhœa, were often found.

Lewin, at La Charite in Berlin, experimented in 1868 on a grand scale, using the corrosive chloride dissolved in water at a dosage of 5 to 10 milligrammes, adding morphia in some cases to make the injection less painful. His average number of injections was sixteen for each patient, and the average total quantity of the sublimate was 15 centigrammes for each. Results good.

M. Hardy tried the Berkeley-Hill and Lewin method on some patients at L'Hopital St. Louis in Paris, but gave it up on account of the severe pain, abscesses and eschars resulting from the injections. Diday, moreover, had the same results. Quite a number of physicians followed up the method during 1868-69; some liking it, others opposing it.

Liegeois communicated his results to the Paris Society of Surgery, at its meetings held on June 2d and 9th, 1869. His formula was as follows :

Distilled Water—90 grammes,
Sublimate—0.20 ctgrms.
Hydrochlorate of Morphia—0.10 ctgrms.

M.—To inject 1 gramme.

That is rather more than 2 milligrammes for each time; he found no inflammatory reaction at the wound. In two cases only a slight eschar followed. The pain was insignificant; four cases of slight salivation occurred in one hundred and ninety-six patients. Each patient had two injections every day. Average length of treatment, thirty-seven days, and relapse was noticed in 37½ per cent. He thought that the drug cured much more rapidly than if administered by way of the mouth. Liegeois advised the employment of this treatment in preference to all others, claiming that patients were perfectly competent to use

the method themselves, without coming every day to the surgeon.

Aime-Martin presented his method to the Society of Medicine of Paris, on the 7th of August, 1868. He prefers a formula like the following :

Double Iodide of Mercury and Potassium—0.40 centigrammes.

Muriate of Morphia—0.05 centigrammes.

Distilled Water—10 grammes.

M.—Inject 10 drops every other day.

The morphia to be added at moment of injection, to avoid precipitation. Martin reports his cures as rapid and free from local lesions.

Bricheteau (*Bulletin de Therapeutique, 1869,*) uses this formula :

Double Iodide of Mercury and Sodium—1 gr. 50 centigrammes.

Distilled Water—100 grammes.

M.—5 to 10 drops as an injection, once or twice a day.

1 gramme contains 1 centigramme of the mercuric salt.

Belhomme employs this formula :

Double Iodide of Mercury and Morphia—0 gr. 50 centigr.

Distilled Water—20 grammes.

M.—5 to 10 drops once a day.

Bouchardat mentions (1872) the following solution (of Staub):

Corrosive Chloride—1 gr. 25 centigr.

Ammonium Chloride—1 gr. 25 centigr.

Sodium Chloride—1 gr. 15 centigr.

White of Egg—No. 1.

Disilled Water—250 grammes.

M.—

This is a great advance, and the mixture is called "Solution of the Chloro-Albuminate of Mercury" by its inventor.

Quite recently Mialke has shown that subcutaneous injections of the corrosive chloride of mercury cannot be absorbed, except when the metallic salt acts upon the albuminous contents of the connective-tissue spaces, and produces, at their expense, an "albuminate of mercury," which is easily absorbed. This coagulation in the connective tissue is the principal cause of pain,

of formation of inflammatory nodules, or even of the sloughs we sometimes find. It is, therefore, reasonable to form the "albuminate of mercury" outside of the body, and avoid these annoyances (Terrillon, *Bulletin de Therapeutique*, 4th, 5th and 6th parts, 1880).

The thesis of Mr. Cotte (Paris, 1873,) may be referred to for interesting details on this point. This advance was not appreciated, and our journals are full of accounts of accidents following these injections. Nevertheless the art advanced, and surgeons sought after new compounds; thus, Cullingworth used the bi-cyanide in glycerine and water; Sigmund also advised a similar formula; Aime-Martin used the double iodide of mercury and potassium in the formula already given.

At last Bamberger used chemically pure peptone in combination with mercury. Martineau, in his excellent article, which I am using so freely (*Union Medicale*, No. 99, et seq., 1881,) does not say how to prepare his "peptone de viande" (it is erroneously printed "pepsine de viande," which is nonsense,) but Catillon (*Repertoire de Pharmacie* quoted by *Druggists' Circular*, January, 1881,) uses this formula:

Lean Beef, minced—2 pounds.
 Hydrochloric Acid (sp gr. 1.18)—5 drachms.
 Water—10 pints.
 Pepsine—sufficient.

Digest 12 hours at 45° C. with slight excess of pepsine. Keep temperature between 43° C. and 48° C.; agitate from time to time, and after two to six hours the mixture is nearly transparent. After 12 hours strain and filter. Saturate with bicarbonate of soda, and evaporate on water-bath till a pellicle forms on its surface. It then has, when cold, a sp. gr. of 1.15, and contains one-half of its weight of solid peptones.

Bamberger's formula was this:

Having made a solution of the sublimate in water of 5 per cent., and one of chloride of sodium of 20 per cent., he dissolved 1 gramme of "meat peptone" in 50 cubic centimetres of dis-

tilled water, and filtered it. He then adds to this last 20 cubic centimetres of the mercury solution, and after well mixing he adds just enough of the sodium chloride solution to dissolve the precipitate of peptonate of mercury, the amount required being about 15 to 16 cubic centimetres. Then add to the solution of "mercuric peptone" enough distilled water to make up 100 cubic centimetres, thus making it just one per cent. mercury—that is, 1 gramme of the solution represents 1 centigramme of the sublimate, about one-sixth of a grain. The solution is fit for use after settling some days, decantation and filtration. The dose is 1 cubic centimetre every three or four days; if oftener repeated, abscesses and salivation are to be feared.

Zeissl and Neumann, of Vienna, and Von Rinecker, of Würzburg, have used Bamberger's formula. Terrillon (*op. cit. supra*) used it also during his earlier experiments. Later on he used the following formula :

Biniodide of Mercury—1 gramme.
Potassium Iodide—1 gramme.
Tribasic Sodid Phosphate—2 grammes.
Distilled Water—Up to 50 cubic centim.

Both formulæ have produced some local lesions, painful nodosities, more or less persistent indurations, but no serious troubles like abscesses or sloughs. Other preparations, the lactate, phosphate, acetate, and biniodide of mercury, have been used, but no more successfully than those already noted.

Martineau, of the Hospital de Lourcine, has, since the 12th of April last, used the following formula :

Bichloride of Mercury—10 grammes.
Peptone de Catillon, dry.
Chloride of Ammonia, C. P. of each—15 grammes.

1 gramme contains 25 centigrammes of the sublimate.

This formula has given best results, because the Catillon peptone is exceptionally fine and pure; and since pure muriate of ammonia is the best solvent of albuminate of mercury which is

so easily precipitated, it has also been found best to let the peptone be in excess slightly.

The following solutions have proved excellent:

Solution (A).

Ammoniated Mercuric Peptone—0 gr. 40 centigr.

Distilled Water—30 grammes.

M.—This contains 4 milligrammes of sublimate in 1 gr. 20 centigr., and will keep well for several days.

Solution (B) is more stable.

Mercuric Peptone (as above)—0 gr. 40 centig.

Distilled Water—25 grammes.

Neutral Glycerine—6 grammes.

M.—Dose and strength same as (A).

Solution (C) appears entirely stable.

Mercuric Peptone—0 gr. 40 centig.

Glycerine, C. P.—36 grammes.

M.—Same dose and strength as (A) and (B).

Since 12th of April, Dr. Martineau has treated 51 patients; the total number of injections up to June 21, 1881 (the date of his paper), is 751.

Series 1 consists of those who had 1 milligramme of mercury injected every three days.

In series 2 the dose was raised to 2 milligrammes every three days.

Series 3, 2 milligrammes every two days, and series 4 every day.

Series 5, 3 milligrammes every day.

Series 6, 4 milligrammes every day, and finally, series 7, five milligrammes every day—the last only since June 21, 1881, but is well supported, no pain, no local inflammation, and no mercurialization. He still proposes to go up to 6, 7, and 8 milligrammes per day, the result to be noted in another paper.

At the seance of the Academie de Medicine of Paris, on August 9, 1881, Dr. Martineau, in reply to questions, said that he had gone as far as 6 and 7 milligrammes of the sublimate

every day, and had now used 1,300 injections, and yet never has had any salivation, although the mercury was freely eliminated by the kidneys, as shown by constant tests. He finds any local irritation very unusual, and prefers, as place of injection, the back, the sides of thorax, and some of his patients have had up to 45 injections, still without the least local accident. He finds the method superior to all others, especially in cases of severe syphilis, with serious symptoms in rapid evolution, and even up to 6 or 7 milligrammes per diem he has almost never pain, no abscesses or gastro-intestinal irritation, and rapid amelioration of symptoms. He justly remarks that it is yet too early to definitely pronounce upon the probability of relapses. Martineau's cases are highly interesting and valuable, but space will not permit their reproduction here. It is curious to note how rapidly the worst syphilitic accidents have disappeared under the hypodermic treatment, and in most cases without irritation or pain. It is very much to be desired that some American syphilographer should reproduce Martineau's experiments on a large scale in a hospital, as under such circumstances the method presents many incontestible advantages, even if it be not as well adapted to private practice.—*Annals of Anatomy and Surgery.*

THE PATHOLOGY OF MALARIA.

In the blood of patients suffering from malarial poisoning, M. A. Laveran has found parasitic organisms, very definite in form and most remarkable in character. Some were cylindrical curved bodies, pointed at the extremities, with a delicate outline and a transparent body, colorless except for a blackish spot in the middle, due to pigment granules; on the concave side a fine line could often be traced, which seemed to unite the extremities of the crescent. These bodies presented no movement. Spherical organisms were also seen, transparent, of about the diameter of a red blood-corpuscle, containing pigment grains which, in a

state of rest, were often arranged in a definite circle, but sometimes presented rapid movements, and then lost their regular arrangement. On the borders of the spherules very fine filaments could often be perceived in rapid movement. These filaments were in length three or four times the diameter of a red corpuscle. Their number varied. Sometimes three or four were seen around a spherule, to which they communicated an oscillatory movement, displacing the adjacent red corpuscles. The free extremities of the filaments were slightly reflexed. When at rest, the filaments were invisible on account of their tenuity and perfect transparence. These mobile filaments appeared finally by becoming detached from the pigmented spherules, continuing, however, to move freely amidst the corpuscles. There were also bodies of spherical or irregular form, transparent or finely granular, about the hundredth of a micro-millimetre in diameter, containing dark-red, rounded pigment grains, either regularly arranged at the periphery, or aggregated at some part of the spherule. The bodies and granules were both motionless. These appear to be the ultimate or "cadaveric" stage of those last described. They have no nuclei, and do not tint with carmine, a distinction from the pigmented leucocytes, with which they have hitherto been confounded. Lastly, spherical elements were met with similar to those already described, but much smaller in size, and apparently representing a stage in their development. The animated nature of the mobile pigmented spherule, furnished with filaments, appears indisputable. M. Laveran regards it as a form of animalcule, which exists at first in an encysted state, and in the perfect condition becomes free in the form of mobile filaments, a mode of development not uncommon among the lower organisms. Besides these organisms, the blood of patients suffering from malarial fever contain—

- (1) red corpuscles, which appear to be vacuolated at one or two spots, and contain pigment granules;
- (2) pigmented leucocytes;
- (3) free pigment granules, possibly proceeding from the destruction of the parasitical organisms.

These elements were first discovered by M. Laveran a year ago, and since then he has examined the blood in 192 patients affected with various symptoms of malarial poisoning, intermittent and continued fever, and palustral cachexia, and found the organisms in 180. The disease had been contracted for the most part in different regions of Algeria and Tunis. He convinced himself, by numerous and repeated observations, that these organisms are not to be found in the blood of persons suffering from diseases that are not of malarial origin. In most of the cases of malaria in which the examination yielded a negative result, the patient had undergone a course of treatment with quinine, and to this fact the absence of the organisms from the blood was probably due. The addition of a minute quantity of a dilute solution of sulphate of quinine to a drop of blood was found at once to destroy the organisms. In all the examinations great care was taken to preclude the entrance of any extraneous objects into the drop of blood examined. In general the parasitic bodies were found in the blood only at certain times; a little before, and at the moment of the accession of the fever. In some very obstinate cases the organisms were always present in the blood. They rapidly disappeared under the influence of a quinine treatment. It is conjectured that in the apyrexial intervals the organisms probably sojourn in internal organs, especially the spleen and the liver. After death from malarial disease, pigment granules are found in great numbers in the blood, and especially in the small vessels of the spleen and liver; and they may be, in the most severe cases, so abundant that not only the spleen and liver, but the marrow of bone, and even the grey substance of the brain, are darkened by their presence. These pigment granules, which may obstruct the capillary vessels, appear to be derived from the parasitic elements, which perish after death, and become then unrecognizable.—*London Lancet.*

THE DEBATE ON SALICIN AND THE SALICYLATES IN
RHEUMATISM.

The Medical Society of London may be congratulated upon the inauguration of a discussion which will probably have a great influence upon the therapeutics of rheumatic fever. The opening paper of Dr. Hilton Fagge is, by itself, a most important contribution to the subject, and, together with the communication of Dr. Isambard Owen, which followed, giving statistics from St. George's Hospital, have already brought a mass of evidence upon the influence exerted by salicin and its derivatives upon the disease in question. Several other statistics and analyses are to be laid before the Society, so that on the conclusion of the debate we may hope to be in possession of as large a body of facts concerning one particular line of treatment as have ever been presented, even in acute rheumatism—the favored field for such inquiry. A sufficient length of time has now elapsed since the introduction of these drugs into medicine to enable us to arrive at some definite conclusion concerning their action; and such a conclusion can only be arrived at impartially, freed from bias or prejudice, by carefully compiled statistics. Not that statistics, as Dr. Fagge justly remarked, can give the whole truth; they present us with only one aspect, and taken by themselves are liable to much misconstruction; but the statistical method, so far as it goes, and guarded by critical scrutiny of the individual facts, is of great value in medicine. Awaiting the completion of this debate, or rather “symposium,” before examining it critically, we may briefly indicate the lines taken by the speakers. Dr. Fagge's remarks covered the whole question in an exhaustive manner; and many intending speakers will no doubt find that he has anticipated much that they would have said. For, in spite of the unfavorable conclusions which Dr. Greenhow felt compelled to draw from his elaborate and critical analyses of his series of cases communicated to the Clinical Society two years ago, there is certainly no evidence that these remedies are losing ground in medical favor. On the other hand, they are being employed more than ever. Dr. Fagge

endeavored to show that Dr. Greenhow was not justified in drawing his conclusions, and, among other points, criticised his elimination of mild cases from his statistics; but we feel sure that if Dr. Greenhow erred at all it was on the side of caution, and his inferences were drawn after very close analysis of the cases before him. However, the large number of cases accumulated by Dr. Fagge leave little room for doubt as to the efficacy of the drug. The ground for debate will, we imagine, hardly be found here; few can question the potency of the remedy in cutting short the pyrexia and joint affection, although it does not appear to influence the cardiac manifestations. The open questions are the best mode of administration of the drug, the amount necessary to be given, the relation of relapse or "recrudescence" to the treatment, if any relation there be, and the toxic effects generally ascribed to it, especially those involving the heart and nervous system. These and other points will doubtless be dealt with, and we hope it may be possible for the Society to allot sufficient time for their discussion; for, although Dr. Fagge left no point untouched, the opportunity for collating a vast amount of experience is one which should not be lost. Dr. Isambard Owen's statistics, most elaborately worked out in relation to the severity of the cases treated, and in comparison with treatment by alkalis, were also in favor of the salicyl compounds; but many points were raised which we have not space to notice. Dr. Maclagan, the third and last speaker, concurred with Dr. Fagge in his criticism of Dr. Greenhow's conclusions, and entered at some length into his own special views concerning rheumatism being a malarial disease, and dependent upon the development of a virus which salicin and its derivatives are capable of destroying. Apart from his theoretical explanation of its *modus operandi*, it must not be forgotten that it is to Dr. Maclagan that we owe the employment in rheumatism of these drugs, which are now being put to the test of statistics. It remains to be seen whether they possess all the virtues that have been claimed for them.—*London Lancet.*

IS "CONGESTION OF THE BRAIN" A CORRECT PATHOLOGICAL
EXPRESSION ?

In the course of his Croonian lectures on the influence of the circulation on the nervous system, delivered last spring before the Royal College of Physicians of London, Dr. Walter Moxon answers the question very emphatically in the negative. After a very instructive analysis of the various anatomical, physical, and physiological elements involved in the subject, Dr. Moxon continues as follows :

"Can you in any individual case prove by post-mortem appearances that death was caused by congestion of the brain, or even that a state of congestion of the brain or over-fullness of its blood vessels preceded death? I believe these questions must be answered firmly in the negative. In establishing such a negative, one has to meet with a very strong prejudice, rooted in most tenacious grounds—the grounds of convenience and of ancient and universal acceptance. After examining a body dead from brain symptoms, when all you are able to see in your examination is only that the veins are very full of blood, it is very convenient to be able to say that death was caused by congestion of the brain, and it sounds much better for a skilled witness than to say that death was caused by insensibility; so that the doctrine of congestion of the brain is convenient, and the universality of its acceptance may be illustrated by the naive earnestness with which authors of great works adopt it. . . . We find writers giving four conditions as showing congestion. The first is the swollen state of the brain, so that it seems after removal from the calvaria almost too large for the cavity which contained it. The dura mater seems tightly stretched over it, and, on reflecting this, the convolutions appear broad and flattened, and the sulci less obvious. No allusion is made here to hypertrophy of the brain, which is known only, so authors say, by its causing a general enlargement of the whole organ. I have never seen such hypertrophy, but the flattening described has very frequently come under my observation, but always in

the presence of some obvious cause of expansion of the brain, in the form, usually, of an increase of the intra-ventricular fluid, or else of apoplectic bleeding or of tumor, in which case the swelling and flattening are more localized.

“The next evidence (of congestion of the brain) mentioned by writers is the distention of the veins and capillaries with blood, the veins are tortuous and varicose, the gray matter dark. Both this and the white matter show abundance of bloody points and gorged vessels, and the description ends with, ‘It is extremely difficult to draw the line and say what is morbid and what is consistent with health.’ Now, it is better, nay, it is necessary, to say firmly that it is simply impossible to draw the line and to say what is consistent with health. But the question is not about the degree of health to be inferred from a post-mortem, but whether the mode of dying, the position of the body after death, or the manner of making the inspection, will not determine the appearance of extreme overfullness of the vessels of the brain of the dead person, independently of the conditions which were antecedent to all this. Can we infer from the amount of blood in the brain after death the amount during life? Kussmaul and Tenner, after numerous experiments, under various conditions and circumstances accurately predetermined, declare as the result of their investigations that they could not deduce any results from post-mortem examinations undertaken to ascertain the state of fullness before death of the most important parts of the vascular system. Now, if this is the conclusion where the conditions before and after death were determined and known, how can it be said that the amount of blood found after death in the human brain will show the amount present before death, when the conditions before and after death were unknown and undetermined?”

The author applies the same line of reasoning to other organs—to the liver and to the stomach, with special reference to the appearance caused by sudden death by heart disease. He then continues: “During life, redness, when associated with swell-

ing, heat, and pain, are at one with these associates in proving the existence of inflammation; but after death the redness, which was due to the enlarged scope of vascular play, ceases, because vascular play has ceased with life. The consequence is not doubtful, and it is quite certain that after death the redness goes from inflamed and congested parts. Such serious issues may turn upon this point that I think it very necessary to clearly recognize that no degree of redness, or pinkness, or overfullness of blood about the brain or its membranes, can prove that there was any morbid state of the circulation within the head before the act of dying. Death by asphyxia increases the amount of blood in the head, but a dependent position of the head after death, if only for a short time, will cause a similar increase. It should be taught that it is a sign of ignorance to say in a coroner's court that congestion of the brain was found on post-mortem examination to be the cause of the person's death."

These emphatic words have an obvious medico-legal application. To those who are in the habit of making autopsies with what is deemed proper thoroughness for judicial purposes, and who have invariably opened the head of the cadaver with that end in view, and have noted and described, with more or less faithful attention to details, the blood supply of the brain and its meninges as an essential part of the examination, these new teachings will suggest the propriety of revising the usual interpretation of injected blood vessels. But the observations of Moxon cannot serve to justify the examiner in omitting to examine the contents of the cranium in every instance of post-mortem inquiry in death by violence, no matter how evident the cause of death may seem to have been declared upon inspection of other regions of the body. If the medical jurist desires an excuse for saving himself extra labor with the saw, mallet and knife, when he thinks he has found the cause of death in some region below the head, he will find a distinguished American precedent in the record of the autopsy of the late President Garfield; it will be remembered that before proceed-

ing to the inspection of the body in that case it was "unanimously agreed not to open the head."—*Boston Med. and Surgical Journal*.

TABES AND SYPHILIS.

Prof. W Erb, *Centralbl. f. d. Med. Wissensch.*, Nos. 11 and 12, has made a recent careful study of over one hundred well-marked male cases of locomotor ataxia, and finds the result to still further confirm his previously experienced views (*Deutsche Arch. f. Klin. Medicin*, Bd. 24, 1879) as to the connection of this disease and syphilis. In the first one hundred cases he found only twelve without a previous history of syphilis or chancre; of the remaining eighty-eight, fifty-nine had had the secondary manifestations of the disease, and twenty-nine had had simply chancres. Of these last eleven had been treated constitutionally with mercury and iodide of potash, so that it is presumed that their sores were of the infecting variety; in fifteen of the others particulars as to the nature of the sore are wanting; in only three was it specified as a "soft" chancre. As regards the time of the first manifestation of tabetic symptoms after the syphilitic infection, the following are the facts: The symptoms of tabes developed between the

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| 1st and 5th year in 17 cases | |
| 6th " 10th " 37 " | |
| 11th " 15th " 21 " | |
| 16th " 20th " 3 " | |
| 21st " 25th " 5 " | |
| After the 31st " 2 " | |
| Unknown " 3 " | |
| | 88 " |

In order to meet the objection that syphilis occurred so frequently in the class of people under his observation that it might be considered as an accident always to be looked for, Prof. Erb gives a comparative statement of a similar examina-

tion to that of his tabetic patients, of four hundred of his adult male patients suffering from other affections, chiefly nervous, and finds that seventy-seven per cent. of these had no history of syphilis or chancre whatever, that twelve per cent. had had secondary syphilis, and eleven per cent. simply chancre. Thus in the general adult male invalid population under his observation, the tabetic cases excluded, only twenty-three per cent. were in any way syphilitic, while in the tabetics alone eighty-eight per cent. had a history of syphilis. "In fact," he says, "if one will not refuse all assistance from statistics and logic in the solution of this question, it must be admitted that these figures speak most emphatically in favor of the view that there is an etiological relation between syphilis and locomotor ataxia." Of course they are not absolutely conclusive, but they go far to support the author's views. It is well worth while for others who have large opportunities for observation in this line to make similar examinations. It cannot be said that if syphilis be proven to be at the bottom of most cases of this disease, that its prognosis is necessarily improved, but it does not render it any more unfavorable, and it will be a very interesting practical point.

THE CHARACTERISTIC APPEARANCE OF WOUNDS OF THE INTESTINES MADE DURING LIFE.

Accurate knowledge of the distinguishing marks by which to determine that a solution of continuity in an intestine is the result of violence to the living body rather than of accident during the autopsy, is of very great importance to the medico-legal inspector; and Dr. W. F. Whitney has done good service in pointing out with clearness the means of differentiation. The relation, he says, which the mucous coat bears to the edges of the wound is characteristic, and when carefully considered, will leave little doubt as to the time when the wound was inflicted. In ante-mortem wounds the edges are covered by a protrusion of this mucous coat. The mucous membrane is loosely con-

nected to the muscular coats, and is movable upon them to a certain extent. If all the coats of the intestine are divided, the edges of the wound will gape from the retraction of the cut muscles, and the lax mucous coat is forced through the opening by the peristaltic movement as far as its attachments will permit and curls back over the edges of the wound through the action of its elastic fibres. Once over the edges of the wound, the membrane is not retracted again, and in a few hours it develops inflammatory adhesions in its new position. Besides the new position and relations of the mucous coat, there is a slight thickening of all the coats immediately in the neighborhood of the wound from an infiltration with serum and new cells.

In a rupture or perforation from ulcer, the protrusion of the mucous membrane would not occur, because in these cases the mucous coat is extensively destroyed and fastened to the muscular coats by inflammation before the outer layers of tissues yield.—*Boston Med. and Surgical Journal*.

E. PASTEUR'S EXPERIMENTS ON CHARBON.

M. Pasteur has now an opportunity of practically testing the truth of his theory as to the protection of animals from charbon by their inoculation with the artificially cultivated virus of that disease. On the 5th ultimo, the farm of a veterinary surgeon at Pouilly-le-Fort, sixty sheep were placed at M. Pasteur's disposal. Ten of these sheep were left untouched, in order that they might later on serve for comparison. Of the remaining fifty, twenty-five were marked with a hole in their ears, and were inoculated, the first time on the 5th of May, and the second on the 17th. On May 31, none of the inoculated sheep had lost fat, or spirits, or appetite. On May 31, the fifty sheep were taken, without distinction, and inoculated with the strongest virus. M. Pasteur predicted that, on the 2d instant, the twenty-five sheep not inoculated would be dead, and that the inoculated animals would show no symptoms of sickness; and accordingly, on that day,

a number of spectators, including the President of the Agricultural Society of Melun, the Prefect of the Department, and the Director of Agricultural Matters at the Ministry of Agriculture and Commerce, assembled to witness the result. The prophecy of M. Pasteur was exactly fulfilled. At two o'clock twenty-three of the sheep which had not been inoculated were dead. At three o'clock the twenty-fourth died, and the twenty-fifth an hour later. The twenty-five inoculated animals were quite sound, and in perfect health. Only one of them was feverish; and the fever, which was caused by the animal having designedly been inoculated with too strong a dose of the virus, speedily disappeared. The twenty-five carcasses have been buried in a fixed spot; and, on the infected grass which will grow over it, experiments are to be made with inoculated and non-inoculated sheep. M. Pasteur's discoveries in this direction are being amply corroborated by English experience, and, if the matter be properly taken up, the agricultural interest will have one less difficulty to contend against, since it ought to be practicable to protect herds against charbon much in the same way that human beings can protect themselves against small-pox by vaccination.—*Chicago Med. Journal and Examiner.*

DIABETES MELLITUS AND ALBUMINURIA.

According to Frerich, in true diabetes albuminuria is not frequent, nephritis is rare, and occurs only in certain conditions. Out of 316 cases of diabetes mellitus which Frerich partly observed for ten, twelve, and even fifteen or sixteen years, there were only sixteen cases of nephritis. Cases in which small quantities of albumen were occasionally found in the urine were never pure and simple cases, since it could be proved in most of them that other processes were involved which of themselves could produce nephritis. Of sixteen cases there were only three in which no co-operating cause could be suggested. The author concludes that the general belief that the increased action of the kidneys in diabetes mellitus leads to albuminuria and nephritis is erroneous. According to the author's post-

mortem examinations, which comprise more than fifty cases, true nephritis is hardly ever met with in diabetes.—*Boston Med. and Surgical Journal*.

VASO-MOTORS OF THE LYMPHATICS.

MM. Paul Bert and Laffont have discovered the vaso-motors of the chyloferous glands. They opened the abdomen of an animal in warm water, while the process of digestion was in full play. The lacteal then reveal themselves in the form of white cords, and it suffices to simply excite the solar plexus or the great splanchnic nerve, to render visible the nodosities that form along these vessels. These experiments were announced to the Societe de Biologie, April 2, and repeated in *Le Progress Medical*, No. 15.

WRITER'S CRAMP.

Wernicke has lately found a peculiarity which, if present in all instances, sheds an entirely new light on this affection. In an ordinary case reported to the Berlin Physiological Society (*Arch. f. Phys.*, 1881, p. 197), he observed an isolated paralysis of the extensor pollicis longus muscle, which muscle, according to Duchenne, is not immediately concerned in the act of writing. However, it is of decided influence on the position of the thumb, and hence the author believes the paralysis to be an etiological factor in the disease.

ALTERATIONS OF THE NERVES IN CHRONIC RHEUMATISM.

MM. Leloir and Degerine reported to the Societe de Biologie, April 2 (abst. in *Le Progres Medical*), that in case of chronic rheumatism, with considerable muscular atrophy and rapid eschars, they found the cutaneous nerves adjacent to the eschars affected with atrophic parenchymatous neuritis. They thought that the alteration in the nerves was anterior to the eschars, and saw evidence of this in the rapidity of the ulceration itself. The histological examination of the cord remained yet to be made.

CONSTIPATION IN INFANTS.

The following are some of the remedies found useful by Dr. D. H. Cullimore (*London Lancet*): 1. A pellet of butter and brown sugar or treacle every morning fasting, or a little raspberry jam. 2. The morning insertion into the rectum of a conical piece of white curd soap about two inches and a half long. It must be first dipped in warm water, held *in situ* for five minutes, and withdrawn. 3. Daily friction over the body, from the right iliac region along the course of the gut, with a little salad oil. In India I have used cocoanut oil advantageously. Cod-liver oil is very useful when its smell is not objected to. *En passant*, I may say that I have at present under my care a girl of fifteen who for a couple of months has suffered from obstinate constipation. She has lately had typhoid. Both mild and strong purgatives were ineffectual, and it has now yielded to cod-liver oil friction. Assiduous friction, without any unguent, is often equally useful. Patience, however, is necessary. A teaspoonful of fluid magnesia in the food is a good plan. Tomato jelly is sometimes used in India with benefit. Whatever plan may be adopted, it is well to supplement it with the internal administration of half a drop of tincture of nux vomica three times a day; a quarter of a drop is sometimes sufficient. Minute doses of sulphur also answer well.—*Louisville Medical News*.

 Editorial.

THE BOARD OF REGENTS AND MEDICAL COLLEGES.

The following act has been introduced into both Houses of the Legislature:

SEC. 1. The Regents of the University of the State of New York may authorize duly incorporated colleges and universities of this State to establish and maintain medical departments at the places where such colleges or universities are located by law, or at places to be designated by said Regents other than those wherein such colleges or universities are so located, and they may authorize such colleges or universities to maintain other departments at places to be designated by said Regents.

SEC. 2. This act shall take effect immediately, and all acts and parts of acts inconsistent with this act are hereby repealed.

The real object of this bill has been clearly made known by Assemblyman Hickman, of this city, in quite a lengthy interview published in the *Buffalo Daily Express* of February 20th. The courts having interposed their authority in the matter of the College of Physicians and Surgeons of this city, whereby it has been found impracticable to continue under existing laws either independently or as a department of a duly incorporated university, it is designed by interested parties to change the statute in order that this institution, now moribund, may be revived under fresh auspices or a new medical college organized and connected with Alfred University as its medical department. It having been claimed that the Regents requested this change in the law, we communicated with the Secretary, Dr. Murray, upon this subject, and have received the following in reply:

Editors Buffalo Medical and Surgical Journal:

GENTS—In reply to yours of the 20th inst., I desire to say at once that the question as to allowing universities to establish medical departments at places other than the seat of the university, has never been considered by the Board of Regents, and there has been no occasion to hold or form an opinion thereon. No one has a right to say that they desire a change in the statute relating to that subject. If the Legislature, or a committee of the Legislature, asks for an opinion from the Board on that subject, doubtless they will be ready to give it, as it is a matter of great interest to the body of institutions connected with the Board of Regents. But of the measure introduced into the Legislature, to which your enquiries refer, they have no knowledge, and certainly no responsibility for it.

Very respectfully your obedient servant,

DAVID MURRAY, Sec'y.

Further comment upon this subject at this time is unnecessary. The motives actuating the originators of this measure are too plain to be successfully hidden by the transparent explanations made by Mr. Hickman, the only member of the lower house who is especially anxious for its enactment. The profession, without distinction, are unanimous in opposing

this law. We trust that wise counsels will prevail in matters which concern the vital interests of medical education in this State.

THE CODE OF ETHICS.

In the present issue we would merely notice the following "Substitute for the report of the special committee on amendments to the system of medical ethics," offered by Dr. D. B. St. John Roosa, of New York.

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopts the following declaration, to take the place of the formal code of ethics, which up to this time has been the standard of the profession in this State:

"With no idea of lowering, in any manner, the standard of right and honor in the relation of physicians to each other, but on the contrary in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare that the only ethical offenses for which they claim and promise to exercise the right of discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved*, Also, that we enjoin the county societies, and other organizations in affiliation with us, that they strictly enforce the requirements of this code."

A full discussion of this proposed amendment is evidently impossible in a simple editorial note. We may, however, briefly remark that while it illustrates fully the liberal tendency of the day, the door might thereby be thrown wide open for the entrance of numberless abuses, and the result, be a perceptible lowering of the whole standard of medical ethics, already none too high.

It is generally conceded that some changes in this direction are advisable ; but the policy of removing all restraint from unprincipled men who call themselves "physicians and gentlemen," is a very questionable one, to say the least.

SOCIETY OF THE RED CROSS.

The International Society of the Red Cross has issued a circular offering a prize of two thousand francs for each one of three essays on the best methods for obtaining prompt and speedy assistance for sick and wounded soldiers during a campaign. The following are the subjects proposed :

- 1st. The improvising of means of treatment.
- 2d. The improvising of means of transport.
- 3d. The improvising of an ambulance or field hospital.

The rules governing this competition do not differ essentially from those usually obtaining in similar trials, and are scarcely necessary to be enumerated. The subjoined are four of the most important :

1. The essays must be in manuscript and unpublished.
2. They can be written in French, or German, or English.
3. They must be forwarded to the President du Comite international de la Croix rouge, rue de l'Athenee, 8, a Geneve (Suisse), before the 1st of April, 1883.
4. Each essay shall bear a device, which must be repeated in a sealed envelope accompanying it, containing the name and address of the author.

The military character of these essays may seem to require a knowledge on many practical points beyond the attainment of those likely to enter the list for the prize ; but an intelligent appreciation of the situation on the field of battle will enable a writer, even in the civil ranks of life, to furnish such ideas as ready ingenuity could suggest in an emergency ; and to physicians who have served in our late war an opportunity is afforded for a public expression of valuable views drawn from that experience.

COUNCIL OF THE UNIVERSITY OF BUFFALO.

At a meeting of the Council, held February 21st, the Hon. Orasmus H. Marshall was elected Chancellor, and Prof. Thomas F. Rochester, M. D., Vice-Chancellor. Hon. Sherman S. Rogers was elected a member of the Council to fill the vacancy occasioned by the death of Dr. James P. White. Dr. Mathew D. Mann was elected Professor of Obstetrics and Diseases of Women. The following memorial was adopted :

Resolved, That by the death of Dr. James P. White, one of the founders of our University, and a member of the Board, this institution has lost one of its ablest councilors and most zealous supporters.

We are largely indebted to his persevering efforts for the establishment of our Medical Department, and its growth to its present flourishing condition has been greatly promoted through his instrumentality.

Resolved, That we recognize with just pride the eminent professional abilities of the deceased, by which he acquired a national reputation, and we sympathize with his family, with his professional brethren, and with his survivors in the Medical Department in their common loss.

Resolved, That we deem it due to the memory of our associate, at the close of his honorable career, to bear testimony to his private worth and unsullied reputation. His marked decision of character and tenacity of purpose were strongly impressed on his public duties, and beneficially felt in the various benevolent and Christian enterprises in which he engaged.

Resolved, That these resolutions be transmitted to his family and published in the daily city papers.

 BUFFALO MEDICAL COLLEGE—ANNUAL COMMENCEMENT.

The Commencement of the Buffalo Medical College was held on the 21st of February at the Delaware Avenue Methodist Church. Rev. Dr. Darling, President of Hamilton College, delivered the address to the Graduating Class. Prof. Austin Flint, Senior, addressed the Alumni. The banquet at Goodell Hall concluded the exercises and festivities of the day.

The following is a list of the graduates :

Eli Herr Long, Buffalo—The Conservatism of Nature.
George Strassenburgh, Henrietta—Scarlatina.

Erastus Warren Wallaber, Cambria—Amenorrhoea.

Frank Hamilton Potter, Buffalo—Some Etiological Factors in the Diseases of Women.

Adolph William Latz, Hemlock Lake—Abortion.

Charles Weil, Buffalo—Extra-Uterine Pregnancy.

Edward H. Taft, Black River—Therapy of Heat and Cold.

William Ellis Jennings, East Aurora—Ferrum.

Arthur Henry Forsyth, Tioga, Pa.—The Use of the Senses in Diagnosis.

William Duncan McDougall, Stamford, Canada—Symptoms and Treatment of Malaria.

George Edward Fell, Buffalo—Histology of Aneurismal Clots.

Charles G. Strong, Buffalo—Symptomatology.

Chauncey R. Bowen, South Dansville—The Blood and its Pathology.

Elwyn Lawrence Spencer, Guilford—A Case of Anteversion.

Benjamin F. Egelston, Kendall—Dysentery.

Thomas Tobin, Williams Grove, Pa.—Marasmus.

Burt Prindle Hoyer, Royalton—Pneumonia.

Theodore Senter Thomas, Friendship—Scarlatina.

Henry James Nichols, Limestone—Pneumonia.

Dorse Warren Brown, Elmira—The Aspirator and its Uses.

Allan A. Van Slyke, Sinclairville—Typhoid Fever.

Ernest J. Cowden, Ellery—Scarlatina.

Theo Franklin Moody, Albion—Chronic Lead Poisoning.

Philip Francis Casey, Corry, Pa.—Placenta Previa.

Charles Eddy, Dukenfield, Allen's Hill—Digestion.

James Wright Putnam, Buffalo—Paresis.

Sarah H. Perry, Rochester—Rational Medicine

John M. Mills, North East, Pa.—Hygiene.

Cornelius N. Dorsett, Syracuse—Typhoid Fever.

Henry A. Glover, Owego—Malaria.

Charles Nelson Van Sickle, Wallaceville, Pa.—Diphtheria.

John Henry Pryor, Buffalo—Analysis of Cases of Compound Comminuted Fracture of Tibia and Fibula.

Walter Eddic McChesney, Wilson—Post Partum Hemorrhage.

Abram Chase, Jacksonville—Asiatic Cholera.

Herbert R. Flint, South Dansville—Scarlatina.

Louis B. Baker, Corry, Pa.—Hemorrhage.

Chauncey M. Jones, Cattaraugus—Hygiene.

George Townly Pryor, Milwaukee, Wis.—Decrease in the Birth Rate.

Jacob Davis Woodruff, Little Valley—Bright's Disease.

Ely T. Rogers, Greene—Signs of Pregnancy.

Willis Orlando Hubbard, Lowville—Morbus Coxarius.

Vinson L. Garrett, Woodhull—Erysipelas

- William Alfred McCorn, Newfield—The Different Medical Pathies.
 Charles R. Barber, Wyoming—Diabetes Mellitus.
 Albert M. Cook, Jamestown—Hysteria.
 Jacob Frank, Buffalo—Enuresis Nocturna.
 Frank W. Whitcomb, Sugar Grove, Pa.—Acute Endometritis.
 Willis George Gregory, Buffalo—Hour-glass Contraction.
 Asher J. Remington, Bolivar—Typhoid Fever.
 John James Delarma Furry, Dunville, Canada—Natural Labor.
 James De Forest Arters, Sugar Grove, Pa.—Typhoid Fever.
 Elliott Calvin Smith, East Pembroke—Pneumonia.
 Henry Allen Wilson, Sugar Run, Pa.—Phthisis Pulmonalis.
 Delavan Edward Walker, Mohawk—Opium Habit.
 Arthur Potter Onley, Middletown—Pelvic Hæmatocele.
 Orlando Logan, Albion, Pa.—Puerperal Peritonitis.
 Frank G. Clink, Redwood—Purulent Conjunctivitis.
 Edmund J. Eldridge, Auburn—Blood.
 Geo. W. Davis, Ithaca—Entero-Mesenteritis or Typhoid Fever.
 Hugo Schmidt, Loebenschutz, Prussia—Cystitis.
 Moses Furlong, Otterville, Canada—Gangrene.
 James Munroe Garvey, Delhi, Canada—Variola
 Henry C. R. Moore, Buffalo—Diphtheria.
 Paul Frank Bussman, Lancaster—Cystitis.
 Elmer E. Livingston, Corry, Pa.—Scrofula.

EDITORIAL NOTES.

THE suit brought against Messrs. Parke, Davis & Co. by an English firm to prevent their use of the word "Tonga" as a title for a combination of barks used in Fiji as a specific for neuralgia, and introduced into this country by P., D. & Co., has terminated by the withdrawal of the suit by the London firm.

WE call attention to the advertisement of "Dyspepsin," a combination of pepsin, pancratine and malt. The commendation which this preparation has received from the most eminent medical men of Toronto, and their extensive employment of it, makes it well worthy of a trial. We have received a quantity for trial, and will report our experience with it.

IN imitation of the plan adopted by the London University, the Illinois Wesleyan University at Bloomington, Ill., has had

for nearly ten years courses of study open to non-resident students, with non-resident examinations. These courses lead to the degree of Ph. B., M. A., and Ph. D. Catalogues containing full information will be sent on application to Prof. C. M. Moss.

ONE of the pleasant incidents, connected with Commencement-Day at the University of Buffalo, was the gift of Dr. White's valuable medical library to the Medical College by Mr. James P. White, who manifests in this generous donation the earnest interest of the family in the welfare of the college for which Dr. White so long and successfully labored. We are gratified to witness this disposition of the library, and also to commend the spirit which actuated the donor.

THE firm of Lindsay & Blakiston, which for the last forty years has had a corporate existence, is dissolved by the retirement of Mr. Lindsay. The business is continued under the firm name of P. Blakiston, Son & Co. May the new firm retain the confidence and esteem which for nearly half a century was most cordially given by the medical profession and most thoroughly deserved by Lindsay & Blakiston, whose name was as the name of an old friend to the majority of medical men.

THE seventy-sixth annual meeting of the State Medical Society, which was held in Albany early in February, was eminently a successful one. About thirty papers were presented and discussed, and besides the scientific portion of the work, some important measures were introduced relating to the profession as a whole, one of which we notice elsewhere. The volume of "Transactions" will of course contain the best communications in full, and they can then be noticed more at length.

AT the Buffalo State Asylum for the Insane, under the able management of Dr. Judson B. Andrews, there are now confined 192 insane persons—over 300 having been received into this institution since it was opened for the reception of patients. The work has increased to such an extent that the second assistant physician has become necessary, and Dr. Lloyd S. Crego has

been appointed to the position. This is an admirable appointment, and shows wise judgment upon the part of the Superintendent. The Buffalo Asylum, in a brief period, has secured an enviable reputation in the care and treatment of the insane.

PROF. FLINT favored Buffalo with a brief visit to attend the late commencement exercises of the Buffalo Medical College, and in the very able address which he delivered to the Alumni he very happily referred to his residence here from 1836 to 1859, and to the labors of the late Dr. White, which he shared, in the organization of the Medical College. The address was one of the most happy efforts of the eminent Professor, in which he brought to light the experiences of his early life in the profession which he now adorns. He paid a just tribute to the worth of his associate, Dr. White, and the undaunted will and tireless energy through which his great success was won. The speaker gave a just estimate of the American profession. We hope to be permitted to publish this very interesting address in a future number of the JOURNAL.

“NO ODORS SWEET, PROCLAIM THE SPOT.”—The sanitary, or rather the unsanitary, condition of East Buffalo has again been brought to public notice by the prevalence of sickness and the large number of deaths reported from that vicinity. This condition of things is by many attributed to the presence of two barns in which a considerable number of cows are confined, and also to the proximity of a fat-boiling establishment. That these places are public nuisances, in that they render a residence near them unpleasant, is beyond a question; but that they directly injure the health of the neighborhood we greatly doubt. A far more reasonable explanation of the peculiar prevalence of “typhoid” is the condition of the public wells. That many of these were unfit for use was shown in a report published by Dr. Davidson as long ago as 1879. Again, by order of the Board of Health, the same chemist has recently examined the water of the wells in the vicinity. His report shows at least one good and sufficient

reason for the unhealthfulness of this locality. These contaminated and poisoned wells should be at once closed; there is more danger from one such well than from a dozen cattle barns. There seems to be at this time a disposition on the part of the civic authorities to support the Board of Health in their efforts to correct the evils so bitterly complained of by the residents of this section of the city.

Reviews.

Diseases of Women, including their Pathology, Causation, Symptoms, Diagnosis and Treatment. A manual for students and practitioners. By ARTHUR W. EDIS, M. D., London, F. R. C. P., M. R. C. S., Assistant Obstetric Physician to the Middlesex Hospital, &c. With one hundred and forty-eight illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1882.

This new work on the diseases peculiar to women aims to be a reliable, practical and clinical guide to the student and young practitioner in this department. Its publication following so soon after the exhaustive treatises of Thomas and Emmet and Byford, affords the opportunity for comparison which, we are forced to say, is not at all favorable to our English author. The present work is, however, an excellent manual, and presents the various subjects of which it treats in a clear manner. It is evident, however, that in the department of gynecology the American profession are far in advance of our brethren across the water in their comprehension of this special class of diseases and in their skill in devising and applying measures for their relief and cure. The present work is not as complete as Hewitt's, while it possesses the advantage of greater clearness and conciseness in many of its subjects, and therefore better adapted to the student for whom it is written. We commend it, therefore, as a very practical treatise within the reach of most of those who desire a concise work on this subject, and whose tastes do not permit the expenditure of special attention to this or any other specialty.

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Original Communications.

THE DELIVERANCES OF THE RETINA.*

Mr. President and Gentlemen of the Alumni Association:

When we examine the structure and functions of the visual apparatus, we find that the rays of light pass through the transparent refracting media of the eye,—the cornea, aqueous humor, lens and vitreous,—and impinge upon the retina. We also find that the optic nerve, which in structure cannot be distinguished from other nerves, connects the brain with the retina. The natural inference is that in the retina rays of light are transformed into something which can be carried along by ordinary nerve fibres, *i. e.* the retina receives rays of light and delivers over to the optic nerve fibres something which answers to what we call irritation of nerves. Now, these retinal processes, the transformation of light rays into the irritations which are delivered over to the optic nerve fibres by the retina, which I have entitled for brevity "The Deliverances of the Retina," form the subject of my paper. The time at my disposal is so short that I cannot stop to prove many points which may seem to some of you to demand proof, but you may rely upon my assertions of

* Read before the Alumni of the Buffalo Medical College, Feb. 21st, 1882, by F. W. ABBOTT, M.D.

fact; as to the theories which I advance, you are to be the judges whether the facts sustain them.

A glance at the illustrations will give us the necessary anatomical facts for our purpose. Fig. I represents a section of the retina; 1 the internal limiting membrane which lies upon the vitreous humor; 2, the layer of optic nerve fibres; these radiate in all directions from the entrance of the optic nerve; 3, the layer of ganglion cells; these are in every respect like the ordinary multipolar cells of the rest of the cerebro-spinal system; each of these cells is connected by one process with a fibre of the nerve-fibre layer; the other processes, according to the most careful observers, are lost in the next layer; 4, the inner granular layer. The other layers: 5, the inner corpuscular; 6, outer granular; 7, outer corpuscular; and 8, external limiting, need not detain us. No. 9, the layer of rods and cones, and No. 10, the pigment layer, demand from us especial attention, as the principal point of this paper turns upon the structure and relations of these two layers. This ninth layer is composed entirely of these rods and cones, which stand closely packed together like a mosaic. The cones are shaped very much like a champagne bottle. In the fovea centralis, which lies directly opposite the centre of the cornea, where vision is most distinct, cones alone are found. As we recede from this point toward the ora serata, the rods become more numerous. At first every cone is surrounded by a single layer of rods, then by a double layer, &c. The structure of the cones and rods seems to be identical. Each is composed of an inner body, slightly striated, and an outer body, which is perfectly transparent. In the cones the inner body is considerably larger than the outer body, while the rods preserve the same diameter throughout their whole length. At the fovea, as said before, cones alone are found, and here the transparent outer body is very much elongated.

The pigment layer has until recently been considered rather as a layer of the choroid than of the retina; but the latest authorities, as Schultze and Schwalbe, consider it a true retinal

layer, and, as we shall see farther on, it is a very important one. This pigment layer is composed of flat pigment cells which send processes down between the cones and rods, and these adhere so closely to the pigment that their outer bodies often remain sticking in the pigment when we separate these two layers. This is the particular anatomical point to which I wish to call your attention. At the fovea the entire interspace between the transparent outer bodies of the cones is filled in with this dark pigment. It is as though you stood a quantity of champagne bottles as close together as possible and sifted sand over them. Comparatively little could lodge between the bodies of the bottles, but the large interspaces between the necks would hold more, until, as the surface of the sand approached the corks, there would be more sand than glass. So at the fovea each long, transparent, outer body of a cone is imbedded in a mass of pigment which fits it as a glove fits a finger, and separates it from its neighbors on all sides by a dark, opaque barrier. Beyond the tips of the cones here, and of the rods and cones of the rest of the retina, the pigment cells form a dark continuous layer which lies against the choroid.

The layer of rods and cones is the percipient layer of the retina. The rays of light pass through the other layers without making any impression. It is only when they reach this place that they excite sensations. Hence the rods and cones are evidently the terminal organs of the optic nerve. But in spite of the most careful and patient microscopic examinations, a direct connection between a cone and an optic nerve fibre has never been discovered. Fig. II shows us what our æsthetic friends would call a conventionalized representation of the nervous connections so far as they have been seen. Upon the inner side of the retina, as we saw, the nerve fibres connect directly with the ganglion cells, which send processes to the external granular layers, where they are lost and can be traced no further. Each rod and cone connects with a separate molecule of the external molecular layer, and from this molecule a filament extends to the external

granular layer, where it disappears. So we see that direct nervous connection is lost between the external and internal granular layers.

So much for the anatomy of this extremely delicate membrane, whose ten layers added together are less than $\frac{1}{100}$ of an inch thick.

The study of the physiology of the retina has to be entirely subjective. Microscope and test tube cannot tell us what it does. For a knowledge of its workings we have to depend entirely upon perceptions and sensations. We know that we see with our eyes. We know also that if we want to see anything distinctly, we must look directly at it; but we also take in a large field of vision, so that while we see with distinctness the object at which we are directly looking, we see with less clearness the objects which lie about it. Studies of the refracting media of the eye have taught us that for every object in the field of vision there is a corresponding picture thrown onto the retina, like the picture which is formed on the screen in the camera. A comparatively simple calculation tells us the relation between the size of the observed object and the size of its retinal picture, so that, if we measure the smallest objects which we can see, or distinguish, we can easily calculate the size of the retinal pictures which these minute objects make. Of course we cannot measure the size of observed objects in feet and inches, for a near object occupies relatively a larger space in the visual field than a distant one. So for these observations we note how many degrees in the arc of a circle our objects cover, which circle has the eye for its centre; *e. g.* a wafer about one-fifth of an inch in diameter held a foot away from the eye covers an arc of one degree in the circle, whose radius is one foot. You see at once that this wafer, one-fifth of an inch in diameter, at one foot covers as large an area in the visual field as an object whose diameter is twenty times as great at twenty feet from the eye, which would also cover an arc of one degree in a circle whose radius is twenty feet, and the wafer and a medal four inches in

diameter at these distances throw pictures of the same size on the retina. Now the sharpness of vision is measured by the distance which must intervene between two objects in the visual field, in order that they may be distinguished, and this distance has been accurately measured by different observers. Hooke found that he could no longer distinguish two stars when their distance apart was less than $60''$. E. H. Weber found in his examinations that two white lines had to be $73''$ apart to be distinguished. Helmholtz could see two lines as separate when the angle between them was $64''$. Confusion has arisen in the minds of some in considering this subject, by not observing the distinction between to *see* and to *distinguish*. We can see a fixed star, a mere point of light, of which the most powerful telescope can make nothing but a mere point without length or breadth. But if two stars approach each other so that the distance between them is less than $60''$, they can no longer be distinguished as two stars, but appear to be one single bright spot. We can see with ease an electric light five miles away, where it would cover only a fraction of a second of the visual field; but at this distance two electric lights would need to be about four feet apart to enable us to distinguish that there were two lights instead of one single source of illumination.

As we have just said, we can calculate the size of the retinal pictures of observed objects, and so we can find out the distance which separates the retinal pictures of two objects which can barely be distinguished. Now, if we compare the distance upon the retina between the retinal pictures of two barely distinguishable objects with the thickness of the cones at the fovea, we shall find that these two pictures must be far enough apart to fall on two separate cones; and also that if two retinal pictures are so close together that they fall on one cone, we no longer get two sensations, we are no longer conscious of seeing two objects, the two pictures which fall upon one cone are no longer distinguished as two by us, but are merged together and produce one sensation. We explain this on the theory that each

cone has one nerve fibre which connects it with the brain, so that one impression, or several simultaneous impressions on the same cone, can irritate only one nerve fibre and therefore can produce but one sensation.

As retinal pictures recede from the yellow spot and approach the ora serrata, they need to be farther apart to produce two sensations. In other words, two objects, as they approach the boundaries of the field of vision, need to be farther apart to be distinguished than they do when they are in the direct line of vision. This statement you can easily verify by looking at the points of your dressing forceps held half an inch apart at arm's length. When you look directly at them, you distinguish two points. If you keep the eye still and move the forceps to one side, you can still see the forceps, but soon cannot distinguish the two points or tell whether the forceps are partly open or shut together.

The Germans call the extent of surface which gives only one sensation, whether the impressions upon it be one or many, an *Empfindungskreis*; we will translate this happy term by sensation area, and defining it again, we say a sensation area is that extent of a sensitive surface which gives but one sensation, whether one or many simultaneous impressions are made upon it. The skin has sensation areas which vary in size. I touch the tip of my finger with the points of these dividers one-fourth of an inch apart, and feel the two points. I have two sensations, have touched two sensation areas. I touch the back of my hand with the same two points. I no longer distinguish two points, but feel only one touch—I have only one sensation. Evidently the sensation areas are larger here than at the pulp of my fingers. I put two white beads on the points of my dividers and look directly at them. I see two beads. I get two sensations. Evidently the pictures of these two beads have fallen on two separate sensation areas of my retina, and what we have already gone over teaches us that these pictures must have fallen on two separate cones. As I move the dividers away

from the line of direct vision, I soon find that I can no longer distinguish two beads, but can easily see a white object. The pictures of these beads have receded from the fovea; they have evidently both fallen on the same sensation area, and the two pictures afford me only one sensation.

So much for facts, which are stupid things, because they can excite no discussion. The theories which follow may admit of considerable argument.

We have seen that at the fovea the sensation areas correspond with the size of the cones and grow larger as we leave this point. We have seen that the cones are less frequent as we leave the fovea, being surrounded at first by a single circle of rods, then by a double circle, &c. The layer of ganglion cells is thickest at the yellow spot where they lie six or eight deep. They become more scarce toward the ora serrata, where they are quite isolated from each other. Optic nerve fibres have been traced to the ganglion cells, and processes from them pass into the granular layer, but can be traced no further. Upon these facts is built the theory that each cone with its surrounding rods forms one sensation area, which connects with one optic nerve fibre through one single ganglion cell. So that pencils of light rays which fall upon a cone or any of its surrounding rods, send a sensation along the same nerve filament to the brain. If several rays fall upon a cone and its surrounding rods at the same time, only one sensation is aroused, but this is the resultant of the different impressions upon this one area.

This question may be asked: If the number and location of sensation areas correspond to the number and position of the cones, why consider the rods, which are not shaped like the cones, as having the same functions? The answer is that careful observation has shown that the peripheral field of vision does not show such hiatuses in viewing minute objects like the stars, as it would show were the cones alone sensitive to light.

We can now begin to see our way toward a definition of our subject, and say that the deliverances of the retina are a distinct irritation of a separate optic nerve fibre for every sensation area upon which a ray of light falls. The irritations of these different nerve fibres are distinguished at the seat of consciousness and produce there distinguishable sensations.

These retinal sensation areas are sensitive to or excited by light. Light consists of undulations or waves of different lengths, and these waves of different lengths affect these sensation areas differently, so that for the different wave lengths they deliver over different irritations to the nerve fibres. These different irritations we distinguish in consciousness and call them different colors. When light rays, whose waves are 0.0006878 m m long, and of which there are 450 billions in a second, strike the retina, we say that we see a red color; if they are only 0.0003928 m m long and 790 billion strike the eye in a second, we see a violet color, and all the colors of the spectrum are composed of rays whose wave lengths are between these two extremes. Since light waves which are more than 0.0006878 m m in length, do not irritate the retina, and those which are shorter than 0.0003928 m m, also do not irritate the retina, we see that all the different sensations which we receive through the medium of the retina are caused by light waves which vary in length by less than 0.0006878 m m—0.0003928 m m=0.0002950 m m. So we learn, further, that the deliverances of the retina are irritations of the optic nerve fibres, whose differences in quality are caused by differences of less than 0.0002954 m m in the length of the waves which impinge on the retina.

But the most interesting part of our subject, and the part for which this paper was written, remains to be considered; and that is, whereabouts in the retina are light rays changed to nerve irritations. The opinion is generally held that the cones and rods are directly sensitive to light rays, and that these light waves, in passing through the cones, directly irritate them. This opinion I hold to be an error, and would present another theory which seems to me to explain the facts much more satisfactorily.

This theory is that the rays of light do not irritate the rods and cones directly, as they pass through them, but that these light rays, after passing through the transparent layers of the retina, without doing any work, set up a molecular motion in the pigment layer, and this molecular motion of the pigment beating against the cones and rods irritates them.

To this theory I would invite your careful attention, for if it is true, it will work radical changes in our ideas of the Physiology of vision. The first argument for the support of this theory is, that the cones which have been said to be irritated by light rays are perfectly transparent, *i. e.*, they allow at least ninety-nine per cent. of the light to pass through them unchanged. According to the well-known laws of the correlation and conservation of forces, whenever a force does any work, it diminishes or disappears. When a falling stone reaches the ground, heat is developed, but the motion ceases. The pumps at the water works lift 20,000,000 gallons of water a day, but the boilers do not give off as much heat as they would with the combustion of the same amount of coal if they did no work. Some of the heat has been transformed into motion. When the sun's rays fall upon a transparent window pane, some are reflected, most of them pass through and the pane is not warmed, it remains unaffected. If the rays then fall upon a carpet, a few are reflected, and we see a bright spot, the rest are absorbed, and the spot is warmed. So we see that whenever the sun's rays do any work, they disappear as sun's rays, and that an object which is transparent to them, is unaffected by them. It is unphilosophical to suppose that the retina is the sole exception to this universal law, and that here the particular part which is to be affected by the rays of light, should be the most transparent to those rays and allow them to pass through practically undiminished.

But it may be objected, allowing that ninety-nine per cent. of the light does pass through the cones, is not the one per cent. sufficient to irritate the cone and give us our sensation? Of course it is impossible to say "no" with mathematical certainty, for the

equivalents of light and nerve irritation have never been calculated; but since faint starlight suffices to excite the retina, while sunlight or the dazzling glare of electricity is necessary to print a picture on the photographer's plate, analogy and reason tell us that it is impossible, using Kühne's expressive phrase, that ninety-nine per cent. of the faint starbeams have gone to death or been uselessly absorbed in the pigment, and that one per cent. only has been utilized in doing the work for which the retina was intended.

In the next place, if this theory is true, we are not obliged to attribute special properties to the optic nerve fibres and the rods and cones, which isolate them from the rest of the nervous system.

Light rays irritate no other nerves. Other nerves are irritated by being touched. The terminal filaments of the auditory nerve are irritated by the molecular motions which the sound waves set up in the fluid of the cochlea in which these terminal filaments float. I am not sure that I quite understand Miller's theory of the "specific energy" of the nerves of special sense; but this theory seems to me to do away with the necessity of supposing a specific energy for the terminal filaments of the optic nerve, for such we must consider that the rods and cones really are, which specific energy makes them alone sensitive to light rays. This theory enables us to consider the optic nerve as identical with other nerves in function as it is in structure, and sensitive to the same irritations. Other nerves are sensitive throughout their whole length. A blow upon the ulnar nerve at the elbow hurts like an injury to the little finger. The old theory would have us believe that the light rays pass through the fibres of the optic nerve which form the inner layers of the retina, without irritating them, and only irritate the termini at the outer layer. Our theory says light rays as such do not affect nerve fibres at all, and can be transformed into motion only in an opaque substance like the pigment where they disappear as light rays.

But, some one says, the most powerful beams of light, if unaccompanied with heat, never excite sufficient molecular motion in the skin to arouse a sensation, how can this molecular motion arouse a sensation in the retina. I would say the anatomical relations of nerve and pigment and the direction from which the rays come are so different in skin and retina that no comparison is possible. In the eye the lens sorts out the light rays which fall upon it and directs those which come from one point of the visual field, and hence are of one color to one point of the retina, here they pass undiminished through various strata and fall directly upon the dark pigment which lies upon the cones as your glove hugs your fingers, and if they are changed to motion this motion beats directly upon the cones. We might as well argue a specific energy for the fingers, because we can feel the kick of our gloves, while cannot tell by the sensations of our shoulder blades what our overcoat is lined with, as to attempt to argue from an ordinary sensitive nerve covered from light by derma and cuticle to the closely wedged cone and pigment. Many other arguments might be adduced, but my time is up. Of course this theory is not original. I got the idea from Prof. Fick's article on the eye in the *Handbuch der Physiologie*, edited by Prof. Hermann, of Zurich. I have only worked out some of the arguments in its favor. This theory has not, to my knowledge, been yet advanced in any English speaking authority.*

I love my Alma Mater and am jealous for her fame. I present this imperfect sketch that her alumni, whose studies have not led them into paths of special research, may yet know a little of what is going on among those who are cultivating these special fields.

*Since this paper was read, my attention has been directed to Draper's *Physiology*, in which it is stated that light rays cannot make an impression on the transparent parts of the retina, but that passing through these they are changed to heat in the pigment, and that the variations of temperature in the pigment affect the contiguous nervous elements so as to cause sensations of various colors. Heat is a mode of motion, but not the only one, and I do not think that Dr. Draper proves that it is *the* mode of motion which is set up in the retinal pigment by the light rays. F. W. A.

OXYGEN AND PROTOPLASM.

By W. H. Pitt, M. D.

The discovery of oxygen a little over a hundred years ago by Dr. Priestley, of England, marked a new era in the history of science. But notwithstanding the vast addition to human knowledge in reference to the natural world which his great discovery afforded to all, Priestley, like many a naturalist before him, suffered persecution. A century passed, and Dr. Draper, of this country, discovered oxygen in the sun. The land of Priestley was the first to do him honor, while all the world applauded. But in considering that one discoverer had oxygen all around him, and in almost every compound within reach, we must bear in mind that the other explorer found it 91,000,000 miles away.

The difference in the length of the human arm as a radius compared with the radius vector of the sun, is truly wonderful, but no more surprising than the comparison between ancient and modern thought as applied to natural phenomena.

It is now generally understood that the "universe is governed by law," and not subject to the caprice of chance or impossibilities, built up in the brain of dreamers. We have come to a point now, thanks to scientific courage, when facts are fearlessly declared, and when, without fear or hindrance, all in common may attempt to find out the laws which govern them.

These laws, however, particularly in chemico-physics, are so intricate, because dealing for the most part with the immeasurably small molecules and atoms, that our limited senses fail and we are left to reason from analogy or in utter darkness.

The theory that all matter may be reduced to ultimate elementary atoms, goes a great way towards explaining the mysterious processes constantly at work in organic nature. The principal inorganic molecules H₂O water, CO₂ carbonic acid, H₃N ammonia, every body will admit are formed from the elementary substances, oxygen, hydrogen, carbon, nitrogen. The complex organic molecule contains them all, and in decomposing is resolved into these simpler inorganic compounds.

The consistent reasoner is forced to the conclusion that the complex is made up of the simple. It is also evident that before the complex were fully formed, the simple molecules were, and that before these existed, matter was in an elementary state. Whether, however, the first organic molecule was formed by the union of these simpler ones, and thus passing the boundary of dead matter, sprang into being, forming a nucleus around which many millions might cluster, and thus differentiated into organisms, or whether it was brought around some other way, is not positively known.

That such a view of chemical organization into being does not detract from the supposed plan or design manifested in a First Cause in which so many have been taught to believe, but rather ennobles it, increasing our knowledge of the mystery of life, is an idea prevailing largely at the present time.

But the object of this paper is to direct more earnest attention to oxygen, to ask you to note the part it plays in making our earth what it is, teeming with animal and vegetable life.

The elements of which the earth is composed were originally in a free state, and through chemical union and contraction brought around the present appearance of things. In this combination of elements to form other matter of entirely different properties from its constituents, oxygen took a more prominent part than any of the other elements. Thus we find one half the weight of the solid earth, eight-ninths the weight of water, and one-fifth of the atmosphere, to be oxygen gas either in a combined or free state. The great affinity which it manifests for the other elements singles it out as the one particular element with which nature forms the greatest number and variety of compounds. It does not seem so surprising, then, that since we find it the chief earth-making element, that we should also discover it to be the life-giving and the life-sustaining element.

The infinite phenomena observed in matter, whether in an elementary or a compound state, are the struggles of nature to reach an equilibrium. This equilibrium is never attained either in the atom or the mass, hence the restless state of matter, living

or dead, which we nominate motion, force, life. It is this unbalanced state of oxygen which we call affinity, and which not only makes the earth possible, but all that lives thereon. In a world like ours it is wonderfully adapted to evolve light and heat, which are the constant disturbers of all static tendencies in matter.

And so ages before any life appeared the office of oxygen was to burn the elements, that out of the ashes might be formed our wondrous earth. Long after the conflagration, when the burnt metals and non-metals had become the acids, bases and salts, and the flaming hydrogen the oceans, the globe swung on with its black, dense atmosphere silently and in death.

The air becomes transparent; light breaks upon the scene; the golden rays smite the lifeless seas and the lifeless shores. Oxygen, like a conqueror, lingers in the air, and shall yet give vitality and beauty to the desolate new world.

At length the earth is clothed in verdure, flowers and fruit. The tepid waters swarm with life, and the clear atmosphere rests upon the sea. On the uplifted continents innumerable beings move bathed in the vital oxygen and the morning sun. Chemical and physical forces built up our planet; chemical and physical forces constitute and condition all its vitality.

The sequence is unbroken in which the potency of oxygen rendered possible the globular mass and then peopled its circumference with myriads of living beings. Without this element it is impossible to contemplate what the earth and its inhabitants could have been according to the present laws of nature.

That the living matter is made up from the dead, and that the living is constantly becoming dead, we have abundant evidence. The progress downwards of organic matter into inorganic is quite well understood—not so with the progress upwards.

The border line between the two distinctions we recognize in matter, may not be very wide; but never yet has a lover of nature been able to cross it and witness the evolution, or origin of life. Nor is this strange, since all knowledge, which is genuine, comes through sensation, and the senses of man are limited.

As far as our senses do reach, however, it is safe to go and affirm whatever may be true in examining either the highest or the lowest organisms.

The bodies of very low animal types contain a fluid, structureless and jelly-like, called *sarcodé*. A similar substance is also found in plants and is called *protoplasm*. The sarcodé of the animal and the protoplasm of the plant have been proved to be identical, and are believed by many naturalists to be "the physical basis of life." Certain it is that whatever lives, contains protoplasm. "Where there is life, there is protoplasm."

But, strange to say, it may exist outside of the body of the plant or animal, and so has a kind of independent life all by itself. It is a glairy liquid, resembling the white of the egg. Chemical analysis shows it to be an albuminous compound, composed of oxygen, hydrogen, carbon, nitrogen.

You place a point of it under the microscope and note its movements, as it is never still. From its surface may be thrust out finger-like projections, called pseudopodia. Again, portions of it will flow off in thread-like streams, run together and finally be contracted into the central mass. At other times undulations pass over it, and quickly its whole form is changed, apparently by some internal force. It is certainly living matter, but an organism without organs, as it has no mouth or digestive apparatus. It throws out a stream of itself to capture and assimilate food. These wonderful beings have been generalized under the name *monera*, because of their apparent homogenous structure and singleness of form.

There are different varieties, some with a well defined nucleus in the center, and these are called *amæba*.

Haeckel found in the fresh water of Jenna small lumps of living protoplasm, and probably similar organisms may be found in the fresh water at Buffalo. But this living slime, which seems to be linked so near the inorganic world, will die in a vacuum and become as motionless as the white of the egg which it so closely resembles.

And just here I am forced to the conclusion that oxygen is the organizer of its molecules and its stimulating energy. With the ever free and ever ready oxygen as a nucleus, its albuminoid molecules increase by millions, augmenting the mass and giving it the stimulus of heat which is only another name for motion.

Thus it appears that this point of vitalized matter, this microscopic moner, requires oxygen to build up and replace worn-out material, precisely the same as in the highest vertebrate animal.

The white corpuscles of our own blood are true moners, having amoeba-like motions and life. The red corpuscles of the blood are the oxygen carriers, and the white corpuscles have been seen to devour them.

The parallel is complete: From the highest to the lowest being, oxygen enters as a constituent, evolving substance, heat and motion. This primary substance is protoplasm, and without it life is impossible. It is the same restless matter, disobeying the laws of gravity in its movements and obeying only its own internal forces, whether examined in the moner or in the highest differentiated being. There are some biologists—and it must be confessed those who have given it long and laborious attention—who conclude that all the living matter in man is protoplasm, and composed chiefly of the white corpuscles.

These white corpuscles under the microscope may be seen to crawl across the glass like an amœba; and, as we have seen, they are most probably supplied with oxygen in the circulation by the red corpuscles.

In one way, then, or another, whatever the form of life, high or low, animal or vegetable, oxygen enters into the protoplasmic compound, giving rise to all the phenomena, either directly or indirectly, which we call life.

It is well that it bathes every square inch of our little planet, and it would be more in accordance with natural law, which has given us natural life, seeing it is "free as the air," if physicians would prescribe more of it.

SELF-ADJUSTING, SHELL-PLATE ENTROPIUM FORCEPS.

By Dr. Ræhrig, Cornell University, Ithaca, N. Y.

This instrument was originally designed to be an improvement on Desmarres' forceps. Its chief excellence consists:



1. In the substitution of a soft and yielding *shell plate* for the hard and rigid steel. This shell plate, which has thereafter been generally adopted in the construction of other instruments of a similar use and nature, I was at that time the first to introduce as an improvement in surgery.

2. I thought best to do away altogether with the screw (of Desmarres' instrument), and substituted in its place two crossing branches with a spring of gentle, moderate power.

It may indeed be said in behalf of the screw that only by means of the same can the degree of pressure be regulated and made more or less intense; still, such a difference in degree is here hardly requisite, an average compression and a steady hold or fixation being all that is really needed, and this is obtained by the contrivance just mentioned. It secures a moderate degree of pressure and steadiness, and instead of directing, during the operation, any further attention to the screw—which now and then necessitates some loss of time, inconvenience and trouble—the instrument has become, as it were, in a measure *self-adjusting*.

The advantages here set forth seem to have been fully appreciated by the profession, since the instrument became in a short time after its introduction quite a favorite with ophthalmic surgeons, and has been in constant demand. Its usefulness and convenience having thus been tested and acknowledged, it seems well to make the above statement, as I had heretofore neglected to give the matter any due publicity.

Clinical Reports.

STRANGULATED UMBILICAL HERNIA—HERNIOTOMY—CURE.

Reported by Herman Mynter, M. D.

Mrs. S., 54 years of age, has for 19 years occasionally had a protrusion at the umbilicus, followed with symptoms of obstruction of the bowels, but has always been able to bring it back again, although she thinks, that it never has been perfectly reduced. February 2, 1882, at 5 P. M., the hernia came out, and she was unable to reduce it. During the evening a physician was called, who tried taxis under narcosis with partial success, some gurgling sound being heard and the protrusion being diminished in size. Calomel and morphia and large enemata were ordered, without being followed by movements of the bowels. During the night frequent vomiting occurred, continuing during the next two days. February 5th Dr. Rochester was called in, and finding the vomiting of stercoraceous nature, advised operation and referred the patient to me.

By the examination, at 9 P. M. February 5th, the patient was feeling quite comfortable; temp. normal; p. 84; tongue clean; skin natural. A protrusion was felt beneath the navel as large as two fists, of rather soft consistency, with dull percussion over most of the surface. The navel itself was protruded farther than the rest. The skin over the tumor was of natural color; very little pain of tumor or abdomen by pressure. Bowels had not moved by injection. She had not vomited much for several hours, and it was therefore decided to defer the operation till next day. All nourishment was stopped during the night, only ice pills being allowed, and the tumor was covered with an ice-bladder. During the night and following forenoon, February 6th, copious stercoraceous vomiting occurred, and the operation was therefore performed at 3 P. M., four days after the accident, Drs. Tobie, Diehl, Mann and Bartow being present; pulse 96, rather full, temperature 99, no particular pain in tumor or abdomen.

Under ether-narcosis taxis was first tried, and this failing, herniotomy was performed. An incision, two inches long, was made in linea alba over upper half of tumor, where the ring was supposed to lay. Immediately under the integuments an old protrusion of omentum, slightly congested, as large as two fists, was found, adherent with old, but easily ruptured, adhesions to the sac. The incision was therefore extended downwards two inches to give place. After the adhesions had been severed, a single coil of the small intestines was found, perfectly covered by the omentum. It was considerably congested, but otherwise of sound appearance and feeling, and was returned with ease after the ring, which scarcely admitted one finger, had been incised slightly downwards. The coil was adherent to the inner surface of the ring. The torn and bleeding omentum was double ligated with catgut and cut off, as it, on account of adhesions all around the ring, could not be returned. The sac was thoroughly cleaned with carbolized water, and two silver wire-sutures introduced through the whole abdominal wall and peritoneum to close the ring and prevent any entrance of matter into the abdominal cavity. The upper angle of the wound, where the stump of the omentum was situated, and the lower angle were left open for drainage. Lister's antiseptic gace was applied as dressing, and morphia in $\frac{1}{4}$ grain doses ordered as often as necessary.

February 7th. Temp. $\frac{100}{98}$, pulse $\frac{108}{98}$; no vomiting, pain or symptoms of peritonitis.

February 8th. Very restless during the night in spite of morphia (gr. 1 in 4 doses). Several times greenish vomiting. Pulse 100, temp. 100. Some offensive discharge at lower angle of wound.

February 9th. No vomiting; no tenderness of abdomen; bowels moved; feels quite well.

February 12th. The silver sutures were removed, having cut through the skin.

February 24th. Wound almost healed. A little, deep-seated, hard lump felt to the right of the wound, painful by pressure.

February 25th. Discharge through the wound of badly-smelling pus by pressure on the lump, which feels softer. Incision with evacuation of 2 $\frac{3}{4}$ pus.

March 5th. The wound healed, the patient is up and feels well. The cicatrix is hard and retracted, no impulse by coughing. The ring cannot be felt, and only a little hardness is felt where the stump of the omentum is situated.

A strangulated umbilical hernia has always been considered extremely dangerous, especially on account of the usually large size of the protrusion and the quickness with which mortification of the bowels occurs, owing to the hard, unyielding ring in which the strangulation generally takes place. Uhde (Bilroth & Pitha's Surgery) gives the result of 122 herniotomies, of which 55 died, 67 recovered. In the case mentioned here the large protrusion of omentum undoubtedly acted as a cushion and prevented the quick mortification which usually occurs. A point of interest is the wiring together of the ring, to prevent matter from the large sack and the stump of the omentum from entering the abdominal cavity, by producing an adhesive inflammation. So far the result is perfect, as no impulse is felt by coughing. In regard to the omentum, it must be considered safer to cut it off and have the stump outside the peritoneal cavity, than to loosen the adhesions and return the bleeding, torn and congested mass.

Selections

THE TREATMENT OF TYPHOID FEVER.

We copy entire the proceedings of the Boston Society for Medical Improvement, from the *Boston Medical and Surgical Journal* of Feb. 23.

Dr. A. L. Mason opened the debate with the following remarks :

Having been requested by the President of the Society to say a few words by way of opening a more general discussion of the

management of typhoid fever, I will briefly call your attention to the different classes of cases, as ordinarily met with, and to their varying therapeutic requirements. These latter, in a general way, are: 1, Ventilation and sunlight. 2, The management of the diet and bowels. 3, The use of stimulants and other remedies. 4, The regulation of the temperature. 5, The disinfection of the stools.

It appears from hospital record books that about seventy-five per cent. of the cases do well if proper attention is given to the points mentioned under the first two headings, with such mild measures as may be necessary for securing sleep and allaying discomfort; that is, under an expectant plan of treatment.

A diet consisting mainly of milk, with plenty of cold water to drink, probably meets the requirements better than any other, and as a rule two quarts of milk will supply sufficient nutriment. Patients will sometimes manage three and four quarts, but it is often found undigested and sour in the stools.

In cases which are prolonged to five or six weeks, without relapse, with slightly raised temperature and quick pulse, from muscular debility, too long continuance of liquid diet is apt to delay recovery. On the other hand, too early ingestion of solids, before the intestinal ulcers are well advanced toward healing, may cause almost immediate aggravation of the symptoms. Examination of the abdomen sometimes enables us to determine whether the unhealed lesions or whether muscular degeneration, with nervous exhaustion, are responsible for the tardy convalescence.

With regard to the bowels, it has been an open question whether any interference is desirable beyond checking too free a diarrhœa. Cases which are costive throughout often do perfectly well, and the absence of peristaltic action during the second and third weeks would be expected to contribute to the healing of the ulcers. But in ordinary cases, with a tendency to constipation, it is better to empty the rectum occasionally by enemata. Few practitioners care to meddle with the bowels

any further than that, although the use of occasional laxatives throughout the disease has been said to be of service in relieving the abdominal discomfort and tympanites.

An exception may be made in favor of the German mode of giving ten grains of calomel at the outset, a practice which has appeared to me to give the patient a fairer start, so to speak, than allowing the bowels to remain overloaded. There is probably no greater virtue in calomel than in a dose of castor oil or other cathartics, except that it is easy to administer.

The use of stimulants and other remedies. As was before remarked, about seventy-five per cent. of the cases are mild and get well under purely expectant treatment, perhaps requiring a little alcohol towards the close to hasten convalescence. But of the remaining twenty-five per cent. of cases about ten per cent. assume a severer type, and, after suffering from the graver symptoms caused by the higher range of temperature, the deeper intestinal lesions, and the ataxic state, perhaps after having survived hæmorrhages from the bowels, bed sores, and an extreme degree of muscular degeneration, these cases also, to some extent by virtue of the rational therapeutics of to-day, rally from the last stages of physical exhaustion and recover.

And, lastly, we have the fatal cases to deal with, varying in number from five to twenty-five per cent., according to the severity of the epidemic, and, if we can draw any conclusions from statistics, according also to the therapeutic measures which are adopted.

Among the requisites for successfully tiding over many critical cases alcohol stands first, a reserve force, however, which should not be wasted by too early use. During the last autumn at the City Hospital, Dr. Stedman adopted the plan, which I continued, of withholding stimulants from all cases in which the pulse did not rise to 120, that is, in the majority of cases, unless there was some special indication for their use,—such as a weak first-sound of the heart, an irregular or dicrotic pulse. These cases did well, and, in fact, the death-rate this year was low,

about eight or nine per cent. The epidemic, although extensive, was not severe.

Other drugs which have been useful are, ergot in ataxic cases, with capillary stasis from a tendency to vaso-motor paralysis; the mineral acids; anodynes; tonics; salicylic acid and quinine, the last two chiefly from their antipyretic influence.

Carbolic acid and tincture of iodine, in doses of a minim each, repeated every two or three hours, have been said to produce remarkable effects from their antizymotic properties. This suggestion, also applicable to the treatment of diphtheria and all of the so-called "germ diseases," has met with some favor in Germany and England.

Before entering upon the fourth consideration, *the regulation of the temperature*, I will read a few extracts with regard to the prevailing death-rates at different places, and the decreased mortality wherever systematic antipyretic treatment has been followed in typhoid fever.

Referring to previous reports in the *Journal*, I find that Dr. Ernest Besnier's valuable statistics of the prevailing diseases in Paris, for ten years previous to 1877, give a death-rate of 21.31 per cent. in 16,000 cases of typhoid fever.

In the London fever hospitals in 1877 the average mortality was twenty per cent.

At Basle, under expectant methods, there were twenty-seven per cent. of deaths, and about the same ratio prevailed elsewhere in Europe.

In this country no statistics on a large scale have been prepared in any of the cities, but it is doubtful whether a sufficient number of cases from which to generalize would show a lower rate of mortality than fifteen per cent.

In England the number of deaths from typhoid fever annually is more than 8,000, and this disease is always an important factor in raising our death-rate, especially to be deplored as the victims have rarely reached the prime of life.

Therefore it is a serious question whether this high rate of mortality cannot be reduced materially in this country, as it has been in other countries.

It is now twenty years or more since Dr. Brand published his first monograph on the systematic treatment of typhoid fever by cold baths, acting on the supposition that the prolonged high temperature was the source of all degenerative changes; attacking the disease through its principal symptom. The zeal of this enthusiastic physician and his remarkable results were not sufficient, however, to popularize such a troublesome mode of treatment, and in his second work, published in 1868, he recognizes the fact that if his methods had not been adopted by Professor Bartels, of Kiel, they would have come to an early end. Later, Jürgensen, Liebermeister, Traube, and other German physicians of large opportunities took the matter up; after the war the same system was introduced successfully into the Lyons hospitals by medical officers who were forced to admit its merits after observing the practice of Dr. Brand on the French prisoners of war at Stettin; judging from the Croonian lectures of Dr. Cayley, delivered in 1880, it has slowly gained ground in London; but in this vicinity, with the exception of a small proportion of the cases at the Boston City Hospital, under the care of Drs. Edes, Stedman, Doe and Draper, it does not appear to have been tried.

Of course in a long disease, with constant calls upon the endurance of the attendants, useless labor is to be condemned, and proper conservatism inculcated.

Professor Gairdner, of Glasgow, where the mortality in the fever hospitals appears to be unusually low under the expectant plan, had a prolonged controversy with Professor Liebermeister on this subject.

In Professor Bamberger's wards in Vienna, in 1872, the results of antipyretic treatment were not striking, but in Berlin in the same winter Professor Traube thought that the mortality would be reduced to three per cent.

And, finally, Dr. Brand's last publication announces a death-rate of but 7.4 per cent. in a collection of 8,000 cases treated according to his methods in different parts of Europe.

Statistics are to a certain extent unreliable, but I think to only a moderate degree in this case; and as long as we have for some time been in the habit of accepting everything else that is German, the systematic antipyretic treatment of fevers, with all the attendant trouble and expense, should at length command a trial in hospital practice at least.

It may be said, I think, that the type of fever in Boston is not usually very severe. During the month of October and part of November last more than thirty cases came under my care at the City Hospital. Although their course was often tedious, with a very large proportion of relapses, two cases only were fatal. Several cases continued more than sixty days, and one case over one hundred days. Venous thrombosis affecting one or both legs was noticed in several instances. The relapses were not attributable to errors of diet, and bathing had not been resorted to except in the form of sprinkling or sponge baths.

In this connection the use of salicylate of soda *after* defervescence, as recommended by Professor Immermann, for the purpose of preventing relapses by disinfecting the system, is interesting.

The proper disposal of the stools is a matter of importance too often neglected.

Dr. Edes said that the lighter cases of typhoid, such as were the most of those which he had seen the change in his hospital service, needed but little treatment beyond ventilation, and some attention to diet. Quinia might be used as an antipyretic around the bed to hasten and make more complete the defervescence, but could hardly be considered essential. The cold sponging either with water or diluted alcohol contributed much to the comfort of the patient, and, so far as it had any influence upon the temperature, was in the right direction; but it could not be regarded as so efficient as some of the other methods of bathing.

In the severer cases he believed in the usefulness of antipyretic measures, especially the cold or gradually cooled bath. This is not supposed to shorten the disease, unless by diminishing the time of convalescence, but to render its whole course milder, especially if the treatment is begun early in the disease.

He referred to his own experience in three successive years in the City Hospital, though without claiming any special value for his own results, excepting as agreeing with those derived from a larger number of cases.

Some of the German statistics which had been already referred to by Dr. Mason, seemed to him valuable as showing the results in the change of methods of treatment in the same hospitals.

Even the table compiled by Bordier, who is not a strenuous advocate of this treatment, show a decided advantage on the side of bathing.

The labor involved is one of the important objections to the treatment, but he had not encountered so much opposition from attendants as he expected, and could not help thinking that the trouble of bathing was, in part at least, compensated for by the greater freedom from involuntary discharges, the care of which, in severe cases, constitutes a large and disagreeable part of the labor of the nurse.

Quinine is occasionally useful and very materially diminishes the number of baths necessary to keep down the temperature. Its effect is usually felt for many hours after the dose is given. Digitalis appeared to him inefficient in small doses and dangerous in large.

Dr. Tarbell said that the treatment of typhoid under his care in the wards of the Massachusetts General Hospital consisted in milk diet, sponge bathing with tepid water two or three times a day, or oftener if the temperature seemed to demand it, and abstinence from drugs. Beef tea was used as a stimulant in some cases, but alcoholic stimulants were used comparatively rarely and usually not at all until the third week or later in the dis-

ease. The diarrhœa was restrained from becoming excessive by means of small opiates.

Dr. Tarbell was exceedingly skeptical as to the utility of any of the so-called antipyretic remedies employed for rapidly and violently reducing the temperature, and he was not in the habit of giving large doses of quinine nor of using the cold tub bath. His experience was of course limited, but the results of treatment by these methods thus far published in England and America did not appear to demonstrate their superiority to the milder treatment. He also called attention to the comparative rarity of the propagation of the disease by direct contagion, and mentioned the fact that no nurse or other person had contracted the disease from a typhoid patient in the Massachusetts General Hospital for the past six years. The only means of prevention used were extreme cleanliness and the placing of carbolic acid in the bed-pans before and after using, which could at best be but a slight disinfection of the excreta which were then emptied into the common sewer.

Dr. C. E. Stedman said that he had reviewed for the forthcoming volume of the City Hospital Reports 1,032 cases of typhoid fever admitted in the last ten years; in the fifteen years since the opening of the Hospital 1,184 cases have been treated. The fatality in the first five years was thirteen per cent.; in the last ten years seventeen per cent. This mortality is about the same as that reported by Murchison in the London Fever Hospital from 1848 to 1870. It has been accounted for by the poor circumstances and constitutions of the patients, but the experience of the speaker confirmed the statement of Dr. Murchison that the fever was more fatal, in a course of years, in the higher than in the lower classes, and Dr. Stedman considered the high rate due to the fact, not only of so many moribund patients being received, but that the number was so large of patients admitted in the second and later weeks of the disease, not having had sufficient food. In one year the mortality was over twenty per cent., in another eight or nine per cent. In trying to tabu-

late the results of treatment, he had been freshly impressed with the untrustworthiness of such statistics. As well as it could be figured, the highest mortality was found among the patients treated by large doses of alcohol, but these were exactly the worst cases recorded in the books. Again, there were nearly four hundred cases which were set down as having had "no treatment," meaning that rest and milk were the chief or only restorative measures adopted. Of these the very mildest cases, seven per cent., died, being patients moribund on entrance who were incapable of receiving treatment, or such as were doing well till a sudden reverse took place. Eleven per cent. of those who had antipyretic doses of quinine, etc., died, nearly all bad cases; twelve per cent. of patients treated mainly by sponge baths succumbed, mostly mild types of fever. The calomel method recorded seven per cent. of mortality, but there were few cases thus treated. Of eighty patients treated by tub baths, twenty per cent. died, almost all bad cases. The naked figures unqualified by statement of the stage of the fever when admitted, or its severity, give little notion of the true standing of the facts. Dr. Stedman had faithfully used the antipyretic remedies, quinine, baths, etc., and found, like others, that such means reduced temperature in a marked degree; but the temperature almost always rose again, and he could not see that the course of the fever was at all shortened. It seemed to him that about six hundred of the cases above reported would have done well under expectant treatment, and of the remainder very many were saved by timely and proper medical supervision with the best of nursing. Skill in the handling of fever is attained when the physician knows that the time has come to supplement rest, food and nursing with the administration of drugs and stimuli. Dr. S. found the pulse was his best guide, and though knowing that patients with typhoid fever sometimes die with a slow pulse, had never himself yet lost a patient whose pulse did not range above 120. When the beats neared that number he began to feel anxious, and to stand ready to employ, if need be, the bold-

est stimulation. Records of temperature of 105° F. (in one 107° F.) had not alarmed him, if the pulse kept down. Several charts showed continued high temperatures with slight morning remissions, and a pulse of 100 or 108; such cases had done well. It is to be noticed that we saw few patients who had not been freely purged before admission, and he had been led to believe that a mild cathartic was not unwholesome early in the disease. For diarrhœa, when there were more than three or four stools daily, he used Dr. Harley's pill of a grain of opium and a quarter of a grain of sulphate of copper, or Dr. Pepper's pill of nitrate of silver and hyoscyamus. When stimulants did not moderate high delirium, chloral and bromide were serviceable, or sometimes the wet pack. For himself, were he limited to one remedy and one drug, he would cheerfully rely on cold sponging and brandy.

Dr. Minot had never employed cold baths in the treatment of typhoid fever, but he had tried the effect of sprinkling the patient with ice-water, aiding evaporation by fanning. In this way the temperature can be reduced several degrees in a short time, and the method is easy of application. He had, however, not found any great benefit from it in very grave cases. In two instances in which a high temperature was repeatedly lowered by the effusion, the patients died, but their condition was almost hopeless previously. The temperature can be reduced with much certainty by means of large doses of quinine, ten grains being given every fifteen minutes until the desired effect was obtained. Usually two or three doses are enough. He was accustomed to order stimulants freely in all cases with prostration, and he thought many patients were saved by them. He suggested a trial of the subcutaneous injection of sulphuric ether, as employed by Dr. L. E. Dupuy, of Paris.

Dr. Lyman said that the practical points in treatment of typhoid had been so much discussed by others that he would allude to only one or two.

In the first place, it was not a disease to be cured or cut short; a large proportion needed only nursing and watching, the physician to bear constantly in mind the old maxim of Cullen, "Obviate the tendency to death." It should be remembered always that it is the *heat* which kills, either directly or indirectly. True muscular degeneration, not simply muscular atrophy, it is which weakens the heart, and in a case which runs its normal course without complications it is this weakened heart which is, perhaps, more to be feared than anything else, a fact pointed out by Stokes as long ago as 1839. The difference between bodily heat and fever (quickened heart action as shown by the pulse, and the temperature of the blood as shown by the thermometer) should never be lost sight of. The necrobiotic action of heat upon the tissues, and the simple wasting from deficient nutrition are totally different things, the recognition of which is necessary in our attempts at treatment.

He would say nothing as to cold bathing, having no experience of it, as he had always felt that he could accomplish with cold sponging, cooling drinks, quinine, and alcohol the diminution of dangerous heat without the liability to chill or local congestions.

He was in the habit of beginning with stimulants early, and was governed as to their continuance by the effect upon the pulse, skin and tongue. He thought it easier to forestall weakness of the heart than to remedy it when once established. As to quinine, he considered it our best and most reliable antiphlogistic; as an antipyretic its effect is more indirect, that is, by its property of lowering heat the tissue changes which cause fever are anticipated. This is the theory of excellent observers, and he was inclined to follow it. He wished also to remark upon the importance, in a prognostic point of view, of uniformity of both the pulse and the temperature, and especially the former; a steady pulse, for instance, of 120 being more favorable than a much lower but more irregular pulse.

Complications, of course, must be treated as such when they arise. Cerebral excitement, of course, counter-indicates quinine; a hard, full pulse, which, though not common, is sometimes found, would lead to caution in use of stimulants; exhausting diarrhoea would induce extra caution in the diet, and require either an alkali or gentle anodyne; much tympany, the use of turpentine, etc. Every case requires treatment, but in the majority of cases in his experience that treatment would be patience, diet, good nursing, while the few would, from complications or otherwise, require from beginning to end all the therapeutic skill of the most accomplished practitioner.

Dr. Mason said, in reply to a remark of Dr. Tarbell regarding the infrequency with which hospital attendants contract typhoid, that he remembered two cases in nurses in one year at the Massachusetts General Hospital, and several cases at the City Hospital. The poison which conveys the disease either *is* transmitted through the excreta or it is *not*. If it is, then disinfection of the stools is important, and for this purpose a strong solution of carbolic acid (one to twenty), or, better, a caustic solution of one of the mineral acids, is required. The practical difficulty of carrying out such measures, and of disinfecting other emanations from the body, was recognized, and Dr. Mason stated that he had seen two cases in which he was satisfied that the disease had been conveyed from one person to another by other means than the stools, perhaps by the breath.*

Dr. Reynolds remarked that the point of the propagation of typhoid fever through the fæcal discharges of patients is too important to be evaded or shuffled out of the way. It is conceivable that typhoid fever may have other ways of spreading itself. There is absolutely no question that the disease communicates itself by means of the dejections. The facts which incon-

* On subsequent inquiry of Dr. Rowe, superintendent of the City Hospital, it was found that in two and three-fourths years there had been four cases of typhoid among the attendants, three nurses and one ward tender, who had been on duty in the fever wards, where at one time last autumn there were sixty-nine patients with typhoid fever. He considered a solution of the substance sold under the name of "phenyle" a cheap and powerful disinfectant.

testably prove this have become classic in the literature of the subject. These facts are so well known that it is almost an impertinence to rehearse them. Two very striking instances are familiar to every reader of Liebermeister's essay.

"A woman attacked in Ulm returned to her native village, in which no case of typhoid had existed for many years. The excrements of this person were thrown upon a dunghill. Several weeks later five workmen were employed to remove this dunghill. Four of these five were attacked with typhoid, the fifth with gastric fever and swelling of the spleen. The excrements of these patients were buried deep in the dunghill. Nine months afterward the dunghill was wholly taken away by two men. One of these had typhoid, and died of it.

"In Lausen there had not been a case of typhoid for fifty-eight years. An epidemic of one hundred and thirty cases occurred, seventeen per cent. of the whole population. Only those who drank of the running streams were victims. Those who used the wells escaped. In the month preceding this outbreak, four cases of typhoid had developed in an outlying house, at some distance from Lausen. The excrements were thrown into a stream near the cottage. This stream communicated subterranously with the streams that supplied Lausen."

The negative fact that nurses and others in close attendance upon fever patients do not contract the disease, provided due care is exercised in the disinfection of stools, in their instantaneous removal under proper precautions, and in burying them under dry earth, where that is practicable, is of much weight as to the matter under discussion.

Certain features of the disease, and some points in regard to its management and its treatment by remedies, have been much impressed upon me in an epidemic of forty or fifty cases, which occurred in the neighborhood of Boston during the past summer. A large proportion of these cases were under my personal care.

I am anxious to urge in regard to arresting the spread of typhoid that the mild and imperfectly characterized cases are those most likely to do mischief. A servant, "neither sick nor well," whom the household are hardly willing to consider ill, school children suffering from the abortive form of the disease, these, and other like patients, deposit in the common privy excrements containing the poison, and later, if from any cause members of the family are in a susceptible condition, more than one life may be put in peril from attacks of which the real cause escapes recognition.

Twelve or fifteen years ago the writer of an exhaustive article on typhoid, in the *British and Foreign Medico-Chirurgical Journal*, laid stress upon a surmise that there exist in typhoid fever two stages: one an initial period, without general septic poison, and a following condition mainly characterized by symptoms which he believed to be due to septic absorption. He declares that this latter class of symptoms rarely appear, if at the commencement of the disease care be taken to secure sufficient unloading of the bowels, and if subsequently, by the continuance of mild laxatives and enemata, moderate daily dejections are obtained. I am inclined to admit at least a germ of truth in this statement.

The epidemic to which I have referred was essentially mild in type. It was treated under unusually favorable conditions as to season of the year, good local climate, and opportunity for careful nursing. Severe symptoms of various kinds were, however, in some cases present, giving ground for grave anxiety as to the issue. It seemed to me remarkable that in no one instance of those which I was permitted to watch was there intestinal hæmorrhage, diarrhœa, tympanites, or marked abdominal distress, and I could not help asking myself, whether pursuance of treatment like that just described might not have been in some degree responsible for this favorable result.

Not until we fairly admit the self-limited character of typhoid, the fact that the disease, once present, as inevitably runs its pre-

scribed course as measles or scarlet fever do theirs, can we hope to understand it satisfactorily or to manage it wisely.

Those are golden words in Sir William Jenner's late lecture on the "Treatment of Typhoid," in which he describes the aggravation of symptoms which constantly follows the every-day futile attempt to fight off a threatened attack, sometimes by feeding and stimulants, sometimes by violent muscular exercise, and again by drugs, or pictures the mischief which often results from an imagined necessity of returning to a distant home to be ill.

Correspondence.

VIENNA, AUSTRIA, March, 1882.

Editors Journal:—After six months' residence in Vienna and a winter of work, I feel able and at leisure to write another letter for the JOURNAL, and this time about the University of the Austrian capital. Founded in 1365, and with the exception of those of Prague and Heidelberg, the oldest of German universities, it is now attended by over four thousand students, one-third of whom are medical. It was not until the reign of Maria Theresa, however, that Vienna began to be, through the repute of the physician Van Swieten, one of the most popular medical educational centres. But it was during the last two or three decades, that it achieved its greatest reputation through such men as Rokitansky, Hebra and Skoda, and their deaths mark the beginning of its decline; for since that time an economic and short-sighted ministerium has failed to call famous men to fill vacant places, as it well might do, but in some instances has chosen men of as yet very little note. A good example is the recent call of Kundrat of Gratz to fill the chair of Pathology left vacant by the death last year of Heschl, the successor of Rokitansky, when there are so many pathologists, such as Klebs of Prague, Rindfleisch of Würzburg, Von Recklinghausen of Strass-

burg, Arnold of Heidelberg, and Cohnheim of Leipzig, any one of whom would by acceptance of the position do honor to the University. As it is now, the University honors whom she chooses, for she has the reputation which a number of her professors have not. Among the one hundred and twenty professors and private docents at present in active duty are few of very great fame. In the different departments are the following of more or less celebrity: Since the retirement of Hyrtl, who lives in a villa near the city, no one of importance occupies the chair of Anatomy. Von Brücke in the department of Physiology is second to no one but the Russian Purkinje. In Pathology are Weichselbaum and Hans Chiari, private docents, one of whom will be chosen to go to Gratz, and from April on, Kundrat. In Experimental Pathology is the well-known Stricker. In Internal Medicine are Bamberger and Adalbert Duchek, who died a few days ago at the age of fifty-eight. Surgery is represented by Billroth and Albert. On the Ear are Pollitzer and Urbantschitsch; on the Eye, Arlt and Stellwag. In Gynecology and Obstetrics we have Carl and Gustav Braun, Spaeth, Rokitansky, Jr., and Bandl. On Children's Diseases are Widerhofer and Monti. Kaposi, the son-in-law and also successor of Hebra, has charge of the clinic for Skin Diseases, and Hebra, Jr., and Neumann for Syphilis. The lectures in Psychiatry are given by Theodore Meynert and Leidesdorf; in Medical Chemistry, Ludwig; Laryngoscopy, Schrötter and Störk; Urinary Organs, Ultzmann.

Of all these perhaps the best known in America, and indeed throughout the world, is Theodore Billroth, who, first known as an excellent Pathologist, has of late claimed the attention of medical men through his surgical achievements. A few months of attendance at his neat and well-appointed clinic, with seating capacity for two hundred or more students, is certainly no loss of time, nor is a walk on Tuesday mornings through his wards with him. At the beginning of the session one of the first things shown us was the successful case of excision of pylorus

for carcinoma—a woman about fifty years in very good health and with no sign of return of cancer. The operation had been performed some six months before. He then showed us the stomachs of the others on whom he had performed the operation with fatal result, and explained his method. Gastrotomy for œsophageal stenosis is quite often performed. The first step is to open the abdomen and secure the adhesion of stomach wall to the opening, and in a few days the operation is completed by the opening of that organ. That is a way, too, they have of making a suprapubic lithotomy in case of cystitis, to prevent infiltration of purulent urine and septicemia—to open as far as the bladder and wait until the fistula sides are healed before proceeding farther. Carcinoma is unusually common in Vienna—of breast, uterus, stomach, tongue and œsophagus. The removal of a tongue is almost an every-day occurrence at Billroth's clinic. He generally cuts down upon and ties the lateral lingual artery on each side before the removal of the organ. One is surprised to see so much goitre here, and Billroth removes thyroid glands very often, and with remarkably good results. For example, a boy of twenty and a woman of fifty, on whom the operation required seven minutes each, I saw walk into the clinic, the boy in seven days, the woman in six days after it, the wounds entirely healed by first intention. The incisions are made obliquely from the neighborhood of the sterno-cleido-mastoids to meet in the trachea, thus avoiding the deformity which a large scar in the median line is apt to cause by contracting. He showed us also ten cases from the city on whom he had operated within a short time, all perfectly well. His laparotomies are performed on Saturdays, and are only to be seen by those receiving printed invitations, which he sends preferably to foreigners. The conditions of your admission are that you have not been near the pathological institute that day, or near any zymotic disease, and that you appear in a complete change of apparel from what you have worn during the week. The anæsthetic in use here, as indeed in all the clinics in the hospital, is as follows:

℞ Chloroformi, 500 grammes.
Etheris sulph.
Alcoholis, $\bar{a} \bar{a}$ 150 grammes.

This is poured upon a small piece of flannel stretched over a wire frame large enough to cover the nose and mouth of the patient. They claim to reduce the danger of death from narcosis to a minimum by use of this mixture. The carbolic acid spray is rarely or never used, but wounds are washed and hands of operators and instruments are bathed in 1 per cent. or 3 per cent. solution of carbolic acid. All wounds, no matter where they are, and in all the hospital clinics and wards, are treated with iodoform, and with splendid results. The iodoform powder is rubbed into gauze as we rub plaster of Paris into our bandages. This gauze is applied directly to a wound after freely dusting the same with the powder; over the gauze comes a large pad of absorbent cotton, and over this a large piece of oiled silk or jaconnet; then the bandage. Iodoform is a good deodorizer, and I have seen the gauze strips taken from the wound of an œsophagotomy after an eight days' stay with not the slightest odor, and the same from a collum uteri after removal of a carcinoma. Prof. Luecke of Strassburg is introducing naphthol in its place as a much cheaper and equally effective application. Withal, Prof. Billroth, in spite of his great knowledge and attainments, has not the faculty of imparting it well to others. He is a type of the sturdy, stout German with whom life has gone well, is about sixty years of age, and wears a gray, full German beard. He speaks so low generally that the most of the sound is lost in his mustache and whiskers. Prof. Albert, who is much younger, has all the ability of Billroth as an operator, and is a teacher who arouses enthusiasm in all who hear him. It is more instructive to attend his clinical lectures on surgery than those of Billroth. Among the operations they have performed during the winter semester, beside such as above mentioned, are tracheotomies, lithotomies, litholapaxies, amputations, resection of joints, rhinoplasties, staphyloraphies, liga-

tions of subclavian and lesser arteries, removal of tumors from antrum highmorianum, etc. One case of Billroth's may prove interesting—which was to have been an ovariectomy on a woman of fifty, but which revealed after the exploratory incision a large medullary carcinoma of abdominal glands and omentum majus. Parts of this were removed and the abdomen sewed up. That was several months ago; and the woman walks about the wards in good health, of course eventually to succumb to her fatal disease.

For the obstetric student Vienna presents a good field. This department of the Allgemeines Krankenhaus occupies the seventh, eighth and ninth courts, and is divided into the three clinics of Spaeth, Carl Braun and Gustav Braun. It is noteworthy to state that there are three brothers Braun and one son-in-law, all well known as gynecologists. In the three clinics together the average number of births daily is between thirty and forty—enough for an athletic student. Almost all of the obstetric operations are performed in the course of a semester. Natural labors are not brought before the class, except at Spaeth's, which is more for beginners. At Braun's clinic during the winter have been a large number of forceps deliveries, turnings, several cephalotomies, operations for extra-uterine pregnancy, several ovariectomies, one successful Cæsarian section, four or five complete removals of uterus per vaginam for carcinoma, and any number of operations for ruptured perineum, and fistulas, vesico-vaginal, recto-vaginal, ureto-vaginal, urethra-vaginal, and vagino-peritoneal. A curious cause for a large fistula between vagina and pouch of Douglas in one case was coitus. Braun rightly calls the vagina the Pandora box of woman's ills. The Swedish massage system is in great vogue for the treatment of fistulas before operation, for perimetritis and oophoritis. Iodoform also comes into use here. All wounds require that dressing. After an operation for ruptured perineum, in addition to the plenteous sprinkling by the teaspoonful upon the seam, iodoform in stick form is laid in the vagina and rec-

tum ; then over the whole absorbent cotton, jaconnet and bandage. No ill effects follow the use of iodoform, except if extremely long continued, when headaches are complained of, and occasionally more serious symptoms of iodine intoxication supervene.

The clinical lectures of Meynert on Psychiatry are full of interest. He has one or two wards in the General Hospital, to which for his daily teaching patients from the large Insane Asylum, five minutes' walk away, are brought. The various forms of nervous diseases are exhibited to the class and thoroughly examined and explained.

Perhaps no other city in the world affords the material for the study of Pathology which Vienna does. Every morning from six to ten post-mortem examinations are made in the Pathological Institute connected with the Hospital ; while the immense Poorhouse across the road, the Garrison Hospital for the use of the military students close by, the large St. Anna's Children's Hospital, the Foundling Asylum, and Insane Asylum, all close together, provide an enormous quantity of material for pathological and anatomical purposes. It is no wonder that the museums in the various departments are so rich. In making these post-mortem examinations there is no " unanimous agreement not to open the head," but everything receives thorough research from keen, scientific and unflinching eyes.

To non-professional people the Ring Theatre fire is already a thing of the past ; but to doctors it still teaches something, and I may therefore be pardoned for referring to it. A committee of physicians, Eduard Hofmann, the eminent professor of Medical Jurisprudence, at its head, was appointed to identify bodies. Nearly four hundred bodies were brought to the city morgue, which is the Pathological Institute, but never before had its accommodations been so taxed. It has wards for perhaps a hundred dead ; so those who came in that one fatal night in December were laid along the halls a few feet apart on both floors. This committee by arduous labor was able to identify two hun-

dred and fifty. Legal obductions were made upon three only. Spectrum analysis of the blood gave the characteristic spectrum for poisoning by carbonic oxide, which, added to the fact that few bodies presented the erythema and vesicles of burns *intra vitam*, showed conclusively that suffocation by carbonic acid and smoke and poisoning by carbonic oxide were the causes of death, while the frightful burning of the bodies occurred *post-mortem*. It was rare that sex could be determined by external organs, and the uterus and ovaries had to be sought for for this purpose. Age was determined to some extent by examination of epiphysis of humerus, separate until twenty-fourth year, by condition of ovaries, and by progress of calcification in larynx and ribs, beginning in thirtieth and ending in fortieth year. The general appearance of the bodies was hideous: the outstretched arms as if to ward off something, the dreadful trismus which even involved the palpebral muscles, the red foam at the lips, the completely blackened features, and the general disfigurement of the mangled and shapeless bodies. Some idea of the heat may be obtained when I say that it was so great as to burst open the skull and cook the brains; that in almost all cases the abdomen was burst open by its action upon the evaporative fluids of the body; that sometimes a corpse was so shrunk that little seemed left except the spinal column; that the albuminous fluids of the eye were completely coagulated; and that bones and teeth were often so calcined as to crumble at the touch. The delicacy of a hand would sometimes reveal the sex. In several cases hernias and trusses, in one case coxitis, led to identification. Six women were pregnant, two in sixth, two in third, two in second month, and of the first two little was left of the women except the round black ball of the uterus and charred *vertebræ* and pelvis. The bodies were buried as soon as possible, as the air was so polluted by the odor as to render it dangerous for the hospital. From the three hundred bodies whose ashes still lie in the ruined auditorium of the theatre arose such a pestiferous vapor that the city ordered it immediately disinfected with carbolate and phenylate of lime.

The season has passed over so sunny and smiling that the Viennese call it an Italian winter. The result has been an increase in all zymotic affections; small-pox is an all-the-year-round disease. Indeed, last year an American student caught it at the Poliklinik and died here. The report last week gave one hundred and fifteen cases in the city small-pox hospital and as many more in the suburban towns, together with plenty of typhus exanthematicus and diphtheria, while scarlatina, typhoid fever and measles are epidemic. It has been conclusively demonstrated by the Vienna physicians that those who drink the water supplied by the aqueduct from the Schneeberg, thirty miles away, do not have typhoid fever, while those who drink well water are the ones who receive the contagion. As the well-water districts are Dornbach, and other of its suburbs, entirely separated from those supplied from the Schneeberg, there is no room for mistake.

Before closing, something may be said for the benefit of students who are coming this way. Except London, Vienna is the most expensive city to live in in Europe. The bright side for the student is that there is such a vast supply of material compressed into such small space, for the Krankenhaus with its three thousand patients, the Children's Hospital, the Garrison Hospital, the Insane Asylum, the Poorhouse, the anatomical, chemical and pathological laboratories, and the Poliklinik all stand close together. The dark side of this is that, owing to the opulent and luxurious decline of the University at present, all this material is put into the hands of the assistant physicians, or internes, a brood of vampires who prey upon the foreign students. From the professors themselves little is to be obtained, except excellent lectures over the patients. For actual examination of patients yourself you must seek the assistants. Their courses cost from \$5 to \$25 per month. The courses on the Eye and Ear are comparatively inexpensive. Under Profs. Monti, at the Poliklinik, and Widerhofer, at the Kinderspital, one is sated with children's diseases at trifling expense. But courses

in laryngoscopy, and other departments of physical diagnosis, in obstetric operations and gynecology, in surgery, cost from \$10 to \$25 per month. One who does not undertake too much will not need to pay out for instruction more than \$30 per month. With economy one can live in Vienna for \$30 per month. The best plan for a student is to take a room as much beyond a ten-minute walk from the Krankenhaus as he has time to spare (for all the Hausfrauen within that distance look upon Americans as bonanzas), to have his breakfast and supper in his room, and take his dinner at a restaurant. He will look quite in vain for a pension. Vienna is much more expensive than Berlin, and about double as expensive as other German universities of great reputation, such as Leipzig, Strassburg, Heidelberg, Prague and Würzburg. During the semester some one hundred and fifty Americans have been attending lectures here, beside a large number of Scotchmen and a few Englishmen. Indeed, it has gone so far that Hebra, Jr., lectures in English. Most of the foreigners seem discontented here by their somewhat Jewish reception, and it is probable that the number of Americans, as well as of students of other nations, will gradually decrease each year, unless the Ministerium takes greater pains to uphold the reputation of the University. One thing is true, the University can at any time regain its former supremacy.

It is a false idea some have of railing at German theories. I have some respect for a medical theory founded on twenty years' experience and study of thousands of cases. Theory, of course, is not truth, but is founded on truth, and is a precursor of other truths. Really the Germans are a most practical people, as practical as theoretical. They do not, at least, found an absurd theory on ten hours' observation, but their theories are the results of life-times of observation. The fanatical London professors tell the students coming here, by all means avoid the Germans, do not listen to them, only look at their cases; and I know a young Englishman who is in a state of continual trepidation lest he should catch a German idea. Myself I have no

doubt that he has been so thoroughly inoculated with weak English theories that his mental constitution is proof against the German theory epidemic.

I was reading a few days ago of the Veterinary Department of the University and Horse Hospital. To obtain a diploma from this school one must attend six semesters, averaging five months each, or twice, nay thrice even the amount of study required of American physicians. Let no one say invidiously that the Germans value their horses more than we do human beings!

FREDERICK PETERSON.

Editorial.

THE AMERICAN MEDICAL PROFESSION.

At the recent commencement exercises we listened to an eulogy upon the medical profession of this country, in which we, as a profession, received favorable comparative criticism. Our professional standing, as compared with that of our brothers across the water, may be considered as uncertain, to say the least. It is our present purpose to present a single bearing of this many-sided question. However wide our views upon the question as a whole may differ, there can not possibly be any dissent from the statement that in original research into the sciences of life and disease, such as biology and pathology, including of course many sub-departments, we bear only a very unfavorable comparison.

We believe, and that it can truthfully be said, that there is not a university town in Europe that does not furnish a larger number of medical men, engaged exclusively or very nearly so in the labor of original research, than the whole of the United States. Where are our physiological and pathological laboratories that would not appear preposterously insignificant in comparison with those of such men as Stricker, Donders and Rindfleisch.

The fact cannot be denied. We proceed, therefore, to find the reason. The common excuse that our country is still too new and undeveloped, the population too primitive and scattered, is no longer available. The fault lies with the profession itself. A recent meeting of the Medical Association of this city will serve to illustrate. A certain gentleman of this city was announced as having consented to read a paper, the subject of his paper being the relation of the various so-called germs to the etiology of disease. Certainly no subject could have been more interesting and important, the essayist a gentleman than whom there is no one in this city better qualified for the task of presenting the subject in an authoritative and exhaustive manner. Considering these facts, is it not a remarkable and humiliating thought that at the time first appointed no quorum was present, and at the adjourned meeting there were present less than a dozen all told. Could any subject have been more attractive? Is there any regarding which there exists greater ignorance, both among the laity and the profession? If it be true that the greater the ignorance the greater the assurance, then we find here an apt illustration, there being no subject regarding which more reckless assertions and foolish statements are daily made by press and people.

The essayist's failure to attract from the ranks of a numerous profession a larger audience is no exception, but on the contrary the unvarying rule shows but too clearly the almost hopeless apathy touching scientific matters which pervades the medical profession of this country. It may be claimed that we are not ignorant of the results obtained in the various European laboratories, and that we are not slow to profit and make practical application of any facts determined or discoveries made. But this will not excuse our idleness. The profession of other countries has a right to look to us for a return of original information, and our duty to humanity and our zeal for the progress of medicine should further incite us.

As to causes which have been active in bringing about this condition of inactivity and stagnation as well as the only remedy which in our opinion can be effectual, we have clearly defined views, the presentation of which we reserve for a future editorial.

WILLIAM GOULD, M. D.

The subject of this notice graduated at the Buffalo Medical College in 1850. He commenced the study of medicine long after reaching mature years, and on receiving his degree settled in this city, where his entire professional life has been passed. Dr. Gould was a very successful practitioner, possessing a quick insight into disease, and clear and practical methods of treatment. Endowed with more than ordinary natural ability, he directed his energies earnestly to his profession and achieved merited success. As a parliamentarian Dr. Gould was by far the most ready and apt of any who have been honored with the position of President of the Erie County Medical Society and the Buffalo Medical Association. In these positions, and as President of the Buffalo Free Dispensing Association, he exhibited executive ability rarely met with in the profession. At a meeting of the Erie County Medical Society, held March 21, 1882, eulogistic remarks were made by several of the members, and the following memorial unanimously adopted:

MEMORIAL.

In the early dawn of Monday, March 20, 1882, passed from earth to the rest of Paradise, William Gould, M. D., aged 70 years and nine months.

The profession of Buffalo and Erie county, assembled in special session, desire to express their deep and sincere sorrow in view of the sad event which takes away another of our oldest and most respected members.

We gratefully recognize that this society is thus deprived of a strong and earnest supporter upon whom the highest honors in its gift have been bestowed, and from whom it has received in return all that zeal and energy could accomplish. We appreciate the ability and industry which he brought to his life work, and the delicate sense of honor which characterized him in all his professional and social relations. Endowed with more than ordinary natural ability, he guided his professional labors

with the most mature judgment, and under difficulties and amid dangers exhibited a self-reliance which ensured success. As a member of the community he was widely known and universally respected, and among his patrons greatly beloved. The divine principle of charity for the poor and the afflicted was exhibited in his daily life and gained as a reward the consciousness of faithful stewardship in his profession.

Passing away to his eternal rest in the fulness of years and with the respect and love of the profession to which the best of his days were given, Dr. Gould leaves a record of fidelity to duty which this Society gratefully records. It is therefore

Resolved, That the members of this Society attend the funeral in a body; that a copy of this memorial be transmitted to the family, and also engrossed in the minutes.

EDITORIAL NOTES.

A NEW MUSEUM is to be built for the University of Michigan at a cost of \$60,000.

LAWSON TAIT speaks of Listerism as one of the largest, best blown and most attractive bubbles ever displayed to a surgical audience.

OF the fifty-six Professors of Harvard College, forty-three are graduates of Harvard—a notable instance of an Alma Mater appreciating her own children.

SMALL-POX has been effectually stamped out in this city, not a case now existing. The Health Physician, Dr. Phelps, recommends that the name of the Pest House be changed to Quarantine Hospital, a very good suggestion, which we hope will be adopted.

THE necrology of the past month includes the name of the eminent Dr. Pancoast, of Philadelphia, whose skill in the various departments of surgery has given him more than an American reputation. Among the readers of the JOURNAL are probably many who have listened with profit and pleasure to his clear demonstrations of technical subjects, and, having had personal knowledge of his ability, can measure the loss the profession has sustained by his death.

A LATE number of the *American Journal of Obstetrics* contains an exhaustive and valuable article by Dr. Garrigues, of New York, on the "diagnosis of ovarian cysts by means of the examination of

the contents." His conclusion is that the examination of the fluid affords a very valuable aid to diagnosis, but that it would be rash to base a diagnosis on the character of the fluid alone. This does not differ much from the opinion of Baker Brown; that "microscopic examination may serve to strengthen an opinion—but alone it ought not to decide one."

"MEDICAL EDUCATION" seems to have received its full share of attention in Commencement addresses this year, and we are glad to see a general recognition of the fact that the granting of medical degrees by faculties, having a *financial interest* in the college and in the *number of graduates*, is one of the potent factors in maintaining the present condition of things. The appointment of a Board of Examiners, before whom all candidates for degrees would have to appear, would crowd out a good many colleges from the doctor-making business.

DR. PARVIN, (ex-President American Medical Association), says that the New York State Medical Society, in voting to consult with homœopaths, has placed itself outside of the American Medical Association, and that they must be glad to rescind their action before two years, for the great mass of practitioners in New York State were loyal to the old flag, though a few specialists, hungry for homœopathic consultations, may dishonor or desert. Homœopathy deserves no such concession as the New York gentlemen wish to make. Honestly practiced it is absurd, dishonestly it is knavery, at best it has been a foolish fashion and is a dying faith.

THE effort in the legislature to annul the registration of physicians, as required by the medical law of 1880, was considered at a recent meeting of the Erie County Medical Society, and the following resolutions adopted:

Whereas, A bill now pending in the Legislature to regulate the practice of medicine and surgery in this State gives the right to every person to obtain medical advice and aid from any one in whom he may repose confidence whether he is registered or not as a physician, thereby removing all restrictions in regard to the practice of medicine and annulling the registry law passed last year by which some protection was secured to the public at large against the dangerous practices of ignorant and unprincipled persons; therefore,

Resolved, That the Society request our Senator and Members of Assembly from this county to use all honorable means to defeat the passage of said bill, and that the Secretary forward this resolution to said members

A CHICAGO paper reports the death by small-pox in that city of a physician quite prominently known for his anti-vaccination sentiments. It would be well if retribution followed every fault of judgment as closely as in this case, since the superstition of some ignorant practitioners has immolated many victims on the altar of this loathsome disease and been an important factor in producing its epidemic form. No less excellent would be an enactment such as our Health Physician has recommended, making the refusal to submit to vaccination a misdemeanor in the eyes of the law.

Reviews.

Home and Climatic Treatment of Pulmonary Consumption on the Basis of Modern Doctrines. By J. HILGARD TYNDALE, M. D. New York: Ber-
mingham & Co., Publishers, 1260 and 1262 Broadway. Price 50 cents. 1882.

This little volume of 174 pages treats of the important disease, commonly called consumption, under five heads: Pathology in Consumption; A Treatment in General; Home Treatment; Climatic Treatment; General Conclusions. After carefully examining its contents we fail to find anything new or original in the author's pathology and treatment. The work is commended to our readers as one of many issued by writers, more ambitious for notoriety than to serve the profession with fresh and original ideas in pathology and therapeutics.

A Manual of Organic Materia Medica, Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms for the use of Students, Druggists, Pharmacists and Physicians. By JOHN M. MAISCH, Phar. D., Prof. of Mat. Med. and Botany in the Philadelphia College of Pharmacy. With many illustrations. Philadelphia: H. C. Lea's Sons & Co. Price \$2 75.

This is a good book for pharmacists for whom it is more especially designed. The medical properties and doses of the various drugs are simply stated, but there is no attempt to give instructions on their therapeutical applications. It is well illustrated and handsomely printed. Prof. Maisch is a master in his department, and the work is an evidence of true progress in pharmacology.

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Original Communications.

SYMPTOMATOLOGY OF THE PUPIL.*

By Lucien Howe, M. D.

PART I.—PHYSIOLOGICAL CHANGES.

Unless a writer has a special claim to originality in the subject which he proposes to present, it is becoming that he should give some reason for adding to an already abundant and almost overburdened mass of medical literature. But as long as our knowledge of any topic has not yet crystallized into definite form—while the facts known concerning it are still somewhat disconnected—and especially while new observations are being continually made; during this time, any brief and systematic arrangement of these facts is usually acceptable to a large class of readers.

I shall endeavor, therefore, to present here a brief résumé of our present knowledge of the subject under consideration, together with some observations of my own, which seemed to be of value, with the hope that this will be acceptable to those practitioners who seek principally for truths which can be applied clinically.

* Read before the Buffalo Medical Club April 12, 1882.

Concerning the movements of the iris, we have, unfortunately, very, very much yet to learn, and it is not a little remarkable that the causes of phenomena, which are so readily observed, which have been studied so long and constantly, and withal are so full of importance—that these should still be involved in so much obscurity.

As we proceed to our study, we naturally begin by examining the structure of the iris. We know, of course, that it is a diaphragm placed in the anterior part of the eye. It might be interesting to consider the layers of epithelium which cover its two surfaces, its thick deposit of pigment posteriorly, or the numerous vessels which ramify throughout the entire structure. But the portion of special interest to us, at present, is its muscular tissue and the nerves which supply it. The muscular fibers are arranged in two sets. One, a comparatively large circular band which surrounds the edge of the pupil, is called the *sphincter pupillæ*. The other—more indistinct—is composed of radiating fibers, which pass from the sphincter outwards toward the peripheral edge ⁴⁴*, and these together, are known as the *dilator pupillæ*. The first may be compared to the hub of a wheel, and the second to its spokes. The opposing action of these two separate sets of fibers naturally suggests itself, for contraction of either one, is necessarily accompanied by relaxation of the other.

It is worthy of note that the existence of distinct radial fibers was not so early recognized as were the circular ones, and several eminent authorities in microscopical anatomy, or in physiology, have joined in the controversy concerning them. On the one side we find that Brucke ³⁸ affirmed their existence, while Henle ⁵² and other equally acute observers, either denied their presence in the human subject or considered it uncertain. This difference of opinion, formerly held, showed at least how minute and radial fibers are, and how intimately they are interwoven with the blood vessels, although at present we are in a position to speak of them without hesitation.

* The numbers refer to a list of references which will accompany Part II in the next issue.

Having thus glanced at the two muscles which contract and dilate the pupil, let us next trace the course of the nerves which supply them. These come principally ⁷⁵; first, from the motor oculi, second from the sympathetic, and third from the ophthalmic branch of the trifacial. The general positions of these are too well known to require extended description, but their relations in many pathological conditions are so important, that I shall not hesitate to rehearse familiar detail, rather than pass lightly over so important a part of the subject. Moreover, I would venture to suggest to any one whose recollection of any of the particulars concerning the cranial nerves, has begun to fade into a myth of the dissecting room, that he take down his copy of Gray or Wilson and review the portions under consideration.

Turning our attention first to the motor oculi, it will be remembered that the fibers of this nerve arise near the motor tract in the pons varolii, and emerge from the brain just in front of the pons and to the inner side of the crus cerebri. Thence it passes forward through a sheath in the dura mater toward the orbit. Indeed, it enters that sheath, so soon after leaving the brain, that it is followed with some little difficulty when we remove that organ from the skull, and it should not be forgotten that the protection thus afforded, renders it less liable to lesions in the cranial part of its course than when nearer its origin, or when in the orbit. While in this sheath, it passes very near to the sixth nerve which is on its way to the external rectus muscle, and also almost touches the sinus cavernosus. Any simultaneous disturbance of function, therefore, of the external, and of the other recti muscles, or of these, with any evidences of trouble in the sinus mentioned, would of course indicate the locality of the lesion. After entering the orbit, the motor oculi gives off branches to all the ocular muscles—with the exception of the superior oblique and external rectus—and also a small twig, but a very important one in this connection, which goes to the ophthalmic ganglion.

We shall presently find that the nerve just described supplies the sphincter muscle of the iris, and as its function is opposed to one which supplies the radial fibers, it is but natural that we should regard next the branches of the sympathetic. It is well known that the intricate interlacing¹⁰¹ of these fibers almost defies description, and indeed they are liable to so many variations at least in the region under consideration, that no detailed account of their course is necessary. For our present purpose, it is sufficient to recall the general positions and relations of the three cervical ganglia⁵² with their communications, and especially that group of fibers which, lying just by the side of the sella turcica is called the cavernous plexus. It communicates with the third, fourth and sixth nerves and gives off one branch of importance which goes to the ophthalmic ganglion. This ganglion receives a twig from a third source, namely, from a branch of the trigeminus, but that being a nerve of sensation is not of so great importance in a study of the motions of the iris.

The ophthalmic ganglion is seldom seen in the dissecting room, but if the outer and upper wall of the orbit have been removed, and the external rectus laid bare and then divided, a little further patience will enable one to find the three branches which go to form that small reddish-brown enlargement just at the outer side of the optic nerve. Its half dozen or more branches of distribution can also be seen, as they pass forward to pierce the posterior part of the sclerotic, whence they find their way to the iris. The filaments connected with the motor-oculi are distributed ultimately to the sphincter muscle, those from the sympathetic go to its radial fibers, and those from the trigeminus to its entire structure^{6 67}.

Our knowledge of the action of these three nerves upon the iris, is derived principally from experiment, but also from clinical observations and post-mortem appearances. As for the facts learned by experiment, we must exercise a certain amount of caution in making deductions from the phenomena observed. Thus, the experiment itself, may introduce complicating factors,

and besides the conclusion which could properly be drawn as regards an animal, might not hold good when applied to the human species. These experiments are of various kinds, and much has undoubtedly been learned from the use of mydriatics and myotics, but it is principally from the effects following the division of the sympathetic or motor oculi, or their irritation by electricity, that we must rely for our knowledge. Making allowance, however, for possibilities of error—which, of course, are always present in problems of this sort—irrespective of the source from which the information is gained, we are safe in asserting that the filaments of the trigeminus are principally for sensation ;

That contraction of the pupil or myosis is caused

1st. By irritation of the motor oculi, or

2d. By paralysis of the sympathetic.

And dilatation of the pupil or mydriasis is caused

1st. By irritation of the sympathetic, or

2d. By paralysis of the motor oculi.

A moment's reflection will show the reason of this important relation. For, as the sphincter fibers at the pupillary edge of the iris, and its radiating fibers, are direct opponents of each other, it is evident that the same effect can be produced by contracting one set or relaxing the other. A small pupil may result *either* from a forcible contraction of the sphincter, *or*, from unusual relaxation of its opponent—the radial fibers. Conversely, a large pupil may result *either* from a forcible contraction of the radial fibers, *or*, from unusual relaxation of their opponent—the sphincter. The fact of this relation is sufficiently important to be worthy of reiteration.

The usual size of the pupil may be varied within physiological limits by three causes. These are: 1st, The age of the individual; 2d, Contraction in the effort of accommodation; 3d, Contraction due to increased intensity of light. As middle life is passed and old age advances, the pupil becomes noticeably smaller than in youth. One of the most important factors in

the production of this contraction is probably an increased effort in the act of accommodation, necessitated by the gradual hardening of the crystalline lens.

In considering the character of this muscular action, we are naturally led to the second physiological variation, namely, that which occurs in the act of accommodation. It is now generally conceded, that when the eye regards a distant object, it is in a state of rest, but the nearer the object approaches, the greater is the effort made to see it distinctly, or, in other words, to keep the image on the retina. In this act of accommodation the pupil becomes perceptibly smaller ¹⁵.

This can be noticed in the eye of a person who looks alternately at an object distant twenty feet or more, and at a point only a few inches in front of the face. It can be seen, however, with even greater ease, if the one whose eye is observed, happens to possess the power of voluntarily adjusting the focus and relaxing the effort. While experimenting thus upon the print of a book before him the varying size of his pupils is readily observed. Not only do they contract in the act of accommodation, but it has been noticed that persons, like watchmakers, jewelers and others, who are accustomed to use their eyes for close work during a long time, are apt to have that aperture unusually small, and the contraction is occasionally accompanied by such symptoms of irritation, as to simulate a real inflammation.

Let us next turn our attention to the changes which the pupil undergoes from the influence of light. This contraction may be the result of the rays entering one eye directly, or may come about indirectly through the impression produced on the other. It is not known exactly what the connection is between the two eyes, upon which this relation in every way depends, ¹, but certain it is, that the retina, optic nerve and optic tract of the one into which the light falls, must be in a healthy condition in order to have the reaction take place. In proportion as the perceptive and conductive portions of the nerves are imperfect,

in that proportion does the pupil generally ³⁴ remain sluggish. Moreover, the older the person is, the less apparent is this effect of the impact of light, and the entire cessation of the reaction after death, is of importance, when a question arises in regard to recognizing that condition ⁶⁴.

The reaction is easily shown, as we know by closing one eye entirely, and then shading its fellow for a moment or two with the palm of the hand. On removing the hand suddenly, the pupil of a healthy eye at once contracts. When making this observation clinically, it is always well to repeat it with each eye separately, in order to be assured that the conditions are the same on both sides. It should finally be noted that the reaction of the pupil is due to the impact of light on the retina, and not on the iris. If the rays from a flame be converged by means of a small magnifying glass upon the iris, little or no effect is produced; but if the light be then allowed to enter the pupil, contraction at once follows.

The degree of contraction varies in proportion to the intensity of light, and I may remark in passing, that as the electric light is one of the strongest known, with the exception of sunlight, that the maximum amount of contraction is produced by it. But this of itself, is of no special detriment, and as it is the only questionable effect of that source of illumination, we must regard the popular objections to the electric light as entirely unfounded.

The importance of recognizing clinically these physiological variations, is too evident to require more than simple mention. As the physician approaches the bedside of a patient who is perhaps speechless or unconscious, and then observes the size and movements of the pupil, he should remember what condition to expect from the age of the patient, he should consider the distance at which objects are observed, and the relation between the age and degree of reaction from light.

Clinical Reports.

CASE ILLUSTRATING THE ADVANTAGES OF MEDIAN LITHOTOMY.

Reported by George E. Brewer.

Mr. H., of Pennsylvania, aged 36, suffering with symptoms of stone in the bladder, was brought to Dr. Julius F. Miner for treatment. As the case is one of interest, a brief history of it may not be uninteresting. Early in the preceding February, the patient sustained severe injuries, resulting in retention of urine, which necessitated the use of a catheter for its relief. A flexible rubber instrument was used. Attempting its removal, the attending physician was astounded to find that it had separated, about eight inches remaining in the bladder. He immediately suggested the use of a lithotrite for its removal, but finding that considerable deposit had accumulated before an instrument could be procured, he wisely desisted from any such uncertain and embarrassing procedure.

March 29th. About seven weeks after the accident, Dr. Miner, assisted by Drs. Kebler, Cary, Sloan and others, attempted its removal by the median operation for stone.

Ether was administered, after which the patient was placed in the lithotomy position. A grooved staff was then introduced into the urethra, with which the foreign body could now be distinctly felt. An incision about an inch and a half was then made in the raphe of the perineum, about three quarters of an inch above the anus. This divided the skin, superficial fascia, and a thin layer of adipose tissue. Then the rectum, being drawn downward by the forefinger of the left hand, the knife was carried back to the groove of the staff, making an incision through the membranous portion of the urethra, about three-quarters of an inch in length. A ball-pointed probe, which was then passed along the groove of the staff into the bladder, served as a guide to the finger, which, as soon as the staff was removed, was introduced to dilate the parts. In about ten or fifteen min-

utes the urethra was sufficiently dilated to admit the lithotomy forceps. Five pieces of catheter, completely encrusted with phosphatic deposit, varying, in length from one-half to three inches, were removed. The bladder was then thoroughly syringed out, and the patient placed in bed.

Not an unpleasant symptom followed the operation. The slight hæmorrhage, which was present, ceased as soon as the position of the patient was changed.

During the second day the pain, frequent desire to urinate, the constant muco-purulent discharge, and other unpleasant symptoms present before the operation, had nearly disappeared. The patient had good control over his bladder, passing water only once in two or three hours.

April 5th.—One week after the operation. His temperature has never risen above $99\frac{1}{2}^{\circ}$, nor his pulse exceeded 110. Part of the urine has already passed through the urethra; wound looking healthy and granular.

April 12th.—Two weeks after the operation. The patient in excellent condition; passes nearly all the urine through urethra; wound nearly closed. Every indication of speedy recovery.

The merits of median lithotomy have been variously estimated by different surgeons. While none actually condemn it, very few have much to say in its favor. The reason it is not more commonly practiced at the present day, seems to be owing to the fact that surgeons have not given it a fair trial.

Holmes, speaking of median lithotomy, says that it is "an easy and ready way of removing small stones in *childhood*;" while its application seems to Ashhurst to be "practically limited to those cases among *adults*, in which the stone is small." Erichsen, in comparing the median with the lateral operation, says, "It appears to me that the median operation, when performed in suitable cases, has the advantages over the lateral of being attended with less risk of arterial hæmorrhage, and less injury to the pelvic fascia," (thus avoiding the danger of urinary infiltration); the author then concludes with the statement that,

as it can only be used in cases of small stone, it can never take the place of the lateral. Hence we find that the only objection upon which the opponents of median lithotomy seem to unite, is, that its application is limited to cases of small stone.

Previous to the year 1874, Dr. Miner, supposing this objection valid, always employed the lateral operation. During the summer of 1874, however, he succeeded in removing a calculus weighing 587 grains from a boy twelve years of age, by the median method, and since that time has employed it exclusively.

Of the ten operations he has made in this way, every one has been successful, the age of the patients varying from five to seventy-five years, and the size of the stones, from that of a chestnut to that of an ordinary hen's egg. That the wound healed up rapidly, and that the patient had good control over the bladder almost immediately after the operation, were noticeable facts in nearly all the above cases. The reason of this is palpable. As the median operation is founded on the precept "small incision, much dilatation," the knife is only used to a very limited extent.

The median operation also offers an easy and reliable way of practicing lithotrity. By opening the membranous position of the urethra the lithotrite can be used to much greater advantage, and the debris more easily detected and quickly removed, thus avoiding many of the difficulties and dangers attending ordinary lithotrity.

In this connection Dr. Miner suggests, that in case a stone is ever encountered too large to be safely drawn through the dilated urethra, the operator has the choice of two methods; he may either extend the incision, making the medio-lateral operation as practiced by Buchanan, Lee and Gouley, or he may crush the stone and remove the fragments. Although never being obliged to resort to either alternative, in one instance Dr. Miner crushed a very soft stone while removing it with ordinary lithotomy forceps. With the aid of the finger, however, the fragments were so easily located and removed that he recom-

mends it as a safe and ready mode of procedure, when lithotripsy seems desirable.

In conclusion, then, its simplicity; the ease with which complications are overcome; its freedom from profuse arterial hæmorrhage; the slight risk of wounding the pelvic fascia, prostate or seminal vesicles, avoiding the danger of urinary infiltration, cellulitis and septicæmia; the rapidity with which the wound closes, and the ease with which cleanliness is maintained during the after-treatment, constitute the reasons why Dr. Miner so earnestly recommends median lithotomy.

Translations.

REMARKS ON SYPHILITIC AFFECTIONS OF THE EYE—EXTRACT FROM A LECTURE BY PROF. L. DE WECKER.

From the French by Lucien Howe, M. D.

Let me complete this lecture by a few remarks concerning the manifestations of specific disease. It is next to impossible to give exact figures regarding the percentage of syphilitic affections, especially as some ocular troubles, which are probably due to that, are not manifested by any distinctive characteristics. It is fair to say, however, that counting all eye troubles together, those resulting from syphilis hardly exceed 15. per cent., thus, while the sword of Damocles hangs above the head of many an affected one, it only falls comparatively seldom.

As to the part of the eye most liable to be involved, that depends somewhat on the original trouble being one which is acquired or hereditary; in the former case, showing itself principally in the iris, in the latter, in the cornea. Next to the iris, the parts most liable to be involved in the acquired form, are the choroid, retina, optic nerve with its coverings, the sclerotic, cornea muscles and lids. In the hereditary form, next to the cornea, comes the iris and choroid, the walls of the orbit, and especially the lachrymal sac as most apt to become diseased.

Considering, for a moment, the ocular manifestations of the acquired form, we find them much more frequent in men than in women, and this, in the proportion of almost two to one, while there is surely no such inequality in the numbers of those having syphilis. Nor can this fact be explained by any increased difficulty in recognizing that disease among females, for all attempts at secrecy and reserve are usually laid aside, when the patient finds herself threatened with a serious affection of the eye, and naturally fearful as to the result.

Another fact worthy of notice is, that the ocular manifestations of the disease show a preference for rather advanced age, exhibiting themselves in persons from forty to fifty, or thirty to forty years of age, although the original infections are ordinarily during youth. It is therefore fair to infer that the tendency of syphilis to attack this organ, of our most valuable sense, is greater, in proportion as the individual is older.

Still a third point on which I would lay stress, is that the younger the subject, the less liable are the ocular symptoms to be accompanied by anatomical changes, which are diagnostic of specific disease. While on the contrary, when syphilis has taken hold of an older person, we see more frequently that there is a development in the morbid products in some form of the typical gumma.

We know that simple iritis in a young syphilitic subject does not differ from iritis in a person otherwise healthy, except that the former merges readily into a choroiditis or a retino-choroiditis. This point of differential diagnosis becomes more evident in proportion as the individual is older. Moreover, experience has taught me, that an irido-choroiditis with sclerosis of the vessels and pigmentary degeneration, does not always stop at that point, but that similar changes go on in the nervous centres, accompanied by symptoms of cerebral syphilis, thus invading the centre of an organ (the brain), of which, before, only a prolongation had been attacked. In general, then, the ocular manifestations of syphilis recently acquired by a

young person, are much less dangerous and less obstinate to treatment than those which result when the disease is acquired rather late in life. In the latter case, the tendency to disorganization is more noticeable, and the persistence of the malady is made evident, not only by different tissues being successfully involved, but by the frequent relapses which are apt to occur.

Why is it that the eye has the unenviable privilege of playing such an important role among this class of affections? Can it be because of the abundance of its lymphatics or because of the great vascularity of the iris and choroid? These questions are still undecided; nor is it yet established, as some authors think (Manz, Schubert), that certain causes acting within or upon the eye, such for example as traction on the choroid in the development of posterior staphyloma—it is not proven, I say, that such influences pre-dispose that organ to the manifestations of syphilis. But even if we are ignorant of some points in the etiology, a study of the subject at least gives a clue as to the therapeutic rules which should guide the practitioner. These can be summed up in three words. They are to act with promptness, energetically and persistently. Mercurials combined with the iodide of potassium, or what is known as the mixed treatment, together with absence of light and complete rest in a room comfortably warmed, are absolutely necessary. In case there seems to be the least danger of unusually severe inflammation, it is well to pursue a plan like the following: Employ freely mercurial frictions, using 12 to 15 grammes (three to four drachms) at a time, and let a clyster also be prescribed which contains from 2 to 4 grammes (30 to 60 grains) of iodide of potassium.

By taking care to avoid the mercurial sore mouth, this routine may be continued about a month, and after an equal period of cessation, again resumed. It is well, however, to keep up almost continuously the use of the iodide, with perhaps occasionally a little pilocarpine subcutaneously. I have more faith in the employment of inunctions than in injections of mercurial peptones,

which are disagreeable and often poorly borne by the patients. Finally, it is in every way desirable when a person has suffered from any syphilitic affection of the eye, that he pursue some systematic plan to thoroughly eradicate it, such as has been advised by Fournier and by Martineau. This consists in resuming the treatment at the end of one, two or three months, and supplementing it with sulphur baths. These stimulate into activity any cutaneous signs of the disease which may still remain latent, and not only cause the mercurial to be borne a longer time, but also serve to indicate, by the amount of reaction produced, whether or not the disease may be considered as thoroughly cured.—*Annales d'Oculistique.*

Selections.

THE PATHOLOGY OF MALARIA.

In the blood of patient suffering from malarial poisoning. M. A. Laveran has found parasitic organisms, very definite in form and most remarkable in character. Some were cylindrical curved bodies, pointed at the extremities, with a delicate outline and a transparent body, colorless except for a blackish spot in the middle, due to pigment granules; on the concave side a fine line could often be traced, which seemed to unite the extremities of the crescent. These bodies presented no movement. Spherical organisms were also seen, transparent, of about the diameter of a red blood-corpuscle, containing pigment grains which, in a state of rest, were often arranged in a definite circle, but sometimes presented rapid movements, and then lost their regular arrangement. On the borders of the spherules very fine filaments could often be perceived in rapid movement. These filaments were in length three or four times the diameter of a red corpuscle. Their number varied. Sometimes three or four were seen around a spherule, to which they communicated

an oscillatory movement, displacing the adjacent red corpuscles. The free extremities of the filaments were slightly reflexed. When at rest the filaments were invisible on account of their tenuity and perfect transparence. These mobile filaments appeared finally by becoming detached from the pigmented spherules, continuing, however, to move freely amidst the corpuscles. There were also bodies of spherical or irregular form, transparent or finely granular, about the hundredth of a millimetre in diameter, containing dark-red, rounded pigment grains, either regularly arranged at the periphery, or aggregated at some part of the spherule. The bodies and granules were both motionless. These appear to be the ultimate or "cadaveric" stage of those last described. They have no nuclei, and do not tint with carmine, a distinction from the pigmented leucocytes, with which they have hitherto been confounded. Lastly, spherical elements were met with similar to those already described, but much smaller in size, and apparently representing a stage in their development. The animated nature of the mobile pigmented spherule, furnished with filaments, appears indisputable. M. Laveran regards it as a form of animalcule, which exists at first in an encysted state, and in the perfect condition becomes free in the form of mobile filaments, a mode of development not uncommon among the lower organisms. Besides these organisms, the blood of patients suffering from malarial fever contain—(1) red corpuscles, which appear to be vacuolated at one or two spots, and contain pigment granules; (2) pigmented leucocytes; (3) free pigment granules, possibly proceeding from the destruction of the parasitical organisms.

These elements were first discovered by M. Laveran a year ago, and since then he has examined the blood in 192 patients affected with various symptoms of malarial poisoning, intermittent and continued fever, and palustral cachexia, and found the organisms in 180. The disease had been contracted for the most part in different regions of Algeria and Tunis. He convinced himself, by numerous and repeated observations, that

these organisms are not to be found in the blood of persons suffering from diseases that are not of malarial origin. In most of the cases of malaria in which the examination yielded a negative result, the patient had undergone a course of treatment with quinine, and to this fact the absence of the organisms from the blood was probably due. The addition of a minute quantity of a dilute solution of sulphate of quinine to a drop of blood was found at once to destroy the organisms. In all the examinations great care was taken to preclude the entrance of any extraneous objects into the drop of blood examined. In general the parasitic bodies were found in the blood only at certain times; a little before, and at the moment, of the accession of the fever. In some very obstinate cases the organisms were always present in the blood. They rapidly disappeared under the influence of a quinine treatment. It is conjectured that in the apyrexial intervals the organisms probably sojourn in internal organs, especially the spleen and the liver. After death from malarial disease, pigment granules are found in great numbers in the blood, and especially in the small vessels of the spleen and liver; and they may be, in the most severe cases, so abundant that not only the spleen and liver, but the marrow of bone, and even the grey substance of the brain, are darkened by their presence. These pigment granules, which may obstruct the capillary vessels, appear to be derived from the parasitic elements, which perish after death, and become then unrecognizable.—*London Lancet.*

TREATMENT OF GOITRE WITH ERGOTIN.

M. Bauwens, speaking of the treatment of goitre with ergotin, divides cases of goitre into the following classes: 1. Cystic goitre, with easily apparent fluctuation. 2. Goitre partly cystic and partly hypertrophic. 3. Goitre characterized by diffuse parenchymatous hypertrophy and great vascularity. 4. Recent goitre, soft and diffuse. In cystic goitre, and in soft, diffuse, recent goitre, the author considers that iodine is the best remedy,

and has most confidence in parenchymatous injection as the mode of its employment. He calls attention to the fact, however, that in proportion as vascularity predominates as a cause of thyroid enlargement, so will iodine fail to cause reduction. Iodine stimulates the reabsorption of the contents of the cysts, but can not cause the vascularity to diminish. It is in these latter cases that the author recommends ergotin. The ergotin should be injected into the substance of the tumor; it at once causes contraction of the muscular coats of the small arteries, and a diminution in the size of the tumor and in the amount of pulsation observed in it is at once apparent. He uses the following solution: \mathcal{R} . Yvon's ergotin, 1 gramme (gr. xv); glycerine, water, in equal parts, enough to make 7 grammes ($3\text{ j}\frac{3}{4}$). Of this solution he injects 2 grammes (3 ss.) at a time directly into the substance of the goitre; this treatment is repeated at intervals of about two weeks until a cure is effected. It may not be out of place to mention that the ergotin of Yvon does not differ in any essential from that of Bonjean and other makers. The author reports the following case: A woman of twenty-nine had suffered from goitre since the age of fourteen. Moderate in size for seven or eight years, the tumor had lately begun to enlarge quite rapidly; at the time of examination it measured three inches transversely, by two and a half vertically, the right lobe predominating. It was elastic to the touch, pulsated, and presented a slightly marked soufflé. At the menstrual epoch, upon excitement, or as a result of singing, shouting, or hard work, the tumor became more enlarged, and pulsated vigorously. The signs were those of a goitre essentially hypertrophic, with predominance of the vascular element. At times there were attacks characterized by dyspnoea, buzzing in the ears, dizziness, and dimness of vision. Twice the patient had suffered from attacks of complete aphonia lasting two or three weeks. Iodine had been tried in various forms and ways, but without any good result. Parenchymatous injections of ergotin, as described above, were practiced for five weeks every six or seven days;

at the end of that time the tumor had completely disappeared. There was at no time any considerable soreness or pain as a result of the injections. A little swelling with some sensitiveness at the point of injection, lasting only about forty-eight hours, was the only trouble occasioned. The author suggests the treatment in exophthalmic goitre, although he has not yet had an opportunity to try it.—*N. Y. Med. Journ. and Obst. Rev.*

SANITARY RELATIONS OF THE SOIL.*

By Dr. Max Von Pettenkofer.

I am well aware that I have chosen no new theme when I assume to speak of our soil and its relations to our health. It is, on the contrary, very old—for Hippocrates wrote two thousand years ago on air, water, and earth in their hygienic relations—but there are old subjects that are always awakening a new interest, and always appear fresh when considered in a new light or from a new side. To these eternally fresh subjects belongs that of the ground on which we stand and live, on which we are born, and in which we are to be buried. Since mankind has comprehended the idea of health, sickness-giving and health-promoting properties have been ascribed to the locality, which has been regarded as consisting of air, water, and earth; but the seat of that which makes sick and makes well has been supposed to be more in the air and water and less in the soil; that is, it has been conceived that a place might have its own air and its own water which we have to use directly in breathing and drinking, while we could be independent of the soil, on which we only tread. The local air could, however, hold the first place in hygienic regimen only as long as it was not known that the average velocity of the atmosphere over the surface of the earth is three metres (or ten feet) in a second, and that, even when we feel that it is perfectly calm, the air is moving at the rate of a

* An address delivered before the Association of German Naturalists and Physicians, at Salzburg, September 18, 1881.

half-metre (or twenty inches) in a second. A real stagnation of the air, even in deep cloves and valleys, or in the narrowest streets, is not to be spoken of; the air is rather to be conceived as undergoing a constant change of place. And if it has properties or contains matters in one place which are not remarked in a neighboring place, they can not originate in the air itself, but must be derived from the locality from which they are communicated to it, and are then carried away in the free atmosphere, to dissappear by dilution and other processes.

The same is the case with the local water. All the water that we drink on the earth falls from the sky, and is everywhere of precisely the same composition. Only when it penetrates the soil is it changed by taking up matter which is derived from the ground through which it flows, a fact that was mentioned by Hippocrates. And the local admixtures disappear from water, partly by dilution, partly by chemical changes, just as they do from the air; only in a lesser degree and more slowly, because water is present in the soil in smaller quantity and moves more sluggishly than air. This purification of the water takes place not only during its continuous retention and movement in porous soils, but also in open river-beds and streams. Brunner and Emmerich have drawn water from the Isar at numerous places between the mountains and the mouth of the river at the Danube, on the same day, and have found it essentially alike everywhere, although the stream receives considerable admixtures from the towns on its banks.

What is there that does not fall into the Elbe in its course from Bohemia down to the sea? Yet filtered Elbe water is considered a pure drinking-water at Hamburg and Altoona,

The river Trent receives, before it reaches Nottingham, the sewer-water of two million people dwelling on its banks, amounting to at least five hundred thousand gallons a day, yet its waters at that city are clear, sweet-smelling, and chemically free from injurious constituents.

At Paris, the collecting sewer of Clichy pours a great stream of blackish water into the gently flowing Seine below the bridge of Asnieres, by which the river is so fouled that neither fish nor plants can live in it; but at Meulan, a few miles below Paris, every trace of impurity has disappeared from the stream.

When the air and water at any place are contaminated, the contamination does not proceed from any combination or decomposition of those two elements, but from qualities of the place, and they soon purify themselves again. An impurity cleaves longest and most tenaciously to the soil, which suffers no change of place, like air and water. While formerly we esteemed the hygienic value of the air first, of the water second, and of the soil third, we should now reverse the order.

The influence of the soil upon the health of those living upon it is brought out very plainly during the prevalence of epidemic diseases. That malarial diseases, like intermittent fevers, originate from the soil, is already accepted; and the more exact studies in recent times of the manner in which cholera, abdominal typhus, yellow fever, and the plague are spread, has convinced many that these diseases, also, which were formerly considered independent of the soil, because their specific germs are communicable and are actually communicated by human intercourse and trade, are still in some way connected with it, although the nature of the connection is yet to be found out. The explanation of the frequent, sharply defined local limitations of cholera and typhoid has been sought first, in influences not of soil but of water and air, to which the germs of disease have been imparted from men; but a clear and impartial examination of the local prevalence of these diseases in circles of greater or lesser extent has now furnished evidence that in many cases air and water can no longer be maintained to be the causes of the localization, but that the sources of the epidemic must be sought in the soil.

In the occurrence of cholera on ships at sea, where any influence of soil would seem to be absolutely out of the question,

that influence often makes itself apparent in a striking manner by the fact that only persons who have come from certain places are attacked, while other persons on the ships do not even have a diarrhœa, although they are all the time with the sick, and use the same food and water and air. Ships at sea may be considered as in themselves safe from cholera; usually sickness brought upon them in individual cases dies out; and it is regarded in seafaring practice as an excellent prophylactic measure to go to sea, taking the sick along and breaking up all communication of the men with the infected port or shore. Exceptional cases of epidemics breaking out on ships can not be regarded as arising from contagion from person to person, but always from previous communication of the ship or its crew or passengers with some place infected with the disease.

Not less plainly and frequently is the real influence of the soil shown in inland regions and towns that enjoy immunity from cholera. Permit me to bring forward as a well-known but pregnant example the great manufacturing and commercial city of Lyons, in Southern France, which has constantly maintained with impunity the most active intercourse by sea and land with cities infected with cholera ever since the disease first appeared in Europe. Often as cholera-epidemics have prevailed in Paris and Marseilles, the disease has never yet gained an epidemic footing in Lyons, which lies right between those two cities, notwithstanding many cases have been brought into it from without. Even in 1849, when the city was in revolt and was besieged and occupied by cholera-infected regiments from Paris and Marseilles, and the civil population were suffering from disorder, want, and misery of every kind, the disease did not spread.

The immunity of Lyons is now a generally recognized fact in France, and the city derives a considerable profit from it; for the rich people of Paris and Marseilles, whose circumstances permit it, are accustomed to flock to Lyons like sheep as soon as cholera breaks out in their homes, and readily pay a good price for the patient hospitality of the people. Formerly, if one

asked in Lyons why the city was so happily and so strikingly spared, he would not be referred to the unusual cleanliness and comfortable life of the common people, nor to the splendid drinking-water, for, before filtered Rhone water was introduced in 1859, this was very bad, but to the air, whose circulation through the confluent valleys of the Rhone and the Saone was so lively that it was always master over the imported cholera-poison, and would not let it develop. But if we compare the velocity of the wind as observed at the Lyons meteorological station with that of other places much afflicted with cholera, we shall not find the slightest difference in favor of Lyons. The plain of Languedoc, over which the *mistral* blows so often, unroofing houses, uprooting trees, and destroying ships in the very harbor of Marseilles, is not seldom visited by epidemic cholera. Later investigations show that nothing is left with which to explain the immunity of Lyons but the condition of its soil. Apart from the size of the city, this immunity is not more striking—it is, in fact, not so striking—than that, for example, of Versailles, where, notwithstanding a constant daily and hourly communication with Paris, cholera has never broken out in an epidemic form. Decaisne has shown that the condition of the soil only can be regarded as bearing upon the immunity of this place.

Analogous facts may be found wherever the spread of cholera or typhoid is earnestly investigated. The beautiful city of Salzburg, which is now so hospitably entertaining the Association of Naturalists and Physicians, belongs to the number of fortunate cities that have so far been spared cholera-epidemics, notwithstanding numerous refugees from cholera have collected here when the disease prevailed in Austria and Southern Bavaria; among whom cases have occurred without the infection passing over to the city. Only in the winter of 1873-'74, when a severe outbreak of cholera occurred in the prison establishment at Laufen, did weak signs appear in Salzburg, showing that at least certain quarters of the city were not absolutely and invariably protected against cholera. So Lyons was made aware once, in

1854, that the whole city was not insusceptible to it. The Lyonnese were not willing to acknowledge this, for they had boasted too much of their immunity; but they asked, What do a few hundred cases of cholera in fifty years amount to in comparison with the total population (400,000 souls) of the city? We should not treat the subject in this way, but should rather ask, How many inhabitants has the part of the city which, even if it was only once, had a considerable number of cases of cholera? and then the reply can not be evaded that the suburb of Guillotiere suffered from a decided cholera-epidemic in 1854. This once-occurring epidemic was associated with an equally rare abnormal drought and a long-continued low stage of water in the Rhone, such as had not been observed since 1826. So Salzburg might at some time be visited with cholera, at least here and there, if the sky should obstinately keep its gates closed for an unusually long time, and the disease were in its neighborhood.

The reports of the cholera commission for the German Empire contain a large number of proofs of the influence of the locality, particularly of the soil, among which I might especially mention the reports of Gunther on the spread of cholera in the kingdom of Saxony, and of Pistor on the government district of Oppeln. Both these investigators, not satisfied with considering only the last visitation of cholera in 1872-'74, have also included within the circle of their inquiry all the outbreaks that have come to knowledge since the appearance of the disease in Europe in 1832. The confirmation of the localistic theory of cholera and other epidemics can no longer be put in question; and, if it were the only result reached by the German cholera commission, the money appropriated to the investigation would have been well spent.

We may now ask, What can there be in the soil that can exert so powerful an operation for good or evil upon our health? To this question, so far as concerns injury to health, the answer may be returned that, in all probability, the property is derived from the minute organisms or their products, of which many

million individuals can be put within the area of the head of a pin, and which inhabit the porous soil from the surface down to a great depth—organisms which are capable of being injurious or harmless, or even useful to us, as we are already acquainted with injurious and harmless and useful plants and animals. They have heretofore been invisible to us, having only just been brought to knowledge, in the course of recent investigations in vegetable and animal physiology and pathology, by means of the microscope and experimental cultivation. A prominent vegetable physiologist, Naegelli, has accurately and clearly described them with direct reference to their hygienic significance in his well-known work, "Die niederen Pilze in ihren Beziehungen zu den Infectiouskrankheiten und der Gesundheitspflege." Their mysterious presence recalls the ancient belief in invisible spirits that were accustomed to rise out of the earth, float in the water, and cast gloom over the spots haunted by them. Naegelli called a soil that produces or favors epidemics a disease-bearing (*Siechhaft*), and its opposite a healthful (*Siechfrei*). We must not conclude that only a locality of the former kind harbors molds and similar lower organisms, and one of the latter kind does not, or that these organisms reach us only from the former and not from the latter; on the contrary, they are always present everywhere. If they sometimes appear deleterious, at other times harmless, the conviction is forced upon us, either that the same species do not occur universally, or that the same species assume different properties at different places, under different circumstances, and at different times; that is, that they are only here and there and occasionally poisonous. If either is the case, the medium in which they live must exercise a very great influence upon them; and, so far as this medium is the soil, we have to investigate the conditions which it offers for the growth of these organisms and the communication of them to men. It must be admitted that mycology has so far given us very little light on this point, and many problems respecting it are still waiting to be solved; but it is already well established that hygiene as well as agriculture has much to do with the ground.

Some advance had already been made in the investigation of the hygienic relations of the soil before molds were mentioned as causes of infectious diseases. The simple observation that such diseases occurred or did not occur under certain conditions, of the soil was enough to provoke this. It had already become possible, without knowing the more immediate causes, to make an unhealthy soil healthy. The best known examples of this kind are given in the cases of intermittent fevers and malarial soils, in which the deleterious properties have been wholly or partly remedied by drainage and the drying up of the subsoil, and the fertilization and cultivation of the surface. Tommasi-malaria of Rome and the former drainage of the Roman hills, to the effect that the ancient Romans suffered much less from fevers than the Romans of after-times and of to-day. The archæologist De Tucci having called attention to some underground canals of a peculiar kind, called *cuniculi*, in the Roman hills, Tommasi examined them, and found that they were designed exclusively to drain the hills, and that they were now choked up and inoperative. Formerly, he thinks, they were so familiar that the ancient Roman writers did not think it worth while to speak of them; they passed into forgetfulness during the eruptions of the barbarians and the middle ages, and have now had to be discovered anew.

Measures directed against other infectious diseases that depend on the soil have not been without results, although the specific causes of the diseases are not known.

What are the conditions of soil favorable to epidemics?

It is an old experience that certain infectious diseases have their favorite seats in the so-called alluvial soils, in land subject to overflow. Alluvial soil consists chemically and geognostically of substantially the same mineral matters as the compact mountain-masses, from the disintegration of which it has originated—except that its physical aggregation is essentially different; and it is distinguished from rock soils by the great permeability for air and moisture arising from its great porosity,

that is, from the spaces in which air and water, as well as organic matters, can find place. There are also kinds of rock which are very porous, and their behavior is not materially different from that of alluvial soils, as is shown by the cholera-epidemics in the Island of Malta.

In common life we can hardly conceive the extent of the porosity of the soil on which we dwell. Heavy, towering buildings often stand on a soil which is filled to the extent of a third of its volume with air. The investigation of ground-air has just begun, but it has already surprised us with some unexpected revelations. Ground-air is distinguished from the air that passes over the surface by the higher proportion of carbonic acid it contains, which increases, as a rule, with the distance from the surface, and to which our springs owe their charges of that gas. The carbonic acid is chiefly derived from organic matters and organic life in the ground, with which it increases and diminishes. Air brought by Zittel from the dead dry soil of the Libyan Desert, sealed in glass tubes, showed no larger proportion of carbonic acid than the free superficial air, but the ground-air from a palm-garden in the oasis of Farafreh yielded much carbonic acid. That this gas is mostly derived from organic changes is shown from the investigations of Fleck, Fodor, Wolffhügel, Möller, Wallny, and others, who found that the proportion of oxygen in ground-air was lower, while that of carbonic acid was higher, than in free air.

That the air in the soil does not become stagnant, but is always in motion, though sluggish, not only follows from physical laws, but may be easily proved by experiments and observations. Our houses are aired or ventilated in no small degree by the ground-air. Renk has been inquiring, with the aid of Recknagel's differential manometer, whether the air flows from the ground into the house or from the house into the ground, and has found that through most of the year the draft is from the ground into the house. He has also found that the ground-air, which is sucked into the house, brings dust with it, and other

observers have shown that the same air also carries germs susceptible of development in suitable solutions.

It is thus easy to see how the soil affects our health without our having to eat it; the ground-air plays the part of an always ready intermediate agent, so far as concerns the molds. In this light it is easily seen why some houses sometimes have to suffer so badly from certain conditions of the soil, especially when they are badly ventilated. The movement of the air in a close house is many thousand times less active than where the circulation is free; and the air entering into the house suffers correspondingly less dilution than that passing into the free atmosphere, and leaves in it much more of what it brings up from the ground. While the house is heated during the cold season, and at night in the summer, while the air within-doors is warmer than the surrounding out-door air, the houses act as draught-flues, and suck air out from the ground as if they were cupping-glasses set over it. Experience has long taught us that it is most dangerous to sleep—that is, to pass the night—in such noted fever regions as the Pontine Marshes.

Many persons believe that the ground-air is an object whose existence is still pre-eminently theoretical, and that its practical influence is exceedingly remote. It does not present itself in this light to the physician who has had to deal with it. I am reminded of what the chief staff physician, Dr. Port, has remarked, as if by intuition, on the etiology of abdominal typhus, with immediate reference to military hygiene, and its bearings on the construction of barracks and camps. He says: "If we consider the danger to which the inhabitants of a disease-bearing soil are exposed by leaving their houses without protection from the soil, I might say by putting them on the ground bare-footed, and, if we reflect that our most imposing palaces labor under this partial nakedness, we must of necessity receive the impression that there is some lack in our civilization. We have in this respect not only not excelled the most primitive constructions of the childhood of the building art, but have fallen

behind them in a very important matter. We have no reason, from the hygienic point of view, to look down disparagingly on the pile-dwellings of some foreign races and the mud huts which our peasants still live in here and there: both of these classes of people, although in very different ways, have respected, in building, a hygienic principle that has escaped our architects. They have made their dwelling-places independent of the ground, in the former case by putting under them a grating of piles admitting a circulation of air; in the latter case by isolating the hut by means of a plaster floor. The superiority of these primitive dwelling-houses over our modern buildings can not be made to appear more clearly by any other example than by the sketch which Dr. Hirsch has given of an outbreak of cholera on the estate of Herr von Winter, chief health-officer of Dantzic:

“Nine houses stood in a group in front of the manor-house of the estate, and were inhabited by the farm-servants; seven of them had been rebuilt in timber with brick fillings, and furnished with cellars, which were perfectly dry; their ground-floors were lined with deal, were dry, airy, and kept clean; the manure-heaps were arranged in the manner that is common in rural districts. Two of the houses in the group had not been rebuilt; they were old mud huts, with low stories, without cellars; the rooms were not boarded up, but only plastered; and their condition seemed on the whole much more unfavorable than that of the others, while the manner of living of their inhabitants in other respects was in no way different from that of their neighbors in the modern cottages. About one hundred and fifty persons lived in all the nine houses. A woman, suffering from an attack of cholera, was taken into one of the new houses; three days afterward the first cases of sickness appeared in the neighborhood of this house, and the disease quickly spread to all the houses except the two old huts. The inmates of these houses had the same intercourse with their fellow-dwellers on the premises as the latter with each other; yet, while seventeen persons (or fifteen per cent. of the whole number) in the seven new

houses were prostrated, not a case of sickness occurred in the old huts. The exemption of the latter was attributed to their being isolated from the ground by means of their plaster floors. The change of the other cottages into modern dwellings, with exposed foundations, was hygienically a reformation for the worse. We frequently commit the mistake in carrying out our ideas concerning the salubrity of a house, of confounding hygienic considerations with those of comfort."

Dr. Port brings forward other facts speaking for the influence of ground-air, and summarizes his view in the remark that he regards "a proper treatment of the soil as the first hygienic consideration, the chief prophylactic measure against certain infectious diseases, as the means by which we may make houses, barracks, tents, etc., dwelling-places free from disease. . . . From such dwellings we need not flee on the appearance of epidemics, but in them can bid defiance, as from a fortification, against disease; of such a dwelling we may say with truth, 'My house is my castle.'" It is very much to be desired that the building art could be turned, at least experimentally, in the direction indicated by Dr. Port. Practical hygiene is a little capable of being advanced without experiments as any other art; and where individuals can not experiment, the state should step in in the interest of the public weal, and provide the means for answering important questions.

UNPLEASANT RESULTS FROM THE USE OF IODOFORM.

Dr. Fifield wished to present to the attention of the Boston Society for Medical Improvement a case which had caused him much anxiety from the surprising effects produced by the cautious application of a small quantity of iodoform in powder to some ulcerated surfaces. In view of the great and constantly increasing use of iodoform, both in the hospitals of Europe and in this country, he deemed the subject worthy of much careful study, and thought that as the substance had been spoken of as

a rival, and in some respects the superior, of carbolic acid as an antiseptic, its possible dangers as well as its good effects should be made known as quickly as may be. Dr. Fifield then alluded to the two fatal cases at Breslau, where iodoform had been largely and successfully used in the treatment of caries. The history of these cases showed death to have resulted in one case in two days, in a second in sixteen days. In both there was intermittent drowsiness ending in coma, paralysis of sphincters, aphonic disturbance of speech, contraction of the muscles of the neck, and scaphoid retraction of the abdominal walls, together with great frequency of pulse from the beginning. Temperature normal. In the second case the patient continued in good condition for nine days during the use of iodoform (externally), then headache, and somnolence for two days. Fatty degeneration of the heart with cloudiness of the liver and kidneys were shown post mortem.

Dr. Fifield's case was as follows :

A young lady had had for some time ecthymatous ulcerations with typical, piled-up, oyster-shell-like scabs in different parts of the body, particularly affecting the scalp, which was the seat of numerous foul ulcerations threatening the very bones beneath. On Friday last, at very urgent solicitations of relatives that some vigorous effort be made to arrest the progress of the disease which had obstinately refused to yield to mercurials and iodides in all forms, Dr. Fifield had removed certain scabs on the hands and one scab on the left temple, and had sprinkled them with iodoform. On Saturday, no unpleasant result having been experienced, the scabs of three other ulcers of the scalp had been removed and their surface lightly strewn with the same powder. On Saturday afternoon he was surprised to find the patient with swollen scalp, profuse serous discharge from nearly its whole surface, which presented a typical acute eczema. No constitutional effects complained of.

On Monday head and face enormously swollen, eyelids puffed out to a degree interfering with vision. Neck somewhat swollen

on right side with tendency to contraction of muscles, profuse serous and purulent discharge from scalp, soaking the pillow on which the head rested. A powerful odor of iodoform filled the house. At noon the same day the eyelids were less swollen, the neck rather more.

Tuesday, 28th, swelling subsiding. Some little nausea complained of; had not rested well; pulse rather quick; temperature normal.

March 1st. All alarming symptoms have disappeared.

Dr. West, in answer to Dr. Fifield, said that Professor Billroth used iodoform very freely in the treatment of wounds, and out of hundreds of cases which he had seen treated in this way he had never seen a case of poisoning. The cases of poisoning were where cavities had been filled with iodoform.

Dr. H. J. Bigelow, referring to the use of iodoform in his wards, said that in certain subjects it acted as a local irritant, and in this way might cause trouble.

Dr. C. H. Williams said that he had treated an ulcerated eyelid with iodoform freely applied and without bad result.

Dr. Fitz spoke of the necessity of preliminary cleanliness, as insisted upon by German authors, before applying the iodoform, —*Boston Medical and Surgical Journal*.

DILATATION OF THE CERVICAL CANAL FOR SPASMODIC DYSMENORRHŒA AND STERILITY.

Dr. Godson prefaced his remarks on dilatation of the cervical canal for spasmodic dysmenorrhœa and sterility, at a recent meeting of the Obstetrical Society of London, by sketching the history of the method, introduced more than fifty years ago by Dr. Mackintosh, of Edinburgh, and lately advocated by Dr. Matthews Duncan. Out of ten patients suffering from dysmenorrhœa with sterility, treated by the author, five had become pregnant. The dysmenorrhœa was characterized by severe colicky pains in the hypogastric and sacral regions, either before the

flow or coincident with it. He preferred to drop the term "obstructive," as he knew of no evidence that there was want of patency of the cervical canal, and Duncan had passed a probe into the uterus at the height of the pain without meeting with obstruction. He believed that spasm of the uterine muscular tissue was enough of itself to give rise to the severe pain, without any obstruction. After giving brief notes of five cases, the author gave the following conclusions: 1. That the method was simpler and safer than any other proposed. 2. That the dilatation might be done safely at the physician's house. 3. That a very small amount of dilatation was necessary. 4. That it should be done a week or ten days after a menstrual period. 5. That it should be done, not on successive days, as hitherto recommended, but all at once; that the first bougie should be a small one, and that there should not be enough difference in size between the successive bougies to split the mucous membrane. 6. That pregnancy appeared to take place on account of the dilatation having cured the conditions on which the dysmenorrhœa depended. In none of the author's cases was there either stenosis or constriction of the canal by acute flexion. In one instance the relief of the dysmenorrhœa proved only temporary, and a cure was afterward effected with an intra-uterine stem. One patient was lost sight of; the three others (of the five whose sterility was not cured) were relieved of dysmenorrhœa. . . . Dr. Graily Hewitt regarded dilatation as unnecessary in cases in which the uterus was unduly soft and pliable, but in long-standing cases it was of great assistance. He used a two-bladed dilatator, acting like a glove-stretcher. . . . Dr. Heywood Smith thought it best to have the uterine portion of the instruments straight, not curved as in the dilators shown. . . . Dr. Routh did not see what advantage the method had over that by dilatation with laminaria tents, followed by the employment of an intra-uterine stem. An analogous plan had formerly been used at the Samaritan Hospital, but had been abandoned, proving not to be so free from danger as had been stated. The effect was

transitory, unless pregnancy occurred very soon, and the pain induced was sometimes very great. In cases of flexion it was often difficult to pass even a bent sound, and the use of a straight dilator in such cases would be liable to set up inflammation.—*N. Y. Med. Journ. and Obst. Rev.*

THE FORMATION OF BLOOD-CORPUSCLES.

The authority with which M. Malassez speaks upon all subjects connected with the constitution of the blood confers importance on a summary of facts relating to the formation of red blood-corpuscles in bone marrow, which he has recently communicated to the Societe de Biologie. This summary contains an account of the results attained in a series of investigations on the subject, and embody facts and theories of undeniable importance. It is generally admitted, since the discoveries of Neumann and Bizzozero, that the red cells discovered by the former in the bone marrow of the mammalia are embryonal corpuscles, but various opinions are held regarding the origin of these cells and the mode in which they are transformed into red blood discs. It is to these two points that his investigations have been especially directed. The first hypothesis which was advanced—and it is still accepted by many authorities—is that the red cells are transformed into corpuscles by the gradual disappearance of their nuclei. If the process is studied in animals in which the red corpuscles are nearly the same size as these cells, forms of the latter may be observed in which the nuclei appear to be in process of disappearance. But if methods are employed which leave the structure of the cells unaffected, and especially if the examination is made in animals in which the red blood discs are considerably smaller than these cells, such intermediate forms cannot, according to Malassez, be discovered. Moreover, the corpuscle is so much smaller than the cell that a transformation of one into the other would imply either a contraction of the protoplasm of the cell, or a change by which this breaks up and

forms more than one globule, and each assumption is destitute of evidence. Hence the conclusion is drawn that this theory of transformation by destruction of the nucleus is untenable. Rindfleisch, from appearances which he observed in some cells, concluded that the change does not consist in a destruction of the nucleus, but in the exit of this from the cell. This appearance is stated by Obrastzow to be due to an alteration of the cells analogous to that which Donne long ago noted in the corpuscles of the frog treated by water. It is probably an artificial phenomenon, for it cannot be observed in recent or well-preserved specimens.

In studying the formation of blood-corpuscles in the spleen, Malassez and Picard observed cells, charged with hæmoglobin, which presented protoplasmic buds having the aspect of red corpuscles, but spherical in shape, and it was suggested that these being detached might become separate blood discs. Malassez has succeeded in finding a similar appearance in preparations of bone marrow, which were made in such a manner as to preserve undisturbed the form and structure of the tissue elements. A fragment of fresh marrow was teased out on the object-bearer without the addition of any reagent. Sometimes the glass slide was merely touched with a fragment of marrow. The preparation was then exposed to the vapor of osmic acid. The tissue elements being thus fixed, they were colored with picro-carmine, or with eosin and log-wood. In the hare the hæmoglobic cells are very large in proportion to the red corpuscles, and they may present several minute buds. In the rabbit, calf, cat and child the cells are smaller, and usually the bud is single. The most developed prominences tend to become constricted and pedunculated, and thus to assume the appearance of spherical corpuscles. Their substance possesses the same homogeneity, the same refractive power, the same color, and presents the same histo-chemical reactions as do the red blood-corpuscles. The only difference is in their shape. But the normal globules, which are biconcave, may, under certain

conditions of humidity, etc., swell up, become concavo-convex, and finally, biconvex and spherical. It does not seem inconceivable, therefore, that these buds, becoming detached, may undergo the converse transformation; and the difference in shape does not constitute adequate ground for the rejection of a theory which can plead in its favor a high degree of intrinsic probability.

Regarding the origin of the red cells of the marrow, certain facts appear to be well established. They may be seen in every stage of nuclear division, and it is therefore generally admitted that they are capable of fissiparous multiplication. But their primary origin is still involved in considerable obscurity. The earliest theory, which is still extensively held, is that they are derived from white blood corpuscles. But the blood contains several varieties of leucocytes. Mallassez believes that we must reject the idea that they come from ordinary leucocytes, with a finely granular protoplasm, and which appear polynucleated when they are treated with osmic acid; and also the view that they are formed from the white corpuscles which stain with eosin, because these elements are completely different from the red cells, and in properly prepared specimens no intermediate forms can be discovered. The origin of these cells from the hyaline leucocytes is much more probable, but is destitute of evidence. Preparations made in the above-described method show, however, a perfect series of cell-forms, at one extremity of which is the red cell, and at the other is an element of very different aspect. The forms which resemble the red cell are clearly more differentiated and specialized than the others, and they may therefore be regarded as more advanced in development. All the forms may be referred to three principal types. Those which are nearest to the hæmoglobic cell differ in their more hyaline protoplasm and smaller amount of hæmoglobin in the reticulated form of their nuclei, and in its slighter affinity for coloring reagents. Another form, further removed from the hæmoglobic cell, possesses a less abundant protoplasm, still less

colored and finely granular, a nucleus relatively large, more granular, and tinting still less than those of the last group. In the third form the nucleus occupies the whole, or almost the whole of the cell, as if its substance were diffused through the protoplasm. From the serial character of these forms, Malassez concludes that they, and not the leucocytes of the blood, are the origin of the medullary hæmoglobic cells. The entire succession of forms may be regarded as a progressive development, resulting in the formation of an element which possesses in high degree a special function, that of respiration.

In the animals which possess nucleated red corpuscles the process of formation of these appears to resemble perfectly that of the hæmoglobic cells in animals which possess only non-nucleated blood discs. The cells of origin are the same (and were partially recognized by Bizzozero and Torre), and they present the same transformations, nuclear and protoplasmic. The process does not, however, advance beyond the formation of the red cell. This does not bud, does not form globules; it becomes flattened and passes into the circulation, constituting itself the red corpuscle. Thus the nucleated and non-nucleated red corpuscles are not elements of identical nature, although belonging to the same family and fulfilling the same purpose.

The assertion of Malassez will no doubt, meet with criticism; but he is to be congratulated on having furnished an explanation of the process of blood formation far clearer than any which has yet appeared.—*London Lancet*.

PERNICIOUS ANÆMIA.

In a series of cases of pernicious anæmia Riess has found in the bone marrow an abundance of cell elements of a special character, which have rarely been met with. Besides the usual abundant colorless round cells and the nucleated red blood-

corpuscles, there were many large cellular structures containing blood-corpuscles, such as have been hitherto described only by Cohnheim, and by Gardner and Osler. They were roundish or oval cells, with a refracting clear hyaline or slightly granular stroma. Their size varied considerably; the smaller were not more than twice as large as ordinary red blood-corpuscles, while the larger were eight times as large. The colored elements which were contained in these cells also varied much in size and in number, ranging from one to twelve. When few, they resembled closely the ordinary red corpuscles, but more frequently they were smaller, darker, and more spherical, resembling the so-called microcytes. When very numerous they resembled rather fragments of red corpuscles aggregated in irregular groups. Sometimes these small elements were fused together in irregular masses. The nucleus of the containing cell was often concealed by them; and they sometimes occupied so large a part of the area of the cell that the protoplasm of the latter was reduced to a narrow circumferential zone. The number of these large cells in the bone marrow varied in different cases. Usually they were as numerous as the nucleated red blood-corpuscles, and sometimes exceeded these in number. They were found in five out of seven cases of pernicious anæmia examined. Of the two cases in which they were not found, one was not a pure case, being complicated with an affection of the kidneys, and, in both, circumstances prevented a very thorough microscopical examination. These bodies, on account of their supposed rarity, have hitherto been regarded as arising from the destruction of red blood-corpuscles. In favor of this view are the form and color of the contained corpuscles, which so often resembled fragments of corpuscles. But on this view the frequent appearance of these cells in pernicious anæmia is not easy to harmonize with Neumann's theory, according to which the bone marrow in this disease is the seat of an increased formation of corpuscles. It must be assumed that there is a corres-

ponding increase in the destruction of cells in the lymphoid medulla. In accordance with this the blood corpuscles in the marrow were found in one case to present only the aspect of microcytes, which is usually regarded as a late stage of the red corpuscles. It appears also that according to the recent observations of Grohe similar cells are to be found in the bone marrow in other diseases besides pernicious anæmia.—*London Lancet.*

POST-PARTUM HÆMORRHAGE.

Dr. Barnes's article on post-partum hæmorrhage deals chiefly with the causes and treatment of the accident. We select for abstract that portion of it that relates to precautions against the dangers attending intra-uterine injections of perchloride of iron. To diminish the shock, the manœuvres should be as gentle as possible. The uterus should first be cleared of blood and clots with a stream of hot water; then, the organ being well compressed by the hand of an assistant, to reduce its volume and the extent of its inner surface, about a gill of the iron solution, at a temperature of about 80° F., should be slowly injected, taking care to secure it a free outlet by keeping the cervical canal well open. To lessen the danger of air entering the veins, in addition to compressing the uterus, all air should be expelled from the syringe before the latter is employed, and the nozzle should be inserted into the uterus very gently, taking special care as to holding the cervix open with the hand. The measures thus far mentioned are also the most trustworthy in guarding against a portion of the liquid being forced through the Fallopian tubes, as well as against the iron gaining entrance into the circulation and thus causing venous and cardiac thrombosis. To prevent embolism from decomposed clots in the uterine sinuses, besides the above-mentioned precautions, firm compression of the uterus should be maintained with a bandage, and ergotin should be injected subcutaneously soon after labor; quinine and ergot

should be given, by the mouth or hypodermically, three times a day for at least fifteen days (a measure that the author has long made use of in all cases, whether iron was used or not), and the patient's nutrition should be kept up with the utmost care. To prevent septicæmia, from the decomposition of clots in the uterine vessels or in the cavity of the organ, the latter should be cleansed once or twice a day, after the first day, with carbolized water. For applying the iron solution the author has lately used large hard-rubber tubes, with large openings at the end. Pieces of sponge wet with the solution are stuffed into this end, and when the apparatus is in place the solution is squeezed out with a piston, thus causing such gentle contact of the liquid with the uterine surface that all shock is avoided. The injection, however, is the most convenient, and the author thinks a weak current of the solution the most efficient.—*N. Y. Med. Jour. and Obst. Rev.*

THE ARTIFICIAL PRODUCTION OF ORGANIC FORMS.

The mimicry of organic forms by inorganic elements has often excited the attention of the curious, and it has been recently systematically studied, so far as chemical elements are concerned, by MM. Monnier and Vogt. Forms which closely resemble those of living organism, such as simple and tubercular cells, with septa and granular contents, may be artificially produced in a suitable liquid by the union of two salts, which form, by double decomposition, one or two insoluble compounds. One of the salts must be dissolved in the liquid, the other solid. These objects are formed equally well, whether one of the liquids is of organic origin (as succrate of lime) or purely inorganic (as of silicate of soda). The resulting form clearly depends on the nature and viscid consistence and concentration of the liquids. Some viscid solutions, however, such as gum arabic and chloride of zinc, do not give rise to them. The form which results is as constant for the same conditions as is the crystalline form of a

mineral, and it may even be employed as a means of ascertaining the presence of a given substance. It promises to constitute a new and very sensitive form of analysis, and may thus be employed, for instance, to distinguish the alkaline carbonates, sesquicarbonates, and bicarbonates, the one from the other. The chief influence which determines the form, is the nature of the acid which enters into the composition of the solid salt. The sulphates and phosphates, under certain circumstances, give rise to tubular forms, the carbonates to simple cells. With certain exceptions, such as the sulphates of copper, of cadmium, of nickel, and of zinc, these pseudo-organic forms are only produced by the combination of those substances which are found in real organisms. Succrate of lime, for instance, give rise to such forms, while succrate of strontia and of baryta do not. The pseudo-organic elements are surrounded by true membranes of perfect dialyzing power, allowing only liquids to pass. Their contents are heterogenous, and granules in the interior may be disposed in a special manner. They thus resemble absolutely the morphological elements of organized beings. It is highly probable that the inorganic constituents of living protoplasm play some part in determining the forms which the organized elements assume.—*London Lancet.*

INCUBATION IN VARIOUS DISEASES.

Dukes has carefully observed the duration of the stage of incubation in various infectious diseases. In 15 cases of scarlatina in which the length of this period could be determined, it was found to vary from 1 to 9 days, most cases occupying 2, 3, or 4 days. In 15 cases of varicella the duration was 13 to 19 days, the average being 15 or 16 days. In 42 cases of mumps the stage of incubation lasted on an average 19 days, but in some cases fell to 14, in others rose to 25 days. In 12 cases in which orchitis supervened, it occurred in most instances at an interval of 7 or 8 days after the inception of the mumps, although

in one case it occurred on the second day. In 25 cases of R \ddot{o} theln, the duration of incubation was from 12 to 22 days, most cases taking about 16 days to develop.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Annual Meeting, April 4, 1882.

The Vice-President, Dr. A. R. Davidson, in the chair.

The subject for special consideration was presented in a paper by Dr. W. C. Barrett on "Protoplasm." He gave a review of the progress of biological research from the period of the introduction of the microscope down to the present day, and a resume of the more important truths which the labors of eminent histologists have given to the profession.

As to prevailing diseases Dr. Rochester said, that he thought there was an usual amount of sickness, but little mortality. Eruptive fevers, especially scarlet fever and measles were epidemic; German measles or roseola was also quite prevalent, much more so than ever before in his experience. The disease was found among persons of all ages and was generally light, but sometimes became complicated with diphtheria or other diseases and was more severe. Scarlet fever was very prevalent but not in a malignant form. Pleuro-pneumonia was met with very severe in character and often proving rapidly fatal.

Dr. Cronyn, Dr. Briggs and others also remarked upon the unusual prevalence of r \ddot{o} theln.

The association then proceeded to ballot for officers for the ensuing year, the result of which was the election of the following: President, A. R. Davidson, M. D.; Vice-President, John Cronyn, M. D.; Secretary, C. M. Daniels, M. D.; Treasurer, F. E. L. Brecht, M. D.; Librarian, J. B. Samo, M. D.

Editorial.

IN a recent editorial we were led to speak briefly upon the subject of the comparative interest shown by physicians here and abroad in the prosecution of original scientific studies. In accordance with our intention, at that time expressed, we now proceed to a discussion of the reasons for the disparity, at that time noticed. As we then remarked, the fault lies with the members of the profession and is to be found in their want of enthusiasm regarding scientific work. But why is it that the profession of this country lags in this respect? The reasons are numerous, and to a number of these the reader's attention is now called.

In the first rank we will place the national characteristics. The life and work of the student of nature is one of laborious, patient and persevering toil. The results are slow in coming and hardly earned, and the connecting and practical value of the discoveries are seen often only after long intervals of discouraging delay. Some of the difficulties attending work of this character were forcibly pointed out in the paper to which we alluded in the previous editorial. The American, characterized by his energy, enterprise and business tact, by his inclination for extensive undertakings, promising brilliant pecuniary results, is for these reasons not so well adapted for the work in question, as are certain other nationalities. On the contrary, the conditions required are enthusiasm in the acquirement of knowledge, a deep interest in scientific truths, a patience and perseverance that time does not influence and repeated discouragements but strengthens. We do not wonder, therefore, that in this department of usefulness the Germans, as a nation, outrank all others in the number and character of their workers. Our only hope then lies in our endeavors to modify these unfavorable national characteristics.

Whatever may incline to lessen our love for money or make us in a greater measure independent of pecuniary considerations,

and whatever may increase our zeal in the cause of scientific progress, will tend to the removing of this serious obstacle to our favorable competition with other nations.

That the profession generally must act in this matter, is evident. Still we cannot help thinking that the greatest blame for the present unsatisfactory condition of things lies with those more particularly in power—the heads of our colleges. Therefore it is they more especially who are called upon to act.

That the medical profession of this country is already too numerous, and is yearly becoming more and more so, we firmly believe. Likewise we maintain that the acquirements of the average graduate justly provoke unfavorable criticism. Neither of these propositions admits of gainsaying as they are but too apparent to every unprejudiced observer; and all argument to the contrary but tends to establish them more clearly. Competition is the life of trade, and were the practice of medicine properly nothing more, perhaps the fuller the profession the more enterprising the doctors.

But is it not true that a too great rivalry, accompanied as it is with a care for one's own material advancement, and sometimes for existence even, incites to an unscrupulous method and fosters the development of the black arts in medicine? And is it not also undeniable that a constant and overweening strife for pecuniary success, if not for bare existence, deadens the zeal and enthusiasm for scientific studies?

It is a well known fact that the interest in the study of nature increases in more than a direct ratio to the advance in acquired knowledge and improved insight into its truths. The higher the standard of medical education then, with which the graduates of our colleges start out, the greater the number who will continue in after-years to prosecute their search after truth.

To complete the discussion of this subject we may still again, at a future time, suggest the means which, in our opinion, will bring about this much to be desired result.

EDITORIAL NOTES.

SUGAR-COATED PILLS—The prejudice against this form of coating is being overcome by the superior preparation of Warner & Co.'s Pills. Quinine Pills a year old show a soft and easily soluble interior on being cut open. Their pills are in every case reliable, so far as our experience with them goes.

MEDICAL COLLEGES—Louisville, with a population not greater than Buffalo, has *five*. How superior these western towns are in medical knowledge. Buffalo has to call in the professional talent of New York, Hartford, Rochester and Norwich to supply professors for one, although we have as many learned and successful practitioners here as in any eastern city of equal size.

GLONOINE—The *Journal* called attention to the potency of this new remedy nearly two years ago, and now its value is being very generally recognized. It ranks second only to digitalis in the treatment of cardiac disease. It is especially indicated in angina pectoris and weak dilated and fatty heart. In the latter it gives relief by reducing arterial tension and thus lessening the amount of work the heart has to do.

THE *American Monthly Microscopical Journal* is published at 53 Maiden Lane, New York. Subscription \$1.00 a year. Every physician who uses a microscope should be a subscriber. The publishers say that a comparatively small number of medical men receive the *Journal*. We believe it is because its value, or even its name, is unknown to very many practitioners. We can only say that any one who subscribes for it, will get more than full value for their money. It is one of our most valued exchanges.

EUTHANASIA—A good deal has been written in favor of the propriety and wisdom, giving those poor victims afflicted with incurable and painful diseases a comfortable send-off to Paradise. A missionary among the poor in London put the theory into practice, and when he found his parishioners suffering with cancer and other incurable diseases, and without the means to procure necessities for their comfort, at the sick persons request, would administer a dose of morphia sufficient to put them into a sleep

which knew no waking. Unfortunately the jury before which he was tried were not believers in the theory, and he was convicted of murder in the second degree and transported for life for thus relieving incurable suffering.

Reviews.

A System of Surgery. Theoretical and Practical, in Treatises, by various Authors. Edited by T. HOLMES, M. A., Cantab., Surgeon and Lecturer on Surgery, at St. George's Hospital. First American from second English edition. Thoroughly revised and much enlarged, by JOHN A. PACKARD, A. M., M. D., Surgeon to Episcopal and St. Joseph's Hospital, Philadelphia Assisted by a large corps of the most eminent American Surgeons In three volumes, with many illustrations. Vol. III. Philadelphia: Henry C. Lea's Son & Co. 1882.

With this volume the work is completed, and the profession in possession of a reliable, complete and thoroughly scientific treatise on surgery. Vol. III treats of diseases of the respiratory organs, diseases of bones, joints and muscles, diseases of the nervous system, gunshot wounds, operative and minor surgery, and miscellaneous subjects; including diseases of the breast, diseases of the skin, parasites, surgical diseases of childhood, surgical diagnosis, and a large and interesting chapter on hospitals. As a book of references Holmes' Surgery is unrivalled, and as a text-book for the medical student it is not surpassed by any in the English language.

A Study of the Tumors of the Bladder. With original Contributions and Drawings. By ALEX. W. STEIN, M. D., Surgeon to Charity Hospital, N. Y., etc. New York: William Wood & Co., 27 Great Jones St. 1881.

The author with great diligence has gone through the literature, mostly of medical journals, and collected sixty cases of tumors of the bladder. With these as a foundation he has given us a clear and excellent monograph on the subject, so much more valuable, as our knowledge on this point is rather limited

and confined to, what is found in the common surgical textbooks. The chapters on symptomatology, diagnosis and treatment, are clear and instructive, and altogether the book is a valuable contribution to surgical literature.

An Index of Surgery; Being a concise Classification of the main Facts and Theories of Surgery for the Use of Senior Students, and others. By C. B. KEETLEY, F. R. C. S., Senior Assistant-Surgeon to the West London Hospital, etc. New York: Bermingham & Co, 1260 and 1262 Broadway. 1882.

The author's aim has been, as plainly indicated in the title, to furnish the student a work, embracing in a short compass all the main facts and theories of surgery, by aid of which he may recapitulate the surgery shortly before his final examination. With this aim in view, the author has succeeded remarkably well, and produced a book, which will be of genuine advantage to the student.

Percussion Outlines. By E. G. CUTLER, M. D., Assistant in Pathological Anatomy, Harvard Medical School, &c., and G. M. GARLAND, M. D., Assistant in Clinical Medicine, Harvard Medical School, &c. Boston: Houghton, Mifflin & Co., 11 East 17th Street, New York. The Riverside Press, Cambridge. 1882. An octavo of 65 pages.

From the preface we learn that "this little book is intended to teach students the anatomical position of the thoracic and abdominal viscera in the living subject, and to portray such boundaries of these organs as are accessible to percussion. . . . With regard to the preparation of the book, we will add that it is essentially a condensed abstract of the German Literature upon this subject as contributed by Weil, Ferber, Luscha and Gerhardt. We have, however, repeatedly and carefully reviewed in our own practice and at the autopsy table the points which we present, and have convinced ourselves that they are correct." The book includes nine plates, as well as a number of diagrams. The subject all will admit is one the importance of which every physician daily feels at the bedside. Considering the data reliable, we recommend the work to our readers.

Homœopathy: What is it? By A. B. PALMER, M. D., L. L. D., Professor of Pathology and Practice of Medicine in the College of Medicine and Surgery in the University of Michigan. Second Edition 1881. Detroit, Mich: Geo. S. Davis, Medical Publisher.

We have many times been impressed with the remarkable want of information on the part of the profession generally, regarding the essentials of homœopathy. The introduction to this little pamphlet notices this fact in the following words: "Very many educated and even many scientific men have extremely vague ideas on the subject of medicine and the different medical schools. They have an indistinct, erroneous impression that there is some specific system of 'old school' medicine called Allopathy, of a similar exclusive character, but opposed to the 'new school' system of Homœopathy, and are without any definite, much less technical, knowledge of either. . . . They are ignorant of the fact that regular scientific medicine is no exclusive dogmatic system at all." That this is a very general fact is not to be denied. For this reason any work like the present tending to elucidate the theory and practice of Homœopathy should receive general examination. The author has given the subject much time and thought, and the result is a book which no physician should fail to read.

The Diagnosis and Treatment of the Diseases of the Eye. By HENRY W. WILLIAMS, A. M., M. D. Boston: Houghton, Mifflin & Co.

Former editions of this work are so well known as to make an extended notice of this unnecessary. Yet as there are several points in which a marked improvement over previous issues is exhibited, it demands a few words setting forth anew its advantages for physicians in general and students in particular. The style is concise and clear, and the arrangement eminently practical, the author's aim evidently being to embody in as simple a manner possible, the result of his own personal observation together with the recorded experience of others.

The first chapter is devoted to the method of examining the eye, intelligibly detailing the process in all its aspects; a plan

highly commending itself as a departure from the usual course, other ophthalmic works having the information regarding examinations usually scattered, and obliging the student to glean items, as best he can, on this important point. Different affections of the globe are treated in order in subsequent chapters, a special one being assigned to each anatomical part. It is to be regretted that the wood-cuts are not more numerous; a great advantage is gained when a subject is thoroughly illustrated, and an appreciation of this fact by the author would have supplemented well the clearness of his text. The general characteristics, however, of the book are such as to render it an excellent guide, and to those whose practice does not afford the same extended opportunities as Dr. Williams', or for students in this especial branch of surgery, it will be found exceedingly valuable.

A Practical Treatise on Hernia. By JOSEPH H. WARREN, M. D. Second and revised edition. Fully illustrated. Boston: James R. Osgood & Co. 1882.

This work is a second edition of the author's former work, "Hernia: strangulated and reducible," etc., in which he advocated the Heatonian method by injection for the radical cure of reducible hernia, and modified the fluid and the instruments used. The author has added six new chapters on the causation of hernia, recent operations for hernia, artificial anus, and wounds of the intestines, hydrocele and varicocele, observations on hernia and résumé and clinical reports, and left out the lengthy and tedious introduction of the former edition. As a record and advocate of the Heatonian method, the book is of interest, but when the author flatters himself with the belief, that he has written "a thoroughly comprehensive and practical text-book on hernia," we doubt, that this opinion will be endorsed by the profession. The book is a curious mixture of important and unimportant facts, which sometimes have nothing whatever to do with the subject, and is too broad and lengthy to be comprehensive and practical.

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Original Communications.

SYMPTOMATOLOGY OF THE PUPIL.

By Lucien Howe, M. D.

PART II.—PATHOLOGICAL CHANGES.

In the first part of this article a short review was given of the leading facts relating to the anatomy of the iris and to its physiological movements. The general course of the nerves which supply it, was traced, and we found, that while sensitive branches of the trigeminus supplied its entire structure, its movements were regulated by two other nerves, distributed to two different portions. We learned that the circular band of muscular fibers surrounding the pupillary margin, was supplied by the motor oculi, and the radiating fibers by the sympathetic.

It was, hence, easy to perceive that a small pupil could result from strong contraction of the sphincter, or from unusual relaxation of the radiating fibers; and a large pupil could result from strong contraction of the radiating, or from unusual relaxation of the sphincter fibers. Bearing in mind this important connection, and also remembering how the pupil is contracted physiologically in old age, in the effort at accommodation for a near point, and under the influence of light, we are now prepared to advance to the pathological aspects of the question.

But here especially are we apt to become confused in searching for the origin of the unnatural size of a pupil, as there are, as just stated, two distinct causes which can produce the same result. For example, in a given case, the physician is in doubt whether the small pupil, which he sees in his patient, is due to some irritation of the motor oculi, thus contracting the sphincter of the iris, or due to a paralysis of the sympathetic, thus relaxing the radiating fibers.

All such cases would indeed prove exceedingly perplexing, were it not for our knowledge of a few facts in regard to the motor oculi. We know it is principally this nerve which causes contraction of the sphincter when light enters the eye, and in the act of accommodation, and also know that by the instillation of the extract of Calabar bean, this nerve is stimulated and the sphincter contracted; and finally, by a similar use of atropine* the opposite effect is produced. These facts can be utilized to advantage clinically. For example, in a case where the myosis is due to total paralysis of the sympathetic, even a still greater contraction of the pupil might be produced by the action of light, by the effort of accommodation or by the use of Calabar bean, by thus stimulating the motor oculi. But in such a case, if atropine be used, there is no dilatation beyond the usual limit, for, even though the sphincter be relaxed, the radiating fibers supplied by the already paralyzed sympathetic, have no power to contract. Should the repeated use of atropine in strong solutions—say three or four grains to the ounce—produce only moderate dilatation of the pupil, we may infer that with a relaxed sphincter the radiating fibers have contracted somewhat; in other words, that the sympathetic is only partly paralyzed.

On the other hand, if a dilatation be due to paralysis of the motor oculi, and consequent relaxation of the sphincter, it is impossible to produce contraction by the action of light, by an effort of the accommodation, or by using the extract of Calabar

* Atropine is here, and subsequently, used for that class of drugs, whose action is similar to that of Belladonna, and although "Calabar bean" is mentioned as producing contraction, it is ordinarily used in the form of *esserine*.

bean ; moreover, atropine produces no effect. But if the mydriasis is caused by irritation of the sympathetic and consequent contraction of the radiating fibers, some change may be produced by the action-light, by the extract of Calabar bean, or possibly by the effort at accommodation. Stimulants of the motor oculi may, in such a case, cause even a greater degree of contraction of the sphincter than already existed in the radiating fibers, and therefore the pupil is made smaller. These are evidently important points of differential diagnosis.

In general, however, it may be said that concomitant symptoms must be relied upon in the formation of an opinion, and in all cases these furnish at least corroborative evidence. For example, if we find a contracted pupil with increased vascularity of certain parts of the head, or with any signs of disease in the neck or spinal cord, we may infer that a myosis is due to some imperfect action of the fibers of the sympathetic. On the other hand, if a dilated pupil is accompanied by a divergent squint, or by imperfect action of any of the muscles of the eye, supplied by the motor oculi, we are safe in saying that a mydriasis is due to more or less complete paralysis of that nerve, and, of course, to relaxation of the sphincter pupillæ.

In a paper of this kind it would of course be out of place, if not impossible to attempt to describe all the morbid conditions which are accompanied by peculiarities in the size of the pupil. It is only intended, at present, to state the general principles upon which such changes depend. Should any one be interested in a particular phase of the subject, he can gather information to better advantage with the aid of a list of references here appended.

It may be well, however, to simply call attention to a few diseases in which an altered size of the pupil is a more or less constant symptom. For the sake of convenient arrangement I will refer first to those which are accompanied by myosis, and then to those which are accompanied by mydriasis. But let it be understood, that these conditions are not necessarily constant

and unvarying features throughout all the different stages of the same disease. For example, a morbid condition which is only sufficiently extensive to produce irritation of the motor oculi, would, as we have seen, be accompanied by a contracted pupil, but if the extent of that same lesion increased, it might be sufficient to produce a paralyzed state of the nerve, and would then be accompanied by a dilated pupil. With this general observation we may proceed to a consideration of some of the diseases accompanied by contracted pupils.

Let us therefore begin by turning our attention to

I, SPASMODIC MYOSIS.

In this, the contracted pupil is due to irritation of the motor oculi. In such a condition, as already mentioned, the pupil may, perhaps, be still further contracted by the action of light, by accommodation, or by Calabar bean, but it should dilate under the influence of atropine.

The lesion is usually intercranial and frequently of an inflammatory type. Thus we find it in the stages of excitement, produced by large doses of alcohol, or as an effect of opium², of nicotine¹⁴, and especially of Calabar bean⁸⁶. Apparently opposite conditions may produce the same result as an irritant. Thus, Nothnagel¹⁷ mentions that myosis may occur in anæmia of the brain, and also from sudden hæmorrhage into the Pons. In the early stage of meningitis^{3, 10}, the spasmodic contraction of the motor oculi is evinced not only by the contracted pupil, but by convergent strabismus.

In alcoholic amlylyopia we often see the pupil contracted, and the same condition exists in other sceptic conditions.

Inflammation of the cornea, sclerotic and iris, especially in their early stage, or when of a painful nature, are also occasionally accompanied by a contracted pupil.

An interesting illustration of contracted pupil is seen in the more advanced stages of the general paralysis of the insane. Through the kindness and assistance of Drs. Andrews and

Granger I have had an opportunity of examining the eyes of seven such cases at the Buffalo State Asylum for the Insane. The results are shown in the following table :

| Number. | Sex. | Initials of Names. | Age. | Stage of the Disease. | Eye affected. | Contraction by Action of Light. | Contraction on Accommodation | Dilates with a four-grain Solution of Atropia |
|---------|------|--------------------|------|-----------------------|---------------|---------------------------------|------------------------------|---|
| 1 | M. | N. R. | 38 | 2d. | Left. | None. | Slight. | Widely. |
| 2 | F. | A. M. | 40 | 2d. | Both. | Slight. | None. | " |
| 3 | M. | J. C. | 39 | 2d. | Left. | Slight. | Slight. | " |
| 4 | M. | P. D. | 67 | 2d. | Both. | Slight. | None. | " |
| 5 | M. | C. S. | 40 | 2d. | Right. | None. | Slight. | " |
| 6 | M. | F. D. | 39 | 3d. | Left. | None. | Slight. | " |
| 7 | M. | F. F. | 49 | 2d. | Right. | None. | Decided. | " |

From this limited number, and from other observations³², it appears that in such cases further contraction does not occur regularly on attempting to accommodate, and exceptionally from the effect of light, but dilatation is invariably produced by a strong solution of atropine. One would naturally expect in this disease that even the nerve supply of the radiating fibers, also participating in the general decay, would become affected and the pupil refuse to dilate widely under atropine, but such is not the case.

Before leaving this variety of myosis, I would mention a case which seems of interest, as tending to show that syphilis may produce the condition under consideration. The patient, a woman of 27, contracted a chancre 15 years ago. She passed through the primary and secondary stages, developing most typical symptoms and about three years and a half ago began to complain of discomfort "when looking at anything near by." This gradually increased to continual pain, the pupils grew small, there was convergent strabismus and considerable photophobia.

When I first saw her at the Buffalo Eye and Ear Infirmary, on the 4th of September, 1878, both eyes were prominent and

in each, the cornea rather small ; anterior chamber was apparently narrow ; pupil about the size of a small pin's head ; with left, the vision was equal to fingers at 12 feet, and the right, with a plus 20 cylindrical glass, at 90° gave vision= $\frac{3}{16}$. Every effort at accommodation or the presence of light gave increased pain and exaggerated the existing strabismus. On the other hand a two-grain solution of atropine dilated the pupils widely.

This seemed to be, without doubt, a case of myosis due to irritation of the motor oculi and consequent contraction of the sphincter, as indicated not only by the behavior of the iris, but by the strabismus. As apparently a result of syphilis this is a condition, at least, quite rare¹⁶.

We come next to consider that form of myosis, known as

II, PARALYTIC MYOSIS,

caused by partial or complete paralysis of those branches of the sympathetic, which supply the radiating fibers of the iris. In this, as already stated, even greater myosis may be produced by the effect of light, by an effort of the accommodation or by Calabar bean, but atropine does not cause any very decided dilatation. With a partial paralysis of the sympathetic, some dilatation can, however, be produced by atropine. In these cases, if the paralysis of the dilating fibers is complete, then no abnormal enlargement of the pupil is possible, even supposing the sphincter be also relaxed. But in reality such total paralysis of the sympathetic or of any other nerve is exceptional.

In considering this form of myosis, it is well to keep in mind an anatomical fact, which it seemed best to mention first in this connection. Judging from dissections alone, one would suppose that the portion of the sympathetic, which supplies the radiating fibers of the iris, is connected only with the cavernous plexus. It is from that plexus that a twig goes to the ophthalmic ganglion, and thence to the iris. But various experiments^{111, 112, 113, 101,} and pathological conditions⁵⁶ show that there is a most inti-

mate connection between these terminating fibers of the sympathetic and the upper part of the spinal cord. Some observers consider them as of spinal origin²⁸ and knowing also that the motor oculi is of cerebral origin, it is not unnatural that the two varieties of myosis and mydriasis should have been classified on this basis. Thus we may speak of a spasmodic cerebral myosis (the variety first mentioned) and a paralytic spinal myosis (that which we are about to consider); or, on the other hand, of spasmodic spinal mydriasis and a paralytic cerebral mydriasis¹¹⁴.

A most striking example of the connection between the fibers of the sympathetic which supply the dilator of the iris, and the upper part of the spinal cord, is shown by the effects of injuries in that region,^{24, 75, 57, 82, 73}. In these cases, irritation sometimes occurs primarily and with it, dilatation, but contraction of the pupil supervenes sooner or later—and often of the most extreme degree.

It seems probable that the partial myosis, produced by chloroform narcosis, is of a paralytic nature. Although a slight degree of dilatation may usher in the stage of excitement, yet contraction almost invariably occurs when the narcosis is complete,^{92, 91, 89, 90, 53, 42, 108, 79}. Gradual dilatation accompanies a return to the stage of excitement, but when this shows itself suddenly in deep narcosis, when it is very decided, and is not preceded by any unusual irritation, it is an indication of extreme danger⁷⁷. There are, however, occasionally slight variations of no importance, and it is therefore almost too much to say that a constant degree of myosis is an unfailing indication that the chloroform is being properly administered³⁰. The subject offers an attractive field for further investigation.

Perhaps one of the most striking forms of this variety of myosis is seen in ataxia. By many it is called spinal myosis and to its various phases much study has been given^{51 36}. As the posterior columns of the spinal cord are in this disease the principal seat of the lesion, it is quite certain that the small pupil is due to a paralytic affection of the sympathetic. In spinal affections, however, there is a peculiarity in the behavior of the iris, which

might be considered almost as diagnostic, and it is, that while the pupil can be made still smaller by an effort of the accommodation, it does not, on the other hand, react as usual under the influence of light. In a similar manner does the pupil behave in the paralysis of the insane, except that it dilates with the use of atropine.

As a good example of paralysis of the sympathetic it may be of interest to cite a case which recently came under my observation.

The patient, J. M., was a laborer, 26 years old, who applied at the Buffalo Eye and Ear Infirmary on the 14th of last April. He had always enjoyed good health, but nineteen days before, he began to suffer some slight pain in the region of the angle of the jaw, on the right side. Five days later, the pain grew more intense in the right ear and was followed by a purulent discharge. These symptoms, of course, pointed to a purulent inflammation of the middle ear, with perforation of the membrana tympani—a diagnosis, which further examination proved to be correct. But this was the least interesting feature of the case. On viewing the patient's face, first from one side, and then from the other, it presented two aspects, almost entirely distinct. The right half was flushed and constantly moist with perspiration; the left, quite pale and rather dry, while the median line of demarcation across the forehead and down the nose to the mouth was distinctly visible. The temperature on the right side was also perceptibly higher than on the left. As for the pupils, the right was hardly more than half the size of the left. The behavior of the iris and concomitant symptoms indicated a condition of paralysis or, at least, parasis of the sympathetic, which produced the myosis and also suggested interesting pathological questions, which it is beyond the scope of this paper to consider. The case must be left with simply the reference to the peculiarity of the pupil and conditions accompanying it. Such typical examples are not common ³⁹.

Passing next to the consideration of mydriasis, let us give our attention first to the variety known as

III, SPASMODIC MYDRIASIS.

This, of course, is due to irritation of the sympathetic and consequent contraction of the radiating fibers of the iris. In its most typical form some slight contraction may be produced by the action of light, by efforts at accommodation or by the use of Calabar bean. In other words, these stimulants to the motor oculi may counterbalance the already existing irritation to the sympathetic. Moreover, greater mydriasis is often obtained by the use of atropine. When the enlarged pupil is due to simple paresis of the sympathetic, as most frequently happens, then the effect of these experiments of course more nearly approaches what we should expect in the normal condition ⁵⁴.

Examples of this variety are comparatively rare. Spasmodic mydriasis, however, occasionally occurs when other muscles of the body are suddenly made tense, as, for example, a case is cited ⁷⁸ of a soldier who could dilate the pupils by making his muscles rigid when standing "attention." The same symptom is met with in some cases of chorea ²⁶.

It is not strange that disturbances in organs in distant portions of the body should, by irritation of the sympathetic, produce dilatation of the pupil. I have once seen a case in which monolateral mydriasis accompanied dysmenorrhœa. The connection between the two was too intimate to be considered simply as a coincidence.

The patient, E. H., was 20 years old, with mydriasis in the right, which had shown itself at intervals for a year, previous to October 28, 1876, the date of her first visit. Then the right pupil was double the size of the left. Reaction to light, or on accommodation was slight, but forcible contraction could be produced by extract of Calabar bean. In a few days, however, the mydriasis disappeared, but began to show itself again at almost regular intervals of four weeks, each time, lasting three or four days. On

enquiry it was found that the dilatation was simultaneous with the beginning of a menstrual period. Having been advised to consult her family physician concerning a dysmenorrhœa from which she suffered, I learned subsequently that when improvement in this respect occurred the mydriasis also disappeared.

Finally we have to consider the second form of dilated pupil or that known as

IV, PARALYTIC MYDRIASIS.

In this the sphincter of the iris is relaxed as a result of innervation of the motor oculi. With extreme cases the action of light or efforts at accommodation produce little or no change, and atropine is likewise powerless to increase the abnormal condition.

This form of mydriasis is common to the more advanced stages of inflammatory conditions which affect the motor oculi either at its origin or in its course ²⁷. Thus, it is seen in well-established forms of inflammation about the cerebellum, in the second stage of meningitis ^{4, 10}, in chronic hydrocephalus, in epilepsy ⁴; where there has been effusion of blood or serum in the brain sufficient to cause compression ¹⁰, or where an intercranial tumor ¹⁹ exists.

The imperfect effect of belladonna, or its alkaloid, in increasing the mydriasis of this variety, has been already stated ^{26, 74}, and that of Duboisia ²⁵ is probably similar. In morbus Basedowii there is very seldom any change in the size of the pupil—in spite of the fact that the sympathetic is evidently involved—and the mydriasis, which has been noticed, is considered by Stellwag ²⁵ to be due to paralysis of the pupillary branch of the motor oculi.

Far-sighted persons, being obliged to contract the sphincter of the iris more than others, in the effort of accommodation, it sometimes happens that that muscle become relaxed—fatigued as it were—and a paralytic mydriasis results. In two typical cases of this kind I have found that a suitable convex glass relieved the difficulty.

Paralytic mydriasis may also be produced by some distinct lesion in the eye itself. At least it is well established that certain abnormal conditions of the globe are accompanied by mydriasis and it is probable that this is of the variety now under consideration. It would seem that affections of the choroid are especially apt to be accompanied by a dilated pupil, and in this connection it may be well to refer briefly to a peculiar case illustrating the point.

On March 1, 1882, I was consulted by S. L., a laborer, 52 years old, who received a blow on the left eye about eight years before. Since then it became inflamed at intervals, giving rise to considerable pain. When first seen, the globe was rather prominent, there was slight ciliary injection, cornea clear, the anterior chamber wide, and the pupil so widely dilated that only a small rim of iris could, with some difficulty, be discovered. No sign of contraction could be produced by action of light, by effort at accommodation or by esserne. Although the lens was clear, the fundus could not be seen on ophthalmoscopic examination. The vision was reduced to imperfect perception of light, the globe extremely hard, and as the pain was constant and severe—only yielding to large doses of morphine—the wishes of the patient were acceded to, and the eye removed on the 10th of March. Subsequent examination showed that there had existed an inflammation of the choroid, and in one spot, which measured about 3 by 4 lines, this layer had become atrophied, leaving the retina in contact with the sclerotic, and these two coatings had there bent outwards into a staphalomatous projection.

It is beyond the scope of this paper to enter into the treatment of either myosis or mydriasis, but a word or two concerning them may not be out of place. Being ordinarily dependent upon a deep-seated cause, it is necessary first to determine that, before any plan of rational treatment can be decided upon. But it often happens that there is doubt as to the origin of the trouble, and the patient still anxiously asks for a prognosis based at least

upon the general probabilities of his case. In some of these rather obscure cases, if we have to do with a contracted pupil, it is moderately safe to say that the prospects are bad. The causes upon which a well established myosis depend, are not such as ordinarily tend to improvement, or yield to treatment.

On the other hand, many cases of mydriasis do recover spontaneously and it would seem that the tendency to cure can be hastened. I have twice observed a dilated pupil become gradually and permanently smaller under the daily use of the constant current, or by the continued instillation of extract of Calabar bean, in solutions just strong enough to produce a return to the normal size. This observation has been made by other practitioners ^{29, 114, 41, 88.}

Before dismissing the subject, it is necessary to call attention to some peculiarities which are not referred to in the remarks already made. It is but fair, for example, to mention that instances are not rare in which the pupils are of unequal size in the two eyes—and perhaps have been so from childhood—although the person may be considered perfectly well in every respect. I can, at once, recall three such cases among my acquaintances. At least an inequality in the refraction of the two eyes is however usually found in these instances.

Finally, it should be noted that as certain causes may produce an inequality in the size of the pupils of the two eyes, so the same causes, acting in some obscure manner, may result in irregularity in the form of the pupil of one eye, or of both. It would be too great a digression to discuss here the varying circumstances which may produce this, but the general principles, already stated, will furnish indications of the cause in doubtful cases.

Again, as we have already seen, that the same disease may be accompanied by a small pupil at one stage, and later, by the opposite condition; so it may occur, that variations show themselves in quick succession and it may be difficult to determine whether if we have to do with a rapidly recurring myosis, or

mydriasis, or both combined. This is especially the case in some attacks of hysteria¹⁰⁵ and it is possible that this is due to the principle of associated movements of muscles, as seen in other parts of the body. In a similar way, deep inspiration or severe dispnoea is often accompanied by dilatation of the pupil.

Enough has been already said to show that in any given case, when the physician attempts to form any opinion from the altered size of the pupil, he must keep clearly in mind the physiological causes upon which such changes depend. It is almost useless to attempt to remember that this disease is accompanied by a contracted pupil, and that one, by a dilated pupil. The only true method is pursued by the practitioner who, keeping in mind the physiological conditions, seeks for the cause of the abnormal appearance. It was with the hope of making that relation between health and disease a little more clear, that it has seemed worth while to review these facts and personal observations.

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RUPTURE OF THE PERINEUM IN LABOR; ITS PREVENTION AND
TREATMENT.*

By Matthew D. Mann, A. M., M. D., Professor of Obstetrics and Gynecology in the
Medical Department of the University of Buffalo.

When three weeks ago the President of your Executive Committee invited me to address you, I felt at first that I must refuse. The time was so short and the press of work on hand so great that I did not see how I could undertake anything more.

I felt the honor, however, so deeply and was so desirous of making the acquaintance of this Body, that on his assuring me that I would not be expected to give anything very learned or deep and that it might be quite short, I finally accepted.

In looking around for a subject, I hit upon "Rupture of the Perineum," not because it was new or brilliant, but because I hoped that, perhaps, I might be able to put some old facts in a new light and might possibly be able to make some suggestions of practical importance.

It is quite curious how little is said on this subject in our standard text-books. In looking up the literature in 1874, I was unable to find a single text-book, which gave any clear or comprehensive method of either preventing or of treating it after its occurrence.

Since then Playfair, in 1876, touches on the subject, and Lusk (1882) in his new book treats it quite fully. After my paper, in 1874, the subject was quite fully discussed in New York in a number of papers and since then quite a literature has accumulated. Dr. Goodell also had a paper in 1871 on the management of the perineum, which contained, as does everything from his pen, much good sense.

Rupture of the perineum is one of the most common accidents which come under the notice of the obstetrician. Attempts to establish the frequency of its occurrence by statistics will always be misleading. This comes largely from differences of opinion as to what constitutes a rupture, and from differences in the

* Paper read before the Alumni Association of the University of Buffalo, February 21, 1882.

methods of prevention employed by different men, as well as to differences in the methods of observation.

For instance, I have heard of one of the most celebrated obstetricians in this country declare that in a very extensive experience, covering more than 25 years, he had never in his own practice seen the accident happen. Contrast this with the experience of Snow Beck, who saw 75 large ruptures in 112 first labors. Either the first mentioned gentleman has a skill far surpassing that of his medical brethren, or, what is more likely, he never saw the ruptures, because he never looked.

How many men in this room are accustomed to make a careful *ocular* inspection of the perineum after the third stage is completed? They may see the head safely over the perineum, but, as I shall attempt to show, that does not by any means preclude the possibility of the later occurrence of a rupture.

The reports, therefore, of those who do not carefully examine the parts after labor is all over, are entirely unreliable; and statistics derived from such reports, are valueless.

Some years ago I collected a large number of statistics mostly from the reports of European lying-in hospitals, where all the women are carefully examined, from which I concluded that we might safely say that in at least 33 per cent. of primiparæ a greater or less amount of tearing took place. Subsequent investigation and experience has led me to think that the figures here given are too high. Perhaps if we put it at 25 per cent. we should be within the bounds of probability.

Be the figures what they may, I am sure that all who are accustomed to make vaginal examinations in non-pregnant women, will agree with me that ununited ruptures are much more common than they should be.

First let us enquire whether the accident is always avoidable. To this I answer unhesitatingly that it cannot always be avoided. There are certain cases where the disproportion between the head of the child and the orifice of the vagina is so great that no amount of stretching possible in normal tissues will allow of

the passage of the head. Then again certain conditions of the perineum, such as extensive œdema, varicose veins, syphilitic scars, or the active disease itself, so interfere with the natural elasticity of the parts as to render a rupture extremely likely, or even unavoidable. In some instances a deformity of the pubes throws the head back upon the perineum in such a way as to bring an unusual strain upon it. The same thing occurs in certain abnormal positions, as in occipeto-posterior positions of the head and in face presentation. Olshausen says that among primiparæ in at least 15 per cent. of the cases a considerable rupture is unavoidable.

These facts may come as a balm to our wounded pride when our best endeavors have been in vain; but should never be used as a cloak for ignorance, or as a quieting draught for a guilty conscience. Forceps operation must be held accountable for a considerable number of ruptures. The common cause of this is the application of too great an amount of force and this comes in turn from the wrong direction in which the force is applied. If we pull in the direction of the axis of the pelvis, a comparatively small amount of force will be required. By pulling in the wrong direction, we pull against the pubic bone, and when the head finally yields it, passes with a sudden movement which throws the whole force of the unprepared operator suddenly upon the perineum. In the hands of an expert the forceps, instead of being a means of rupturing, the perineum may be used to save it, and under such circumstances may be left on until the head is delivered. But it must be remembered that this method requires more than ordinary care and skill, and unless the operator possesses this, it is better to remove the blades early and deliver the head in the manner to be detailed later.

Nature generally manages these things pretty well, better, I am sure, when left to herself than when interfered with according to the measures formerly in vogue. How then can we best prevent the occurrence of this unfortunate accident? Shall we sit as did our fathers and "support" the perineum with a napkin

for hours at a time, making firm pressure between pains, during pains and all? The fallacy of this supporting plan, although supporting treatment is now so much in favor, need hardly be pointed out. Placing the flat of the hand, or any other hard substance, on a board, will not prevent its being split by a force directed to the end or on the middle of the other side. In the same way pressing on the perineum offers no real resistance to the stretching and tearing power of the advancing head. But this plan of treatment does this, it destroys the natural succulency of the tissues and thus renders them more prone to give way.

No! We must give up all idea of offering any "support" to the perineum and try to prevent the rupture in some more rational way. Perhaps we can learn something which will help us by studying the processes of a natural labor where no rupture occurs.

As the head comes down and begins to press on the perineum, dilatation takes place slowly or rapidly, according to the condition of the parts. The process of dilatation is favored by the intermittency of the dilating force. The head comes down during the pains and distends the perineum, but during the intervals the perineum retracts and the head recedes. This intermittent character of the contractions is a peculiarity of labor throughout its whole course and is peculiarly characteristic of a normal labor. A tetanic condition of the uterus accomplishes nothing, while the tissues rapidly dilate and give way when the forces applied are intermittent in their action. This applies to the perineum equally with the others; a gradual softening takes place when the head comes down during a pain and then recedes again, while with a steady pressure either one of two things will take place; either the progress of the head will be stopped by failure of the tissues to dilate, or the force being great enough, the resisting body will be torn asunder without being dilated. From this consideration of the mechanism of natural labor we may get our first point in the proper management of the perineum.

Try and secure full and complete dilatation of all the tissues composing the perineum before allowing the head to pass, and to do this make the head come down slowly, stretching the tissues little by little with each pain. If it comes too fast, hold it, back and cause it to recede a little during the intervals. Prevent the woman from using the abdominal muscles by telling her not to bear down, but to cry out as much as she pleases, or put her slightly under the influence of chloroform. This agent, I think, very valuable in this connection, for by relieving the pain and stopping reflex action, it prevents the frantic efforts sometimes made just as the head comes into the world; makes the woman manageable and enables one to take their time. But how should we keep the head back? This may be done in one of two ways, either by direct pressure on the presenting part, or by adopting a maneuver called after Dr. Goodell. This consists in hooking the perineum forward by one or two fingers introduced into the anus. By this plan the deeper and thicker portions of the perineum are brought before the advancing head, its too rapid advance is thus impeded, and between the pains the perineum contracts and the head recedes. This may be done until full and complete dilatation is accomplished.

Thus we fulfill the first indication to secure dilatation. It is very curious that the older writers should have condemned this plan *in toto*. Churchill says, "no attempt must be made to retard the progress of the head, but whilst the perineum near the coccyx is firmly supported, this more anterior portion should be left free to yield before the pressure of the head." By so doing, he may be said to have fulfilled one indication, but he does not seem to have any clear idea of the rationale of his procedure.

T. F. Cock, whose "Manual" represented the state of obstetric practice thirty years ago, says, that the preventive treatment must be by "proper support, not retarding the advancing head, nor retracting the perineum." That sound old thinker, John Burns, (1831) knew better, for he tells us that "the most effectual way to prevent laceration is by supporting the

perineum when it is stretched and keeping the head from being suddenly forced out." He hit the nail exactly on the head. To be sure he does not give us the details of the procedure, but he had the right idea. Thus we might go through the whole of obstetric literature, finding sound advice, which has been forgotten and ignored, only to be again resurrected and put on a firm basis by the teachings of modern physiological research.

When the vertex begins to descend in the pelvis, a movement of the head on the body takes place which we call flexion. This continues until the occiput reaches the floor of the pelvis when an opposite motion begins which we call extension. This motion is not completed until the occiput escapes under the symphysis pubis. When the further progress of the body being hindered by the neck catching behind the pubes, an advance can only be made by the rotation of the head around the pubic arch. As a result of their rotation, the position of the head is changed from one of partial flexion to extreme extension, and it is in this movement which is finished coincidentally with expulsion of the head, that the greatest strain is brought to bear on the perineum. To reduce this strain to a minimum, we must seek to make the radius described by the head in its rotation as short as possible. The diameter of the head which should form this radius is the sub-occipito bregmatic. We can only shorten this diameter by getting the occiput well out from the pubic arch, and by then pressing it up to the arch as firmly as possible. The more we crowd it up the shorter will be the radius of the circle described and the less the strain on the perineum. We may also prevent this by taking care that a too rapid and early performance of the movement of extension, before the occiput has fully emerged from under the arch of the pubes, does not take place. In certain cases of malformation of the pubes the movement of extension is interfered with and the flexion of the head is excessive. In these cases the occiput is brought to bear far back on the perineum, and thus are produced the cases of central rupture. The way of preventing this is indicated by the mechanism.

Thus far we have only aided and abated the natural processes. We can, however, often supplement the action of nature by the application of art. During the height of a pain the tissues are all tense and rigid. If, therefore, we do not allow the head to be expelled at this time when the tension is greatest, but hold it back until the acme has passed, and then when the tissues are relaxed and dilatable, lift the head out by manipulative effort, we may be able to greatly lessen the danger of a rupture. To this end we may put one or two fingers into the rectum (Ols-hausen and Ahlfeld) and hook them into the mouth of the child or under the chin; or the tip of the fingers (Ritzen) may be placed behind the anus and in front of the coccyx and the head lifted out in this way. This maneuver may be modified when the woman is on her side, by pressure exerted between the pains, not with the fingers but with the carpal ulnar edge of the hand. In this we accomplish two things, we deliver during an interval and we crowd the head up to the symphysis with advantages already detailed.

The indications then, to sum up, are

- 1st. Secure full dilatation by allowing only a gradual advance of the head.
- 2d. Crowd the head as closely as possible up to the pubic arch.
- 3d. Prevent a too early or too rapid performance of the movement of extension.
- 4th. Deliver during the intervals of a pain.

According to my experience, in the majority of cases, nature secures the dilatation unaided, so that it is generally enough to keep the head back during the last two or three pains with the finger tips on the vertex, not on the perineum, and then with two fingers in the rectum to lift the head out when the height of the pain is over. If, however, the case promises to be a difficult one, and there is a likelihood of trouble in preserving the perineum, I like to put the patient on her side in the English obstetric position. With the left hand passed over the abdomen

and between the thighs, we can generally easily prevent the too rapid advance of the head. With the other hand the head can be crowded up to the symphysis and extension prevented until such time as the tissues are ready to bear the strain. Then with the fingers in the rectum or with pressure in front of the coccyx, the head can be delivered in the intervals of a pain. As I have already indicated this can be much more easily done if the patient is pretty well under the influence of chloroform.

Of course, no mock modesty should prevent a full exposure of the parts. In this way, undoubtedly, a large majority of the ruptures which occur might be prevented. But, as I have already stated, in some cases, especially in old primiparæ, and in the other conditions enumerated, rupture is unavoidable. How then shall we best limit the extent of the accident when inevitable, and how shall we best treat it when it occurs?

As far back as 1810, or even earlier, it was advised to make incisions in the perineum in order to enlarge the vulvar opening. Cazeaux advised that they should be made on the side and limited the practice to those cases where rupture is imminent. Carl Braun gave the operation the name of episiotomy and recommended it, but thought it should be limited to a very small number of cases. The celebrated French accoucheur Chailly-Honore was a most enthusiastic advocate of the operation, referring to it as "the excellent practice of Professor Dubois." Blundell, Naegele, Schultze, Tyler Smith, Barnes, as well as a host of others, including our own lamented White, endorsed the plan of treatment. The advantages claimed are that it substitutes an incised for a torn wound, the latter being made the easier to heal. Also that by making incisions on the sides there would be less danger of those incisions becoming enlarged to a dangerous extent than when made in the median line; or, if extensive laceration should follow, the sphincter ani and the rectum would be saved. My only observations in this operation were made in Vienna a number of years ago. The objection to it there was that the cut surfaces became covered with a diphtheritic deposit

which made them very slow to heal. This was probably due to hospitalism and would not be likely to happen in private practice. But the strongest objection to be urged against the operation is that it does not always do what is claimed for it. Dr. Abegg, of Danzig, says that he has seen, even after very large lateral incisions, such extensive lacerations of the perineum, that they could not have been larger without the use of the knife. Dr. Mundé also reports four cases of rupture following the operation. We may say of episiotomy then that while it may be of benefit in a limited number of cases, it should certainly be restricted to a very few. It is capable of considerable abuse in the hands of incapable or inexperienced practitioners. It makes certain the presence of a wounded surface, always a source of danger to the lying-in woman and a danger, which, had the cut been left undone, might have been avoided. Lusk says, "It is essentially the operation of young practitioners, the occasions for its employment, diminishing in frequency with increasing experience."

In case it is deemed advisable the incision may be made, with a curved probe-pointed bistoury, introduced flat between the head and the vulva during a pain, just before the head passes. The cut should be made about one-third the distance between the posterior commissure and the clitoris, and the incision should not be deep. Care should be taken to avoid cutting the outside edge, as that might be the starting point for a rupture. The after-treatment of the incisions should consist in simply keeping the parts clean by the use of carbolyzed vaginal injections.

As I have already hinted, the head is not the only offending member in the causation of ruptures of the perineum. A considerable number seem to be caused by the passage of the shoulders, a fact, which is alluded to by many authors, but which does not seem to be sufficiently understood. I have seen it happen twice, once in a forceps case, where there was extensive œdema of the vulva and when the head was triumphantly delivered by the operator without a nick in the perineum; although

he was warned to look out for the shoulders, he did not do so, but delivered the child rapidly and tore the perineum down to the anus.

If the shoulder seems to distend the perineum very much and a rupture seems to be imminent, they must be crowded up to the symphysis pubis by the whole hand laid over the perineum, in fact, this is good practice in every case, or the posterior shoulder and arm may be pulled out before the upper one has come under the pubic arch, and thus the diameter of the child's body diminished. This latter plan might be available in cases where a small rupture has been started by the head and it is feared that the shoulder may make it larger.

The question of treatment is now pretty well established. The majority of authorities, especially the Germans, advise that the wound be treated as an accidental wound under other circumstances and in other places would be treated, i. e., by bringing the edges together and holding them there. The objections to this plan, usually urged, are that the lochial discharge, by getting into the wound, will prevent union. The answer to this is that practically it does not. Many obstetricians are content with simply keeping the knees of the patient together, with a napkin tied loosely around them and enjoining quiet. For my part I am not satisfied with such a simple method; there is too much of the "hit-or-miss" plan of treatment about it. To be sure, it does sometimes secure the desired result, and it has the merit of great simplicity and of not bothering the patient very much. But the same advantages might be urged in favor of the doing-nothing treatment, and the results would be about the same. Moreover, if we rely on the position of the thigh to keep the wounded surface together, we shall be unable to use any vaginal injections and be obliged to use the catheter for a considerable time.

But there are two plans which offer the prospects of much better results. These are the use of *serres fines* and of *sutures*.

The use of *serres fines* for this purpose was first recommended by Vidal de Cassis, and has since found many warm defenders. In the Vienna Hospital they are used quite extensively and the results obtained are excellent. In Denmark they are very commonly used and are considered a necessary part of the obstetrician's outfit. Perfect reliance is placed on them for securing a complete union.

Hoogeweg, of Berlin, reported 27 cures out of 28 cases, and other observers have reported excellent results:

Some on the contrary have failed to get good results. It must be remembered, however, that most of the reports come from European lying-in hospitals, where the hygienic conditions are not always the best possible attainable, and where the application is often left to midwives or students, and were made before the days of antiseptics. In private practice the results are always better, and several persons who have used them have told me that they always confidently expected to get union; and such has been my own experience. I have unfortunately no records of my cases. I have put them on a number of times for myself and for others in private practice, and have never yet seen a failure. The class of cases to which *serres fines* are applicable is limited. We may conveniently divide (Thomas) lacerations of the perineum into four classes. 1st. Those which only extend a short distance into the perineum. 2. Those which extend to or past the anus without involving the sphincter ani muscle. 3. Those which open into the rectum. 4. Those which involve the recto-vaginal septum.

There is another rare form when the head bursts through the center of the perineal body. As the connecting band at the fourchette should always be cut, such cases may be put in the second class.

It is to cases of the first and second class that the *serres fines* are generally applicable. Many of the first-class need no treatment at all, and some of these of the second class might perhaps be better treated with the suture. Still I would limit sutures to

the very rare cases when the laceration extends to a considerable distance on one or both sides of the arms.

I show you here one of the little instruments of which I have been speaking. They were made by Tieman, from a model furnished by Dr. Garrigues, of New York, who has written strongly in favor of their use.

The method of applying them is very simple. The woman is placed on her side, with the thighs well drawn up. The vulva is then exposed. After any ragged edges have been trimmed off, the parts are carefully washed with carbolic acid solution (1 to 40). The flaps are carefully approximated and the edges pulled somewhat out, away from the body, so as to make them thinner. The *serres fines* are then made to grasp as much of the flap as the length of their grasping arm will allow of. Two or three are generally enough, and for a short tear one will suffice. The instruments may be left in place for twenty-four hours, and then their position may be somewhat changed. Ordinarily changing the position is necessary only when the points show a tendency to produce ulceration. The changing is about the only painful part of their use. Immediately after delivery the parts are soft, relaxed and somewhat benumbed, so that generally no difficulty is experienced in applying them. As a rule they should be used within six hours after delivery; though I have known a later application to be successful. They may be removed entirely at the end of three or four days. During the time that the patient is wearing them, the knees should be tied loosely together.

There is no necessity for using the catheter, and vaginal injections may be used, but with great care. In this way a very large proportion of the lesser ruptures can be easily and satisfactorily cured. The management of the bowels will be treated of later.

For the third class of cases, when the sphincter ani is torn, or even where the rupture goes to one side of the muscle, without involving it, the retraction of the muscles is so great that it will

be necessary to unite the deeper portions of the wound. This the serres fines will not do, and we are forced to employ the suture. The advice to operate at once is now almost universally given. Says Prof. Von Hecker, of Munich, "In no department of the obstretic science have the views been advanced and corrected so much during the last 20 years, as in the prophylactic and curative treatment of rupture of the perineum;" and again, "In my opinion the right way to manage every rupture, is the application of the suture as soon as possible after delivery."

Dr. Noeggerath tells us that the reason why the early operation has been abandoned for some time, as a most unreliable proceeding is explained by the want of knowledge of these conditions that are requisite to insure success. Again he says, "The opinion has been generally adopted, that the immediate suture in all cases of rupture of the perineum is the only rational method of treatment."

Dr. Thomas would limit the immediate operation to the first three classes; as in the case were the rectal wall is involved he considers that "there is little prospect of success to be expected from an immediate operation."

Dr. Noeggerath, after a very extensive examination of the various statistics at his disposal, concludes that it would appear that complete success is obtained in about seventy-five out of every hundred cases. From my own experience and from so much of the experience of my friends, as I am able to obtain, I would place the percentage in private practice at a still higher figure. The day is past when we should be hindered by the fear of blame being attached to us if we admit the occurrence at the time. To be sure the woman *may* never suffer any inconvenience from it, and thus it may never be discovered; but if it is extensive the chances are that the examining fingers of some gynecologist, will some day bring it to light, and then will be explained the true relations of the laceration and of the consequent uterine disease.

We should not be afraid to do our duty, and the women will in the end be much more thankful, if we explain to them, at the time, the nature of the accident and take the proper means for its reputation, than if we leave them to the chance of becoming invalids for life, or reduce them to the necessity of wearing a pessary for years, or to the alternation of a tedious and trying operation.

But there are other reasons for advocating the immediate operation. It has been incontestibly proved that where the operation is done at once, the women run much less risk of these terrible diseases, which we group under the name of puerperal fever; for by the closure of the wound we reduce or eliminate entirely the chances for the absorption of septic material.

The method of applying the sutures in the early, is the same as that employed in the secondary operation. All that is required is a good, stout, round (darning) needle, and some silk or, better still, some silver wire. The needle is made to penetrate the skin, which in this region is very soft and thin, and offers very little resistance near the edge of the wound, and is then carried around in the recto-vaginal septum and brought out in the corresponding place on the other side. The upper stitches come out in the vaginal mucous membrane, and then pass through the other side from behind forward. The number of stitches required varies, of course, with the size of the wound. If the sphincter is ruptured the first stitch must be put in below the level of the lower border of the anus, so as to include the ends of the torn muscle, as was first pointed out by Dr. Emmet.

As to the fourth class of cases, although I have had no experience in the matter, I should be inclined, notwithstanding the contrary advice of Dr. Thomas, to first sew up the rent in the septum, and then to bring the rest of the wound together with wire in the ordinary way. For the septum I should use silk, putting the knot on the rectal side and bringing the ends out of the anus, or, if it was at hand, should prefer cat-gut, as it would

not necessitate an operation for its removal. If the woman were too much exhausted for an operation, I should at least try the *serre fines*, as such cases have been known to recover without any treatment at all.

The after-treatment, generally recommended, is to constipate the bowels for a number of days with opium, and then to use an enema before they move. To this plan I strongly object. In the primary, as well as in the secondary operation, I always order the bowels to be moved before hand, and then to be moved on the second day by a laxative and an enema of sweet oil. The late Prof. Simon was the first to advise this plan in later times, but old John Burns practiced it before him. Hear what he says: "It has very feasibly been proposed to induce a state of costiveness and prevent a stool for many days. But with only one or two exceptions their method has failed, the subsequent expulsion of the indurated feces tearing open the parts if adhesion had taken place. An opposite practice, that of keeping the bowels open and the stools soft and thin by gentle laxatives has been much more successful." I can only re-echo the sentiments here expressed and advise the following of his advice. And now, gentlemen, I hope that I have succeeded in presenting these old facts in a way to commend them to your attention, and that if any have hesitated to adopt these methods they will finally be convinced.

AN OBJECTION TO "LISTERISM."*

By C. M. Daniels, M. D.

Much has been said for and against the so-called "Listerism," or antiseptic spray, used and advocated by gentlemen high in authority and strongly combatted by others having equal opportunities to judge of its merits. * * * It is not my intention to try to advance any new ideas in antiseptic surgery, nor to pretend to speak authoritatively upon that subject. But as many of the

*Read before the Buffalo Medical and Surgical Association.

papers which have been read before this society have so fully exhausted their several subjects, that there has been little to comment upon, or to draw forth much discussion or criticism, I venture to present this subject this evening, expecting it will at least offer a subject for discussion.

The point taken, is in regard to the spray, as used in ovariectomy, or any operation where an elevated temperature is, or is supposed to be, required. Although such elevation is not conceded as necessary by some authorities, I believe none recommend that it should be below 80° . My attention was first called to the peculiar coldness of the spray while preparing the atomizer for use; and to satisfy myself as to the decrease in temperature, caused apparently by the rapid evaporation, I instituted a series of experiments to thoroughly test the variations practically, leaving theory entirely out of the question. I obtained a reliable ten inch thermometer and prepared several antiseptic solutions as hereafter described, using a room with a constant temp. of 100° . First experiment, used water in cup of atomizer at 58° ; spray thrown upon thermometer at a distance of 26 inches reduced temp. to 73° in five and to 70° in ten minutes, where it remained stationary. Next, used a solution of carbolic acid 1 to 20 at 58° which reduced the temp. to 73° in five and to 67° in ten minutes, showing a wider variation by 3° than with water alone. I then heated the carbolic solution to 180° , but it produced precisely the same result. Then a solution of salicylic acid 1 to 150 was tried, and produced the same result as the carbolic. Finally a solution of thymol at 180° was tried under the same conditions, and which reduced the temp. to 78° in five and to 74° in ten minutes; this was repeated with solution at 60° , but without change. This shows (perhaps in opposition to theory) that the thymolic solution evaporates less rapidly than either of the others stated. Not feeling entirely satisfied with my experiments as described, and fearing that there might have been influences exerted that I did not fully understand, at the suggestion of a medical friend, I obtained permission of the proprietor of

the Turkish bath rooms to continue my experiment there under entirely different conditions and influences, as well as in a much higher temperature, and wishing some one else to witness it, I was accompanied by Dr. A. M. Barker. We entered the room where the temperature was 135° dry heat, as shown by two thermometers, at which point it remained for one hour and ten minutes, the time consumed in the test. A carbolic solution of 1 to 20 was used as before, and the spray directed upon one thermometer at a distance of two feet. In one minute it registered 112° , in three minutes 105° and in six minutes $100\frac{1}{2}^{\circ}$, where it remained stationary for twenty minutes, thus showing a reduction of $34\frac{1}{2}^{\circ}$, or an increase of $1\frac{1}{2}^{\circ}$ over the same solution tried in a temp. of 100° , evidently showing that the greater the elevation, the greater is the proportionate reduction. This I further demonstrated by using the same solution in a temperature of 80° , and could only reduce it to 68° in half an hour, this not being as low as when the room was at 100° .

I am fully aware that these experiments were performed in a crude manner, and do not claim exactness, as certain conditions might possibly cause variations of a degree or more. But the idea I think is fully carried out, and I shall feel well repaid if this will receive enough attention to induce others to investigate further. Now, the inference naturally gained by this would seem to be that it must be productive of much harm to throw a spray at these temperatures over an opening into the abdominal cavity, as the operations are often prolonged, and sitting aside the question of irritation caused by the spray (as claimed by many) it would seem that the greater danger lies in exposing the peritoneum, while in a healthy condition, to continued cold. In my experience with our lamented friend, Prof. White, covering twenty cases of ovariectomy, I can confidently assert that the best results were obtained where the spray was not used, as the average temperature of patients during the first twenty-four hours was lower and recoveries more rapid. * * *

Clinical Reports.

COMPOUND DISLOCATION.

By Dr. C. C. F. Gay.

Compound dislocations of the large joints are regarded as the most serious injury that a limb can be subjected to; more serious, in fact, than compound fractures. Primary amputation or resection is not unfrequently required, especially when the lower extremities are the seat of injury. Amputation is a surgical resource to be employed where there is extensive laceration of the soft parts or injury to blood vessels. The same rules of treatment for the lower, cannot be applied to the upper extremities. It will rarely be found necessary to amputate for compound dislocation of the upper extremities; resection is an alternative which the surgeon will chose rather than amputation. The following in an illustrative case of conservative treatment.

COMPOUND DISLOCATION OF THE RIGHT TIBIA-ASTRAGALOID ARTICULATION. REDUCTION; RECOVERY WITH SCARCELY ANY DEFORMITY OR IMPAIRMENT OF MOTION.

J. S., æt. 38 years, on April 30th, 1881, was driving, when the horse, which was attached to a high-seated lumber wagon, took fright and ran away. The driver was thrown from the vehicle, striking violently upon the pavement. The accident occurred at 11 A. M.; I saw the patient, at the request of Dr. Van Peyma, at 2 P. M. The foot was abducted; toes everted; the extremities of the tibia and internal malleolus protruded two inches through the integument, exposing the articulating surface of the tibia; external malleolus was fractured; there was some hemorrhage. Patient was etherized. I applied an extending band around the foot and heel, by means of which reduction was readily effected without enlarging the wound; strong traction was required. The upper margin of skin was folded inward upon itself which was restored by my forefinger.

The limb was secured to a wide and well padded splint, and warm water dressings applied. The patient did well.

In seven weeks he called at my office. He used crutches.

A note made at that time in my record book, says: Wound healed; foot somewhat abducted and toe everted; motion in the joint; bears some weight upon the foot.

Five months after date of injury the ankle shows but little deformity, and there is good motion of the joint and use of the limb. It should be added that there was also axillary luxation of the right shoulder, which was at once reduced by Dr. Van Peyma.

COMPOUND DISLOCATION AT THE RADIO-CARPAL ARTICULATION.
RESECTION; RECOVERY WITH PROMISE OF A USEFUL HAND.

J. H., æt. 16 years, fell, in a planing mill, on January 30th, 1882, and sustained a compound dislocation of the left radius. Dr. Van Peyma, who had the patient in charge, called me in consultation on Feb. 20th, or three weeks after the injury occurred.

The lad was considerably emaciated and had lost much blood. The hand was much swollen and abscesses had formed in it; extremity of radius was exposed; was of a dark color; roughened, denuded of periosteum and becoming carious.

Three ligatures had been the evening before applied around the radial artery through the tissues, but the circulation was maintained in the hand by the ulner artery. Patient was placed upon the table and etherized. I first removed the ligatures—after applying the tourniquet to the brachial artery—then laid open the wound and resected an inch and a quarter of the radius by the chain saw. There was considerable venous hemorrhage; the boy very pale, pulse feeble and rapid. Hypodermic injections of brandy were resorted to. There was no displacement or exposure of the extremity of the ulna. The hand was freely incised upon its palmer aspect and drainage tube directed to be used. Sponge was placed over the wound with compress and bandage, and the patient placed in bed with

his hand and arm resting upon a pillow; after a little rest in bed the patient felt quite comfortable.

March 2d, twelve days after the operation, the wound was filling up with healthy granulations; swelling of the hand was subsiding; the boy had a good appetite and is improving in all respects. On April 24th I received a call from the boy, who came to show his hand, and he is much elated over the result. Recovery seems complete with promise in a few months of a useful hand with movable wrist joint.

COMPOUND DISLOCATION OF LEFT ELBOW; AMPUTATION;
RECOVERY.

A. K., æt. 12 years, got his arm caught in belting of a coffee and spice mill and was drawn up to the ceiling, causing a dislocation at the elbow joint. The humerus up to three or four inches of the shoulder was exposed and denuded of flesh. Soft parts were much lacerated and the brachial artery severed; pulsation felt in it down nearly to the elbow; no pulsation in forearm. Patient was etherized. Assisted by Dr. O'Brien, who brought the patient to me, I amputated by anterior and posterior flaps close to the shoulder joint; five vessels required ligation. The following day the pulse was 130, temperature 103; from this time forward the patient progressed rapidly to recovery.

Selections.

TREATMENT OF EPILEPSY.

Prof. Ball has been investigating the point as to whether the simultaneous action of several drugs is not more efficacious in the treatment of epilepsy than when administered separately, and his results obtained are sufficiently encouraging to deserve attention. The alkaline bromides, particularly those of ammonium and sodium, with belladonna and oxide of zinc, form the basis of treatment. He administers these bromides, of each 10

parts in 300 of water, commencing with teaspoonful doses four times a day, and increasing up to eight or ten doses daily, if the treatment is not followed by improvement within a few days. The belladonna and oxide of zinc are given in pill form, 15 grains of each being made up into forty pills, and of these, two are taken daily, one in the morning, one in the evening; four pills can be given daily in rebellious cases without causing any inconvenience. In congestive cases he employs drastic cathartics, bleeding, or leeches on the temples or behind the ears.

By this treatment he claims to have produced immediate good results, often seen on the second day of treatment. The treatment must not be suddenly discontinued, but the doses should be gradually reduced. For many reasons he prefers this double salt to the other bromides; it does not produce the headache or torpor generally following the prolonged use of the bromide of potassium, and even where a cure is not produced, the double bromide always diminishes the frequency and intensity of the attacks even in cases where the bromide of potassium has failed. The eruption following the use of the potassium salt is rarely seen when the double bromides are used.—*Journ. de Med. de Paris, Jan. 21, 1882.*

THE THERAPEUTICS OF VENESECTION.

Dr. Wm. A. Dunn, in a paper read at the meeting of the section for Clinical Medicine and Pathology of the Suffolk District Medical Society, summarizes his views as follows:

1. That although the errors of former days, without doubt, allowed a very great abuse of venesection, it has sufficient merit as a therapeutic agent to demand our earnest consideration.
2. If we are sincere in following the motto of our Society, *Natura duce*, we shall take the suggestions which nature gives and bleed in carefully selected cases.
3. That in febrile attacks a loss of blood will lower the temperature, and this decrease in temperature is known to be disproportionate to the amount of blood lost.

4. That by venesection we do not actually diminish the volume of blood, but we cause the blood to become more watery, the free passage of the blood through the pulmonary circuit seems to be promoted, and the functional labor which the lungs have to perform is diminished by the abstraction of a certain number of the more solid particles.

5. It is fallacious to depend upon the condition of the pulse alone as the criterion of the amount of blood to be removed, or the benefit which the patient derives by a venesection. After a venesection the pulse sometimes appears to indicate increased power of the heart's action. The artery seems to strike against the finger with more force than before the abstraction of blood. Formerly practitioners were misled by this effect upon the pulse, and blood-letting was employed as a means of increasing the power of the heart's action. The sensation which the finger receives is delusive, and is caused by the quickness of the movements of the artery. This has been shown by the sphygmograph to depend on the diminished tension of the arteries following the abstraction of blood. It is to be borne in mind, says Flint, in estimating the power of the heart's action by the sensible characters of the pulse, that the sense of resistance which is felt and the amount of pressure required to impress the artery are the evidence of strength.—*Boston Med. and Surg. Jour.*

RISKS OF INTRA-PLEURAL INJECTIONS.

A few years ago we heard far more frequently of fatal accidents occurring during the operation of washing out an empyema than we have of late; but we are reminded of these risks in a note from Prof. Billroth's clinic in the *Allgemeine Wiener Med. Zeitung* for December 20th. The writer says that Professor Billroth has become convinced of the inutility of injections for the purpose of washing out the empyemic cavity, except in the case of blood-clots and decomposing secretion; and in the latter case it suffices to perform a single but thorough injection. Thus in one case of a shot-wound in the left thorax, leading to putrid empyema, Professor Billroth made a counter-opening,

and for four days allowed thymol to flow through. In ordinary empyema the chances are favorable when the operation is done at the right time, for the longer pus remains in the thorax the longer the lung keeps atelectatic, and thus does not approach the wall of the thorax. A rib is resected, a drainage-tube introduced, and pus allowed free escape—a method of treatment much like that practiced by Hippocrates, who bored through the rib and introduced a short smooth metal tube into the opening. To diminish pus formation a rod of iodoform can be placed in the pus cavity. Injections of cold disinfecting fluids often lead to ill consequences. Professor Billroth relates one—a female, twenty years old, with empyema, who was treated by means of injections. One day, when a cure was nearly accomplished, she became unconscious during the injection, and could not be restored. Dr. Wölfler also had an older patient who became unconscious during the injection, but who recovered. Billroth explains these remarkable phenomena, that a shock is received by the organism, excited through the peripheral nerves by means of cold water, and under ever so slight conditions, it may be the cause of death; just as a mere blow on the testicle or stomach region can be fatal. Therefore it is important to employ injections, when they appear necessary, of warm fluid.—*Lancet*, Jan. 7, 1882.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, Tuesday Evening, May 2, 1882.

President, Dr. A. R. Davidson, in the chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cronyn, Rochester, Harvey, Brecht, Briggs, Hartwig, Daggett, Runner, Moody, Storck, Bartlett, Granger, Mynter, Mann and Howe, and by invitation Drs. Fell, Coakley and Crego.

The minutes of the last meeting were read and approved.

Essay—By Dr. C. M. Daniels, subject: "An Objection to Listerism." The ground taken being that great reduction of temperature is consequent upon the use of the spray, as demonstrated by a series of experiments, showing a reduction of from 26° to 33° . (Extracts from the paper appear in this number of the Journal under "Original articles.")

Discussion—Dr. Rochester stated that the idea as applied was entirely new to him, and endorsed the grounds of objection. He spoke further regarding the rapidity with which carbolic acid is absorbed when in dilute solution, and of its sometimes causing disquamative nephritis; and also referred to the extreme uses to which it is sometimes put in uterine applications, &c., which he thought demanded great caution.

Dr. Cronyn endorsed the paper and objections raised, and thought the manner of demonstration original. He considered that "Listerism" is practically doomed, but that it has been the means of improving surgical dressings in a great degree.

Dr. Hartwig also considered the objection well taken.

Dr. Moody wished to thank the essayist for the idea advanced.

Dr. Bartlett spoke in general regarding the use of carbolic acid which he has discarded altogether and referred to the tests as tried in New Orleans several years ago, where one section of the city was set apart and disinfected with it during an epidemic, but with very unsatisfactory results. He also expressed the opinion that the only true value of "Listerism" is in the improved surgical dressings.

Voluntary Communications—Dr. Hartwig presented a patient having a very peculiar condition of the skin, which created much interest, and was commented upon by Drs. Rochester, Mynter, Bartlett and Cronyn, the prevailing opinion being that it was urticaria syphilitica.

Dr. Howe spoke upon the treatment of purulent discharge from the middle ear. He had often recommended that powdered alum should be blown into the ear, which should be afterward thoroughly syringed. A recent experience, however, had taught him that this treatment was not unattended with danger. Alum

may produce a coagulum, notwithstanding the careful syringing of the ear as directed, which cannot easily be removed. He also related a case and showed specimen.

Dr. Fell raised the question of vaccination, stating that he had in several instances used the Bovine virus on the slips without success, but a re-vaccination with humanized virus was uniformly successful.

Dr. Bartlett referred to the timidity of physicians in using anything but Bovine virus, and thought that physicians should be justified in using humanized virus when carefully selected under personal supervision.

Dr. Rochester held to the opinion that some of the Bovine virus obtained was inert, or unprotective, especially when it produced unusual inflammatory action; and that much was obtained before the vesicle was in proper condition.

Dr. Cronyn seconded Dr. Rochester's remarks and believes good humanized virus to be recommended, especially if only one remove from the animal.

Dr. Hartwig concurred in the same opinion.

Dr. Briggs thought it imprudent to vaccinate largely without using the Bovine virus, and related his experiences during the past year as Health Physician to the effect that in general it had given satisfaction when obtained from reliable sources.

Prevailing Diseases—Measles and scarlatina, and Dr. Bartlett reports several cases of diphtheria.

Miscellaneous Business—The President gave statistics of the attendance of members of the Association for the past three years and commented upon the apparent want of interest manifested. He thought that the inconvenient location of the Association Rooms prevented the attendance of many physicians and suggested the obtainment of suitable rooms in some more central part of the city. He also spoke strongly in favor of more fully carrying out the Rules and By-Laws of the Association.

Remarks were made by Dr. Howe, who presented the following resolution and moved its adoption:

Resolved, That the Board of Trustees be requested to procure, if possible, a suitable room for the meetings of this Association in such location as shall be most convenient for a majority of the members.

Dr. Bartlett endorsed the resolution and spoke in favor of it.

Dr. Briggs seconded the motion.

Dr. Rochester gave some interesting reminiscences of the early days of the Association and of the discussions upon subjects then introduced, and thought much interest might be awakened if the custom was revived. Regarding the removal to other quarters, he would endorse the action of the Society and should they at any time wish to return to their present location, the College Faculty would, doubtless, again welcome them.

Dr. Cronyn was of the opinion that the lack of attendance was from indifference, and seconded the effort for removal if it promised a better future. He also related some experiences of the past when discussions sometimes waxed warm and were the features of the meetings, and kept up the attendance and interest. He thought free discussion should be invited and encouraged.

Dr. Howe thought that promiscuous discussion without previous preparation and limited time would introduce much which was of little, if any, professional importance, and that it would evidently be better to confine speakers to certain restrictions. This was not concurred in by Dr. Cronyn, who remarked that, as it was the intention to publish the proceedings, he thought that each speaker would confine himself to subjects in question and under the ruling of the chair and would feel more free to reply under such circumstances; at least such had been the past experience of the Association.

The motion for the adoption of the resolutions was unanimously carried.

The President stated that in his opinion the July and August meetings should be suspended, which, upon motion, was carried.

Adjourned.

C. M. DANIELS, *Secretary.*

Editorial.

MEDICAL EDUCATION.

In the two preceding numbers of the JOURNAL are contained the first two of a series of editorials of which this is the third and concluding. In the former, we referred to the comparative low standard of medical education, and the causes which we recognize as having been instrumental in bringing this about. We now proceed earnestly to call attention to the only remedy which in our opinion can be efficient.

The standard of medical education must be decidedly elevated. Necessarily this will result in a marked diminution of the number of candidates and still a greater lessening of the number of graduates. Such has been the result in certain European countries where the experiment has been made. The latter by diminishing the excessive rivalry and competition for livelihood in so much affords the time as the former will foster the inclination for scientific study and work. That the former object is desirable is clearly shown by the following extract from the *Medical Record*, entitled, "What is he going to do?"

"The graduation of some five or six thousand young medical men during the present spring is an event of deep importance to the profession. What are they going to do? is the question asked, not only by the parties especially interested, but by the profession and public at large. The *New York Times*, which always discusses medical questions with more than ordinary fairness and intelligence, has recently applied itself to the problem just suggested. There is now, it says, in the United States one physician to every five hundred inhabitants. The ratio of sick to well during the year is estimated at about twenty per one thousand, including the paupers. This would give about ten patients to each practitioner; but of these many are too poor to pay, and many do not call in a physician, so that five or six patients are all that can be allowed for each medical man.

Another method studying the question is as follows: The ratio of deaths is, for the whole country, not far from twenty per one thousand annually. For every death there are about twenty-five cases of sickness, or five hundred cases per one thousand annually. This would give an average of two hundred and fifty patients per year for each physician. But this number must be reduced nearly one-half, by subtracting those who do not pay, and those who are not ill enough to need a physician. With the present number of physicians, therefore, there would be two or three patients per week for each, if they were equally divided.

What need is there, then, for six thousand new doctors annually? If they do what they expect, if they practice and prosper, it must be at the expense of those already in the field."

In the present system we find that practically the control is vested in the professors of the various colleges. Their decision is practically final. If an overbold curator impertinently offers to question this, he is summarily dropped. Curators are in fact figure heads, well masked to deceive the public. The reputation and, even more, the financial success of medical colleges, as at present constituted, are unhappily directly dependent upon the number of their graduates. The temptation to yield the higher interests of the profession and the public to the more personal consideration of pecuniary success, is but rarely withstood. The professors are in fact, and with an occasional exception, deservedly the leaders of the profession. They are, as a class, fully as honorable as their brethren in the profession and no more subject to the greed of money getting, or to the acquirement of reputation by questionable resorts. And yet in fact we find the temptation too great, apparently irresistible. To remove this temptation should be the unanimous endeavor, not alone of the profession, but at least equally of the general public, who are even more vitally interested in the matter of more competent medical advisers. The control must be taken out of the hands of those pecuniarily or otherwise selfishly interested, and placed with those who, looking only to the public good, shall decide without prejudice or favor. State or national boards, appointed in

the manner and wielding power as uninfluenced as that of our judges of supreme courts, is the obvious ultimatum. Sooner or later public opinion will force this reformation. And it behooves the profession to see to it, that they remain in the van, and, not being disgracefully inactive, have it forced upon them.

The former incentive of degenerative tendency being removed, the rivalry of colleges will assume a higher and more commendable character. An impartial board of final decision existing, the various colléges within its jurisdiction and sending applicants for approval, will soon discover the new sources of reputation to be the advantages offered for study, and the character of the students recommended for the favorable consideration of the board of final resort. As is now the case with the army and naval boards, the small percentage of rejections will then constitute the honorable record of merit. The incentive will then be to increase the advantages for the study of disease, and to strive at more thorough and availing instruction. The various colleges will then find their true level, and in due time the profession will show the result in the speedy disappearance of quackery and the increased zeal for honest scientific work.

That the profession itself is mainly, if not solely, responsible for the present unsatisfactory state of medical education, and that it having at present, as it always has had, the power to remedy, either ignores or still worse, fosters this disgrace, almost passes belief. Unendurable would seem the oppression, were the origin of this evil and the power of remedy in other hands. This matter may no longer, and we have reason to believe will no longer be delayed. When the ball is put in motion, we call upon all to help it along.

EDITORIAL NOTES.

DR. JOHN T. HODGEN, of St. Louis died suddenly and unexpectedly at half past seven o'clock on the evening of April 28th.

THE nestor of American surgeons, Prof. Gross, of Philadelphia, has resigned the chair of surgery in the Jefferson Medical College. As a teacher, writer and surgeon he has had few equals and no

superior, and no medical man has been better known abroad or at home. Although of ripe old age he is still healthy, and it is to be hoped that his life may still for many years be spared for the profession of which he has been so bright an ornament.

ACCORDING to calculations made by the Medical Academy of Paris, there are at present 189,000 doctors scattered over the world. Of these there are 65,000 in the United States; 26,000 in France; 32,000 in Germany and Austria; 35,000 in Great Britain and its colonies; 11,000 in Italy, and 5,000 in Spain. Putting aside pamphlets and memoirs innumerable, it is estimated that 120,000 works have been published on Medical subjects. Of the writers 2,800 are American; 2,600 French; 2,300 German and Austrian, and 2,100 English.

THE NEW CODE OF NEW YORK STATE MEDICAL SOCIETY.—At a recent meeting of the Homœopathic Medical Society, of Lancaster, Pa., the following resolution was unanously adopted :

Resolved, "That it is the sense of this meeting, that since the practice of homœopathy has established for itself an honorable position in the estimation of the community, against all the opposing forces that the old school could bring to bear against it, there is no advantage or prestige to be derived by homœopathic physicians in consulting with *allopaths*, and therefore the recent action of the *Allopathic* Medical Society of the State of New York in resolving in future to consult with, was entirely gratuitous."

SIR WILLIAM FERGUSON, after a successful operation on a Manchester millionaire, was asked by the patient to name his fee.

"Two hundred guineas."

"Two hundred guineas," exclaimed the patient.

"Yes," said Sir William. "You forget the life-long experience required to give the proper skill, the time and toil of the journey, and the loss of practice in London."

"But you have been only ten minutes about it, said old Dives.

"Oh! if that is your only objection," said Sir William, in his broad Scotch, "the next time I come, I'll keep ye an 'oor under the knife."

PARKE, DAVIS & Co., have issued their Working Bulletin for the specific investigation of Quebracho, (*aspidosperma quebracho*). The physiological action of this new remedy, upon the lower

animals, gives paralysis of the respiratory organs and diminished frequency of the heart beat. Upon man in the different forms of dyspnœa, (from emphysema and severe bronchitis, phthisis, periodic asthma and pleuritis), the frequency of breathing has been found to be diminished and the respirations less deep. This action of the drug points to its efficacy in asthma and other diseases of the organs of respiration. We refer our readers to the proper notice under our advertisements.

Reviews.

A Treatise on the Diseases of the Eye. By HENRY D. NOYES, A. M.,
M. D. New York: William Wood & Co.

The publishers of the Library of Standard Medical Authors, made a fortunate selection in inviting the writer of this volume to present a digest of the latest views in ophthalmology. From the very first chapter it is evident that a teacher of experience is dealing with his subject from a "standpoint that is clinical and with a purpose that is practical." Moreover, one who remembers former papers and monographs of the writer, recognizes here the tendency to linger in fields which he was wont to cultivate, and beholds familiar figures which have also done good service elsewhere. Let it not be understood that this is counted as a disadvantage, for the book is written more for the student than for those acquainted with ophthalmological literature, and as such, it is on the whole, an eminent success. One might criticise the arrangement of the subject matter, or differ from the writer as to statements concerning a few minor points, but where an opinion must be summed up in the few words of a short notice like this, it can only be one that is favorable in the extreme. Students will find here a concise and clear exposition of many a point over which they have been puzzled, and more than one practitioner will turn to this book to seek for guidance in the perplexities of some obstinate "eye case."

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Original Communications.

THE DELIVERANCES OF THE RETINA.

By Geo. E. Blackham, M. D., F. R. M. S., Dunkirk, N. Y.

In the April number of this Journal is published the very interesting address, with the same title which I have adopted, delivered by Dr. F. W. Abbott before the Alumni Association of the Medical Department of the University of Buffalo, at its last annual meeting.

In this paper; if I have read it aright, Dr. Abbott lays down as facts established by the latest researches of foreign specialists and admitting of no discussion* the following :

1st. That the human retina is composed of ten layers.

2d. That the ninth layer is composed of rods and cones, which, though differing in shape, seem to be identical in structure, each being composed of an inner body striated, and an outer body which is perfectly transparent.

3d. That the tenth layer is the pigment layer which until recently has been considered a layer of the choroid, but is now considered by the latest authorities to be a true retinal layer and a very important one.

*Buffalo Med. and Surg. Journal, April, 1882, page 391.

4th. That the pigment layer sends processes down between the cones and rods filling the interspaces between them so that at the fovea each outer body of a cone is embedded in a mass of pigment which fits it as a glove fits a finger, and separates it from its neighbors on all sides by a dark opaque barrier.

5th. That the layer of rods and cones is the percipient layer of the retina.

6th. That the study of the physiology of the retina has to be entirely subjective. Microscope and test tube can not tell us what it does.

7th. That, if we compare the distance which separates the retinal pictures of two objects which can barely be distinguished with the thickness of the cones at the fovea, we shall find that they must be far enough apart to fall on two separate cones; and also that if two retinal pictures are so close together that they fall on one cone, we no longer get two sensations, we are no longer conscious of seeing two objects.

With these facts as postulates Dr. Abbott proceeds to the theoretical part of his address which he very frankly says may admit of considerable discussion.

He rejects as erroneous the theory that the rods and cones are directly sensitive to light, and the light waves in passing through the cones directly irritate them, and offers in place of it another theory which seems to him to explain the facts much more satisfactorily, which he does not claim as original with himself, but for which he gives credit to Prof. Fick's article on the eye in the *Handbuch der Physiologie*, edited by Prof. Hermann, of Zurich :

"This theory is that the rays of light do not irritate the rods and cones directly, as they pass through them, but that these light rays, after passing through the transparent layers of the retina, without doing any work, set up a molecular motion in the pigment layer, and this molecular motion of the pigment layer beating against the cones and rods irritates them."

This theory he supports by the following arguments.

1st. That the cones which are said to have been irritated by light rays are perfectly transparent, *i. e.*, they allow ninety-nine per cent. of the light to pass through them unchanged.

2d. That while it is impossible to deny with mathematical certainty that one per cent. of the light is sufficient to irritate the cone and give sensation, yet, since faint starlight suffices to excite the retina, while sunlight or the dazzling glare of electricity is necessary to print a picture on the photographer's plate, analogy and reason teach us that it is impossible that ninety-nine per cent. of the faint starbeams have gone to death or been uselessly absorbed in the pigment, and that one per cent. only has been utilized in doing the work for which the retina was intended.

3d. That if this theory is true, we are not obliged to attribute special properties to the optic nerve fibres and rods and cones, which isolate them from the rest of the nervous system.

When a theory is offered as new by an authority of sufficient standing to make it worthy of investigation, two questions naturally arise.

1st. Is it new ?

2d. Is it true ?

The second, of course, being the much more important one.

That this theory is not new will, I think, be evident to any one who will read through the chapter on vision in Draper's *Human Physiology*, published by Prof. John W. Draper, M. D., LL. D., of New York—7th Edition, 1865—eighteen years ago. Dr. Draper there shows, that assuming the retina to be perfectly or very nearly transparent, it is unfitted for the reception of images; that the light rays pressing through the retina are absorbed by the pigment layer, and thereby raise its temperature in varying degrees, that is to say, set up a molecular motion, which is recognized by the rods and cones (or as he calls them the club-shaped particles of Jacob's membrane). Prof. Draper by no means ties himself to the calorific expression of his hypothesis, but says distinctly :

“It remains now to add that this is only one manner of looking at the thing. According as our hypothesis of the nature of light, of its relations to heat, and of its manner of establishing chemical changes may be, the special explanation we give of the functions of the eye will differ; yet there is such a relationship among these hypotheses that we can, without any difficulty, convert an explanation derived from one into an explanation derived from another. It really comes to little more than a translation of phraseology. I have found the calorific hypothesis convenient. * * * Yet, with almost equal convenience, the function might have been treated otherwise, viewing light as arising from ethereal undulations, the additional advantage then being obtained of establishing a parallel between the action of the organ of sight and that of hearing. Or, in like manner, the case might have been viewed in its purely chemical aspect, photographically, as it might be said. * * * But this, again, amounts only to a different mode of stating the same effect, since, as I have shown, all chemical changes accomplished in material substances are occasioned by the establishment of vibratory motions therein, and Ampere has already demonstrated that all the phenomena of heat may be explained upon the doctrine of the vibrations of the constituent molecules of bodies.”*

It is evident then that Dr. Draper announced at least eighteen years ago this theory, that the rays of light passed through the layer of rods and cones were absorbed by the pigment layer—spent their force in setting up molecular motions in that layer—which motions were perceived by the layer of rods and cones which he describes as tactile organs, and further that the molecular motions set up in the pigment layer might be described in terms of heat, light or chemical activity as might be most convenient. Thus much as to the newness of this theory and its transatlantic origin. Next as to its truth.

Two methods, at least, are open to those who wish to disprove a theory.

*Draper's *Physiology*—7th Ed.—Harper Bros., N. Y., page 399.

1st. To show that it is inconsistent with the postulates on which it claims to be founded, and

2d. To show that the postulates are not in themselves correct.

1st. Then, this theory is inconsistent with the postulates laid down by Dr. Abbott, in that, in order to distinguish two objects or points as separate, their retinal images must fall on two separate cones, while if so close as to fall upon one cone only we get only one image. This shows that it is upon the cones themselves and not in the intermediate pigment that the images must be formed. Further, if the images were formed and the molecular disturbance which originates vision set up in the masses of pigment which separate the cones, more than one cone would necessarily be irritated by each mass of pigment thus thrown into molecular motion.

If we stand up a number of sticks in water and drop a stone among them so as not to touch any of them the impulses thus conveyed to the particles of water will spread in every direction, as shown by the circular wave on the surface, and beat upon at least four of the sticks. Thus a molecular motion set up in the pigment between the cones would spread so as to affect, at least, four cones, and the result, according to Dr. Abbott's postulates would be four sensations or images instead of one.

It is thus shown that this theory is not consistent with the postulates upon which it claims to be based.

Now as to the correctness of the postulates themselves :

1st. As to the question whether the retina is composed of nine or ten layers, and whether the tenth, the pigment layer, is properly assignable to the retina or choroid. It is to be remembered that this is largely a matter of nomenclature, and that these lines of demarcation are often artificial and imaginary, and while serving a purpose for description have no more real existence in nature than the equator or the tropics have on the material globe.

For reasons which I will give further on it seems better to me to consider the pigment layer as a part of the choroid, but it is no great matter after all.

The anatomical relations of the rods and cones to the pigment layer, as described by Dr. Abbott, may be accepted, but transparency of the rods and cones must be qualified. That they are practically transparent and colorless when viewed by ordinary light is easily demonstrated; that they (the rods at least) are not so at all times and under all circumstances, in fact, that such is not their normal condition, is also, though not so easily, demonstrable.

Herr Fr. Boll, in a communication to the Berlin academy (in 1876), announced the beautiful and, beyond doubt, important discovery, that the bacillary layer of the retina of all animals is in the living condition not colorless, as has been hitherto supposed, but of a purple red color. During life, says Boll, the proper color of the retina is continually being destroyed by the light which falls into the eye; it is restored in the dark, and after death remains only a few moments. Animals which have been kept in the light are therefore very unsuitable for demonstrating the living color of the retina, and the eyes of animals which have been exposed to the sun for a long time before death remain absolutely colorless. These facts illustrate the relation of the retinal color to light on the one hand, and to vital conditions on the other.*

Kuehne goes on to show that the process of bleaching and removal is continually going on in the normal eye during life. It is thus shown that the light does not normally pass through the retina without doing any work but that it finds employment in the bleaching process, and hence that the portion of it so consumed never reaches the pigment layer, and hence we are not confined to the two alternatives of belief that either the light is wasted or is expended in setting up molecular motions in the pigment layer, since it has enough to do in causing chemical

*Dr. W. Kuehne on "The Physical Chemistry of the Retina" and on "Visual Purple"—English translated—Edited by Prof. Michael Foster, M. D., &c., London, 1878.

changes in the bacillary* layer which Dr. Abbott states "is the percipient layer of the retina."

This seems to answer fully the first and second arguments adduced by Dr. Abbott in support of the theory under discussion. As to the amount of light necessary to excite the retina and the photographer's plate respectively, it is only necessary here to note that there are different degrees of sensitiveness in eyes and in plates, and that some recent dry plates so far from requiring sunlight or the dazzling glare of electricity to print a picture on them, are perfectly responsive to the light of a common kerosene lamp, as a photo-micrograph now lying before me, the negative of which was taken by a few seconds' exposure to lamp-light, amply testifies.

That images are really formed in the bacillary layer of the retina has been shown by Kuehne, who has succeeded in fixing them sufficiently to be exhibited after the eye has been removed from the body.

"Indeed, by confining rabbits in darkness for a length of time and then exposing them to a bright window crossed by bars, decapitating them in a room lighted only by a sodium flame, and treating the retina by a solution of alum, * * * a picture or optogram can be developed and fixed upon the retina and preserved for future study. Such a picture is given in the diagram (fig. 4) copied from the *New York Medical Journal*, March, 1881, and taken by Dr. Ayers who worked with Prof Kuehne in his laboratory."*

If the percentage of the light rays which do not pass through the retina without doing any work are sufficient to produce these photographic effects it may well be believed that they are sufficient to originate the sensation of vision.

As to the final argument that this theory, if true, relieves us from the necessity of attributing special properties to the optic fibres and the rods and cones, I can not see that this is any

*Noyes, on "Diseases of the Eye." Wm. Wood & Co., New York, December, 1881, pp. 5 & 6. See also Foster's *Physiology*, 3d Ed. MacMillan & Co., New York, 1880, pp. 533 to 538. Also Kuehne, l. c.

advantage. I was under the impression that this very specialization of function was one of the distinguishing marks of a high degree of development or exalted position in the scale of animate existence. Not only is this true, but, according to Kuehne, the possession of these special properties brings the terminal fibres of the optic nerve into harmony with other nerves of special sense which are peculiarly sensitive to chemical action viz. : the nerves of taste and smell. It seems then neither the postulates upon which this theory is founded nor the arguments by which it is supported will bear critical examination in the light of late researches.

We may conclude then that the human retina is composed of layers; the ninth, being the bacillary or rod and cone layer, is continually being stained purple by the pigment layer* and bleached by the action of light; that is necessary for the images to be found in this bacillary layer, that visual impressions may be received, therefore it follows that these images must not be formed in the pigment layer. The pigment layer being the source of the sensitizing material or materials (visual purple, etc.,) may be compared to the photographer's sensitizing bath (in the wet process), and the bacillary layer to the plate from which the image is continually being effaced by the resensitizing process. That ninety-nine per cent. of the light does not pass through the retina without doing any work to be absorbed by the pigment, but enough is used up in the retina to produce images by bleaching, and hence enough to imitate visual sensations. Therefore while Dr. Draper, eighteen years ago, may have been justified (before the discovery of the color of the living retina) in adopting the theory that it is in the pigment layer, and not the bacillary layer, that images are formed and visual sensations initiated, we are not at present, and in the light of recent investigations, justified in accepting that theory.

*The pigment layer is thus seen to be a depot or magazine, while the visual purple, derived from the abundant blood supply of choroid, is stored up till wanted to resensitize the bleached portions of the retina; it therefore seems better to consider it as a layer of choroid which is essentially a vascular and pigmentary structure than of the retina which is essentially a nervous and sensitive structure, but as I have said this is largely a matter of convenience of nomenclature.

On the other hand we are not justified in rushing to the conclusion that vision depends *solely* upon the bleaching of visual purple which has been absorbed by the bacillary layer of the retina, for Kuehne and others have shown that vision is possible without visual purple. There may be, and probably are, other substances concerned in the photo-chemistry of the retina. What has been shown is that the changes, whatever they are, take place chiefly in layer of rods and cones and not in the pigment layer.

Happily, though we are not at present prepared to formulate a complete theory of vision, we are constantly accumulating information on which to found one. The microscope has revealed to us the structure of the rods and cones, and the fact that light does produce an effect on this structure (in addition to the bleaching). The test tube has helped us to a knowledge of the chemical constitution of visual purple, and its reactions under the influence of various kinds of light and with various reagents. The study of the physiology of the retina has ceased to be "entirely subjective," and has thus been removed from the nebulous domain of metaphysics to the firmer if more prosaic region of physical science.

"SEWER GAS" AND ITS DANGERS.*

By A. R. Davidson, M. D.

At the last meeting of this association one of our members reported the death, from diphtheria, of three children in one family resident upon Delaware avenue. Subsequently it was discovered that the drainage of the house was defective and ready admission afforded to sewer air. The same physician reported three cases of diphtheria in another family, resident in a dwelling supplied with the recent improvements in drainage, and certainly free from all suspicion of sewer air contamination. In this last case the children all recovered. The discussion which

*Read before the Buffalo Medical and Surgical Association, July 1st, 1882.

followed showed some divergence of opinion among ourselves as to the dangers arising from sewer air; but the chief incentive which has induced me to offer a paper upon the subject, is the publicity which the sad cases, reported by Dr. Rochester, have received, and the public alarm and uneasiness created by over-talking and sensational statements concerning sewer gas, and its effects upon the health of the community.

One widely circulated newspaper asserts "on the authority of our most eminent physicians" that "diphtheria is caused by a subtle and insidious gas—the more terrible because it can not always be detected by the smell." A plumber, in the columns of the same paper, recites at length his experience of the noxious qualities of the gas, and gives to the public and profession new light as to the ætiology of diphtheria and other diseases by the statement that "from imperfect sewers escape *little brown bugs* invisible to the eye, which lodge in the throat, causing a bronchial affection—in time they originate disease and then death." Such extraordinary statements are by no means confined to our own city. A San Francisco paper for instance, heads an article "*Died of Sewer Gas, 658,*" as we read further however, we find that the editor has attributed all the deaths in excess of those for the same period in the preceding year to its deadly influence, and claims to be supported in this assertion by "the Board of Health and all the best physicians of the city."

The happy householder who has enjoyed a blissful feeling of security concerning the sanitary condition of his house, is thus suddenly awakened to a sense of hazard and possible danger to his own little ones. He asks the advice of a number of persons and finds that in a multitude of counselors there is confusion. One man tells him that his fixtures are all right. Another that his traps are useless. If he ventures the hope that they must be effective, as he has never perceived any smell, he is informed that "pure sewer gas has no odor and is consequently the more deadly the less odorous it is." So from one plumber he receives

hope and by another he is plunged into despair, and finally, in a state of ludicrous bewilderment, he usually appeals to his family physician; unfortunately there is no lack of contradictory opinions and recommendations from medical men; there is hardly an ill of the human body and scarcely one of the human mind which has not been by some attributed to the malignant and subtle influences of sewer gas.

In fact, however, as I stated in the discussion last month, there is no such thing as sewer gas. Sewers contain air, mixed with various kinds of gases, in greatly varying proportions. These gases do not and can not produce specific contagious diseases, such as diphtheria, scarlet fever or typhoid fever. Our own State Board of Health officially says: "*No such gas as sewer gas exists and there is absolutely no proof that the diseases which attend the admission of sewer air into our dwellings, are produced by gases.*"

The term "sewer gas" is often used by chemists and sanitarians, but only as synonymous with sewer air, and this has led to the popular error that sewer gas is a distinct gaseous body, having peculiar and marked characteristics of its own.

The composition of sewer air is ordinary air, with the addition of rarely over half per cent. of carbonic acid, one per cent. of sulphuretted hydrogen and traces of ammonia and foetid organic matter. The very common belief that sewer air is, in itself, particularly noxious, is a mistake. The mortality among the men who work in sewers, sometimes for hours daily, is no greater than that of the same class of laborers engaged in other avocations. If "sewer gas" was as deadly as reported, the mortality would indeed be frightful, for I venture to say that of the houses of this city connected with the sewerage system, nine-tenths are more or less accessible to it.

In the great majority of cases sewer air is not even dangerous, except it be taken in very concentrated doses, or breathed over and over again in a living room. In the later case I believe that, though it cannot produce specific disease, it tends to

produce headache, loss of appetite and a condition of debility (especially in children) which disposes the system to be more readily affected by the immediate and specific cause of disease. The connection, however, between diphtheria (for example) and bad plumbing is by no means that which many people seem to suppose, and the spread of diphtheria in houses which have no communication with the sewer is neither uncommon nor unaccountable. The disease, undoubtedly contagious, is propagated by micrococci coming from those affected by it. Sewer air is a possible means of conveying them after they have been introduced into the sewer with the discharges of the sick. It is by no means the only medium, and important as it is to exclude sewer air from our houses; it is not true that this exclusion forms an absolute safeguard against this or any other disease. The conditions existing in a well constructed sewer are not (though the contrary opinion is generally sustained) very favorable to the culture or preservation of the microbes of disease; and even if the sewers are not clean the danger arising from them may be very easily exaggerated; the sediment is mainly inorganic, and non-putrescible matter such as mud from the street and sand and gravel from roofs; the organic matter being lighter than water generally passes off, even in those in which there is a good deal of deposit. There is no doubt, however, that especially in large sewers, where the flow occupies but a small part of the arch, that the presence of ammonia with moisture and warmth would furnish an opportunity for the development and propagation of such contagia. And we may reasonably suppose that these bacteria or germs may become detached and be carried by currents into the outer air or through defective pipes into our dwellings. The possibility of this affords sufficient reason for the employment of the utmost care in the exclusion of sewer air from our houses. The fact that on 364 days in the year a little sewer air may enter without any injury to the inmates—is little comfort, when we realize, that we know not when the odd day may come, when it may bring with it the germs of disease.

This possibility, however, is completely removed if communication between the street sewer and the house drain be cut off by a simple water trap and proper ventilation. "The trap" then is an exceedingly important appliance, and as there are many physicians who are not familiar with those in use by plumbers, I do not perhaps need to apologize for calling your attention to some common forms of them. Of patent traps there are no end; each claiming on its honor as a trap to be impervious to sewer air. I will call your attention to the two of them most highly commended by good authorities. Both are a combination of a water seal and a mechanical obstruction, and for use under sinks, bath tubs, wash bowls, &c., they offer some advantages over the ordinary water traps.

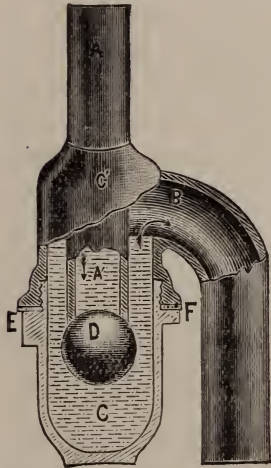


Fig. 1.

Fig. 1, (see cut) is the Bower Trap. The inlet pipe A connecting directly with washstand, sink or other fixtures. B represents the outlet pipe, connecting directly with the main waste pipe. The cup-shaped chamber C remains filled with water to the level of the outlet pipe, thereby floating the hollow ball D firmly to the mouth of the pipe A, making a perfect seal.

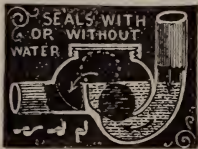


Fig. 2.

Fig. 2 represents the Cudell Trap, also simple in its construction and not liable to get out of order. The ball, being made of metal, in this case closes the inlet pipe by its own gravitation. This trap offers one advantage over the first named in that its seal is good even in the absence of water. The patent traps are, of course, more expensive than the old fashioned S. trap, various forms of which I show you. (Fig. 3.)

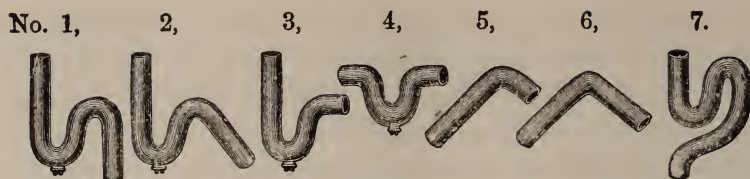


Fig. 3.

No. 1 is what is known as the full S. No. 2 $\frac{3}{4}$ S., No. 3 $\frac{1}{2}$ S., while Nos. 4, and 7 are respectively named the Running—and the Bag trap.

There is for ordinary use no better trap than the common S, properly ventilated. The objection is made to them with some reason, that when rooms are left unoccupied for some time the constant current of air passing through the vent pipe will cause the evaporation of the water and thereby unseal the trap. This may certainly happen, in hot weather especially. It is always a wise precaution when at hotels, for instance, on being shown into a room provided with a stationary wash stand, to at once turn a small stream of water from the faucet into the bowl, thus ensuring the sealing of the trap and security against any further admission of the sewer air.

But those of you who are familiar with the statements of persons interested in the sale of appliances alleged to be sewer gas excluders, or of chemicals possessed of magical disinfecting properties, or who have read the oft quoted article of Prof. F. H. Hamilton, read before the New York Academy of Medicine, entitled "The Struggle for Life against Civilization and Æstheticism," will perhaps reply; "the water trap is no security."

In the paper referred to Dr. Hamilton says: "The foul gases readily pass through water, and there is no security against sewer gas, but the proper use of chemicals, supplied to the traps daily"; perhaps recognizing the impossibility of carrying out such a recommendation, he further advises as the only real security, the placing of all plumbing fixtures in an annex to the building. Dr. Hamilton's views were seconded by Prof. Doremus, who advised that chemicals should

be applied to the water traps every time they were used by a mechanical contrivance. He demonstrated the passage of sewer gases, ammonia and sulphuretted hydrogen through $\frac{1}{2}$ -in. glass traps, as I do now. (Experiment shown.) It will be seen that the proper reaction upon the test paper placed above the water in the trap, takes place in the case of the ammonia in 15 minutes with sulphuretted hydrogen in three to four hours. Those who have been alarmed by such statements, will take comfort from the sensible remarks of Dr. Billings, who said, referring to Prof. Doremus experiments, "that they did not prove anything as regards the passage of sewer gases through traps of water. The gases in the flasks are almost pure and the amount of water in the glass tubes very small and soon saturated. In the soil pipes the offensive gases are greatly diluted with air and the very careful experiments of Dr. Carmichael, of Glasgow, made with an ordinary water closet and a soil pipe, which had been used for a long time, showed conclusively that the amount of gases which pass through a water trap from a ventilated soil pipe, is so extremely minute that it can only be detected by the most delicate tests." The experiments referred to by Dr. Billings are published in the March number of the *Sanitary Journal*, of Glasgow, and were most carefully performed. The amount of ammonia which passed through an ordinary S trap by absorption on the surface of the water on one side and diffusion upon the other, varied from about 1-400 to 1-200 of a grain in 24 hours. Sulphuretted hydrogen passed through the trap in 24 hours to the extent of 1-100 of a grain, and carbonic acid 7 to 10 $\frac{1}{2}$ grains in the same time. These are the quantities of the only sewerage gases existing in the soil pipe in estimable quantities, which pass through in an ordinary ventilated water closet trap in 24 hours. If the trap is not ventilated the amount is slightly increased. The result being ammonia 1-100 of a grain, sulphuretted hydrogen 1-60 of a grain, carbonic acid 32 grains, diffused into the atmosphere of a house gradually during the day; it need scarcely be said these quantities are absolutely harmless.

But the alarmist replies, granting that these experiments are conclusive, "the water trap is no protection against the germs of disease and if they pass over in any quantity, they will reproduce the disease." It is true that even the extreme dilution does not absolutely remove this danger, but the experiments of Dr. Carmichael show conclusively that germs, putrefactive or specific, will not pass through a sound water trap. Time will not allow me to recite the experiments referred to, but they prove conclusively the fact stated.* Prof. Janeway, of New York, and other competent observers make the same statement.

Water traps are therefore for the purpose for which they are employed perfectly trustworthy. They exclude the sewer air to such an extent that what escapes through the water is so little in amount and so purified by filtration as to be perfectly harmless. And they exclude entirely all germs and particles including the specific germs or contagia of disease.

We have them at our command a simple, complete safeguard against the evils conveyed by sewer air, but unfortunately I have also to add that through carelessness and ignorance we very seldom avail ourselves of it. Until late years, at least, traps have been so placed that in the great majority of cases they failed utterly to accomplish their purpose.

The not unusual course of the plumber is to tap the sewer, lay the drain pipe right into the dwelling, run up a stack of 4-in. soil pipe to second floor, place a full S trap right on top of vertical pipe, set both tub, wash stand, water closet, sink, &c., and report the job thoroughly done and everything safe. The householder is shown a trap upon the pipe leading to every fixture, and he is confident that there is no possibility of sewer air entering his house. The fact is, however, that such an arrangement is no protection at all. Each one of these traps are liable to be syphoned, and as a matter of fact may be unsealed most of the time. Again, as in our sewers we have no

* A reprint of Dr. Carmichael's article will be found in the *Sanitary Engineer* of New York, vol. III, page 212.

provision for ventilation, the gases having free access to the house, and in winter, especially, being drawn into it by the comparatively high temperature of our rooms will force the seals even when the water is in the trap. I am informed that of late years such plumbing is not often done, but I venture to say that half the houses of Buffalo have a drainage arrangement similar to this or one equally faulty.

Syphonage of the trap results from a vacuum, or partial vacuum, being formed in the waste pipe below the trap. When water enters the soil pipe, it displaces a body of air in front of it, forcing it either into the main sewer—the open air through ventilators, or into the house through weak water seals—at the same time the partial vacuum produced above empties the water out of every trap which it passes. If a perfect vacuum could be produced, the pressure of air would equal about 15 lbs. to the square inch; the column of water in a trap rarely exceeds $1\frac{1}{2}$ inches, and it therefore would not require more than 1-240 part of a perfect vacuum to displace all the water on the inlet portions of a trap, so that air can pass through. This possibility of syphonage may be obviated by suitable ventilation of every trap, but we cannot have this without suitable ventilation of the whole house drain, and this is a matter of the utmost importance. To accomplish this, it is first necessary to carry the soil pipe through the house, giving it a ventilation above the roof. To this pipe *each trap* should be connected by a good-sized air pipe, having connection to it above all fixtures. We thus prevent the possibility of syphonage or the accumulation of gases in any pipe.

We have now provided an excellent ventilation for the sewers *through* our house. This is certainly a great improvement upon the first plan which ventilates the sewer by allowing the gases to flow *into* our house. I am informed a goodly number of our dwellings have gotten this far in the march of sanitary improvement. But with the possibility of germs of disease existing in the public sewers it is unwise to permit them to have ready access to the drainage system of our houses. Plumbing wears

out, traps become syphoned or lose their seals by evaporation and we run risk enough in taking the chances of being poisoned by our own house drains without adding a thousand-fold to it, by having the foul air of the sewers sweeping through our drain. The words of Prof. Jenkin, of Edinburgh, are pertinent in this connection, though a little overcolored. "All town sewers must be treated as tainted, since, at some time or another the taint is sure to arise. True, the germ may get into our house drains, and breed millions of other germs, and yet we may escape, for our internal fittings may be so perfect as wholly to exclude the hostile army, but who would be so foolish as in a dare-devil way, to allow this army to lurk at every closet, at every sink, at every bath, in every pipe of our house waiting at a hundred outlets for just one opportunity to creep through, *when we could bar the door effectually at one main entrance.* To admit gas from the common sewer into the private drainage system of our house is to lay on poisoned air all over the house with taps to draw it off, placed at random, with the hope that by no accident no single tap may ever be turned the wrong way. Surely, one would think such folly could never be committed, yet not only is the practice common, being due to ignorance, but actually some modern sanitary engineers recommend arrangements by which every house is directly connected to the common sewer, trusting to the hundred little devices inside the dwelling to exclude the poison." In *Buck's Hygiene and Public Health* it is stated, "a common plan of arranging house drains is to carry the pipe directly into the sewer, without a break in the continuity and without providing a means of ventilation, dependence being placed upon the small traps in the house to exclude the sewer gas. This is a most delusive practice and cannot be too severely condemned." An efficient trap should be placed in the main drain just outside the house, but this plan is not complete, for it does not insure a free circulation of air through the house drains. An opening should be made in the drain pipe between the trap and the house, communicating with the outside air and

protected above the surface of the ground by a grating, so as to form an air disconnection between the house pipe and the drain leading into the sewer. To make this plain, I have here a drawing (see fig. 4,) which shows a house drain arranged as it should be, with a running trap in the main drain, and a ventilated pipe attached to the house side of the drain.

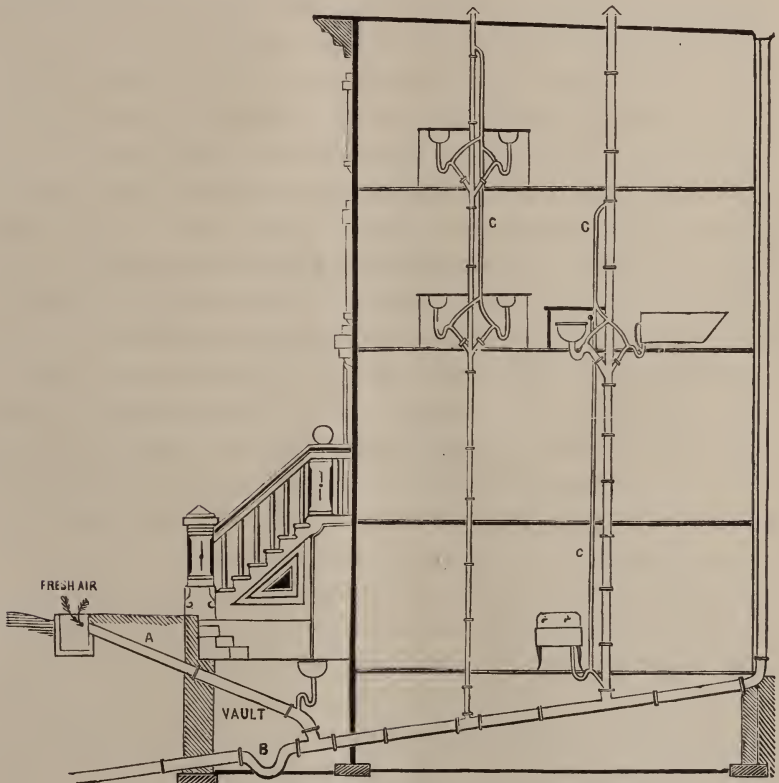


FIG. 4. ILLUSTRATION FROM "THE SANITARY ENGINEER."

Though the isolation of each house is so easily accomplished in the manner described, it is but rarely done. There is no novelty in the principle. It is commended by the highest sanitary authorities; properly done it completely cuts off all danger from sewer air, except that which is generated within the house, and which will not be poisonous except when con-

tagious illness is present there. It is true that when there is much pressure of air in the sewers the trap may be forced, and to prevent this it is recommended to carry a pipe up to the roof from the sewer side of the trap; this completely does away with the possibility of the seal being broken; but if the sewers themselves are ventilated there is no need of this. It is, however, absolutely necessary to have the ventilating pipe connected with the house side of the trap, otherwise we impede the circulation of air within the house fixtures. Such a circulation is of course essential, and as the temperature in the soil pipe and in the inlet pipe is never the same, there will be a constant circulation of fresh air through the house pipes and no possibility of stagnant air in any part of the house drain.

The principal arguments against placing a trap in the main drain, are: 1st, that it may impede the flow of house waste into the sewers; 2nd, that it may interfere with the ventilation of the public sewers. As regards the first objection, that is not likely to occur excepting where the drains have not a sufficient fall, or where they are of too large size, or not adequately flushed. As to the second objection, that it may interfere with the ventilation of the public sewers, I would say that the public authorities should provide proper means for ventilating the sewers so that there would be no need to use house drains as vents. I am informed that most of our sewers are unprovided with any means for ventilation, thus very greatly increasing the dangers arising from sewer air. The air is displaced sometimes with great force by the constant fluctuation of the volume of sewage; unless openings are provided to accommodate these changes, the effect is directly exerted upon the house trap.

Mr. Latham, in Buck's *Hygiene*, recommends the method of ventilation by man-holes in the centre of the street, the openings should be large and sufficiently numerous to ensure complete ventilation of every part of the sewer. In no case in which houses are connected with the sewers, should the distance between ventilators be more than 200 yards. These openings

should always be placed in the middle of the street, so that the escaping air shall be diluted as much as possible before reaching the sidewalk. Thorough dilution is the great safe-guard. If this be secured, sewer air is robbed of its noxiousness. Many of the English cities have introduced ventilation in the main sewers in the manner proposed. In the wide streets the foul gases mix so rapidly with the air that no unpleasant odors are perceived and the death-rate is said to have markedly lessened since the introduction of the thorough ventilation of the sewers.

There is much to be said on this and on other parts of my subject, of which time will not allow me to speak. It has been my object to bring to your attention simply the leading principles of house drainage, which have received the commendation of the best authorities. With the manifold details—in the choice of materials, of fittings, and of modes of designing and executing work—the physician has little to do. When consulted, however, he should insist on the five cardinal principles to which I have referred, viz :

1. Complete disconnection of house drain and street sewer.
2. Ventilating pipe at foot of house drain.
3. Soil pipe to be carried above the roof and not to be used as a conductor of rain water.*
4. Every fixture to be provided with a trap, suitably ventilated.
5. The whole system of piping inside to be water-tight and gas-tight.

In the execution of the work we are generally at the mercy of the plumber, and an inspection of our houses would show a great deal of careless and ignorant plumbing. The law provides some security for the favored citizens of New York and Brooklyn, by requiring the registration of every plumber and the submission of plans and inspection of all new work in dwellings, by the Board of Health. The benefits of this law should be ex-

*There is no objection to, but rather an advantage in the access of rain water to the house drains by an independent pipe, as shown in Fig. 4.

tended to Buffalo. The only people whom we would suppose would oppose it would be builders of pasteboard houses, and plumbers who do cheap and dangerous work. No honorable and self-respecting plumber can compete with men who lack both skill and conscience, and hence the latter class have full sway in cheap contract work.

The respectable plumbers of Buffalo have wealth and influence enough to procure the extension of this law to this city, and it is a matter of surprise that they have hitherto taken no action in the matter.

Clinical Reports.

CASE OF IMPERFORATE ANUS.

Reported by Herman Mynter, M. D.

Johanne Falk, born November 20th, 1880, was brought to my office June 9th, 1882. At birth, as far as could be learned, no anus was found, but through a recto-vaginal fistula the child was able to have fluid evacuations. As it grew older, more and more trouble was experienced, and when seven months old, the family physician opened the pouch of the rectum by a linear incision. As far as could be learned, no other after-treatment was used than introducing the finger into the wound to prevent contraction. The wound healed in the course of six months, but the cicatricial contraction was so great that no benefit was derived from the operation. During the last six months the child has been feeling quite well, but the difficulty of fecal evacuation has increased very much of late. The evacuations have taken place exclusively through the recto-vaginal fistula and only by aid of frequent injections. By examination, the abdomen was seen large, full and hard. By inspection of the perineum a funnel-shaped fistula, about $1\frac{1}{2}$ inches deep, with whitish, hard, cicatricial walls, was found as the result of the former operation.

The fistula was so narrow that only a common-sized probe could be introduced through the deeper part. Behind and just above the hymen a recto-vaginal fistula was seen, through which a large-sized catheter could be introduced into the rectum, but not large enough to pass the little finger. Under chloroform, Drs. Mann, Folwell, Bartow and Davidson being present, the perineal fistula was incised backwards and forwards so much that the index finger could be introduced into the rectum. The pouch of the rectum was found about $1\frac{1}{2}$ inches from the surface, dilated and spacious. The lateral cicatricial walls of the fistula were dissected down to the pouch, and the lateral and posterior wall of the rectum loosened with scissors for about two inches, while the anterior wall (septum recto-vaginal) was not disturbed as by the division of the perineum forwards, the rectal opening of the fistula was brought much nearer the surface and by a suture could be united with the skin. The pouch of the rectum could now easily be united with the loose skin by numerous sutures, those posteriorly especially including a great deal of tissue. After the operation two fingers could with ease be introduced into the rectum. The wound was covered with borated cotton. The sutures cut through in five days; union by first intention took place in the anterior half of the wound, but in the posterior part the rectum retracted and left about one inch to be healed by granulation. From the fifth day castor oil was given every day, and every morning, for about fourteen days, large, hard, round fecal masses had to be dug out with the finger. The abdomen gradually became softer, the appetite improved, and at last regular evacuation of the bowels took place. In the course of four weeks the child was sent home into the country, and the mother instructed to introduce a large flexible rubber bougie morning and night and keep it there for $\frac{1}{2}$ hour.

July 15th.—The child was brought back for examination. Wound almost healed; no visible tendency to contraction; bowels move regularly and with ease, and the child has im-

proved much in general health. The recto-vaginal fistula is much smaller and scarcely anything passes through it when the bowels move. The parents were instructed to continue the use of the bougie for an unlimited period. Of the different varieties of imperforate anus, the one in which the rectum opens into the vagina is the least serious, as the child generally suffers very little inconvenience as long as the evacuations are semi-fluid. But as soon as the excrements begin to become solid, serious consequences occur on account of the distention of the colon with following colitis, and an operation is necessary. The linear incision with introduction of bougies afterwards, is very seldom successful, and it is therefore advisable to resort to the more thorough operation of dissecting the gut loose and uniting it with the skin, a method well described in Holmes's surgery.

In the case reported the Rizzoli method was not carried out to its full extent, as by dividing the perineum forwards the anterior part of the rectum could be united with the skin without being dissected loose from the vagina. The fistula was therefore left undisturbed in the hope that it, as "happens tolerably often," might close of its own accord. Although this has not occurred so far, it has diminished considerably in size, and time will show whether farther operative measures will be necessary to close it perfectly.

AORTIC ANEURISM—REPORT OF A CASE MEASURING FIVE BY EIGHT INCHES IN DIAMETER AND WEIGHING FIVE POUNDS.

By Chas. C. F. Gay, M. D., Buffalo, N. Y.

W. G. B., aet. 61, for many years actively engaged as principal partner in a large Dry Goods House of this city, died on October 16th, 1881, of aortic aneurism of about four years' duration.

HISTORY AND SYMPTOMS.

On January 14th, 1877, Mr. B. was suddenly taken ill at night. His symptoms were alarming and of a character to give rise to the apprehension that he had fatal cardiac disease.

The pulsations of the heart were feeble; he was faint; his extremities cold, and there was some pain that resembled that of angina pectoris. I was called to him twice the same night.

He was detained from business not more than a day or two and never had another illness of the same nature. Sometime subsequent to this attack he had severe pain in his foot—he may have had it before—which was believed to be rheumatism. He thought this pain of the foot of the same character which he afterwards had in his shoulder; he had repeated attacks of it up to a short time prior to his death. With this exception his previous health had been good; he had never received injury or had any constitutional or inherited ailment. One sister had a tumor of the breast, another had been an invalid many years.

About three years prior to his death he began to have pain in his shoulders and back part of the neck, extending up to the back part of the head. This was supposed to be also rheumatic, and was at times so severe as to destroy his rest at night, but which yielded not the least to rheumatic remedies.

Nothing but respite from the cares of his large business had any remedial effect. Three or four weeks' rest and travel would restore him to apparent health. Three or four of these seizures occurred annually. On July 11th, 1880, I observed unusual pulsation at the superior border, and at the left of the median line of the sternum. There was no tumor visible at this time—fifteen months previous to death—and the pulsations had been unnoticed by the patient.

At length a small tumor presented itself, in which there was pulsation, but never at any time during the progress of its growth was there bruit. The tumor enlarged rapidly until, shortly before death, it measured eight inches in its long and five inches in its short diameter. It extended from the right side of the sternum across it, reaching well up the neck in front and terminating midway between the left side the neck and outer aspect of the shoulder.

On his return from an eastern visit early in the month of May he coughed almost incessantly for three or four weeks in consequence, he thought, of a cold contracted during his absence. Finally his cough entirely left him. The cough was undoubtedly partly caused by the cold, but chiefly I think by pressure of the tumor upon the bronchus. The immediate cause of death was suffocation.

Pressure during the last few days of the patient's life upon the respiratory organs and œsophagus, caused dyspnœa and dysphagia—the breathing resembling an asthmatic attack.

TREATMENT

consisted of occasional administration of Pot. Iod. in doses varying from grs. v to xxv. Tr. veratrum veride, with digitalis, controlled the heart's action and maintained the pulse at 60 beats per minute. Inf. prunus virg. and, later in the case, anodynes in full doses. Recumbent posture and rest in bed. Straps of Ad. plaster were applied over the tumor, the walls of which became so thin and the pulsations, at times, so violent that rupture was feared.

AUTOPSY,

made by Dr. B. Bartow in the presence of many members of the profession, confirmed the diagnosis, revealing an aneurism, which had its origin at the arch of the aorta and which, with the heart, weighed *five and a half pounds*. It was laminated and contained a blood clot. The upper section of the sternum was carried away by the process of erosion, caused by pressure upon it.

On account of the destruction of a portion of the sternum the sternal extremity of the left clavicle and two of the ribs had no attachment. The heart was normal in size and structure. After deducting the weight of *the normal heart* the weight of the aortic tumor is fully *five pounds*. It seems quite incredible that a tumor should grow to this size, push its way through flesh, cartilage and bone without rupture. Aortic tumors of larger dimensions may have been reported, but this exceeds in size any of which I have knowledge.

A CASE OF TYPHOID FEVER WITH A PECULIAR COMPLICATION.

Reported by J. H. Pryor, M. D., Resident Physician General Hospital.

L. L., aet. 36, single, German, laborer, entered General Hospital April 27, 1882. Presents appearance of one suffering from a fever. Upon question he stated that he had been sick for one week, and then followed a recital of the symptoms of typhoid fever. He was strong and of inferior intellect. Pulse 100, temperature 103, respiration 23. The treatment was simple, consisting of sponge baths, hydrochloric acid, m iii every 6 hours, and milk diet. No unusual symptoms presented themselves until the morning of May 23d, when it was noticed that he was drowsy and stupid, and complained of feeling very weak. He was ordered whiskey ζ ss every 3 hours. At 3 o'clock, P. M., same day, he had a profuse hæmorrhage from the bowels. The pulse immediately became weak, fluttering and rapid. A clammy sweat covered his body. Whiskey increased to ζ i every hour, and ergot in ζ ss doses injected under the skin. He soon became unconscious, would not rally, and died at 3 o'clock, P. M., May 24, 1882. Autopsy same day.

No peritonitis. Ileum and ascending colon showed external sign of inflammation. Deep ulcerations in ascending colon; also ulceration of Peyer's patches for a considerable distance in the ileum. Cæcum dark colored and somewhat gangrenous. Pelvic cavity full of fœces. Lower half of rectum gangrenous, greatly softened and broken down. Large abscess located in its peritoneal fold. Searching carefully, found a large perforation in the rectum through which fœces were oozing. Surrounding tissues including a small portion of the bladder implicating in the diseased process. Attention was then called to the left leg, it being greatly swollen and emphysematous. The thigh gave token of being distended with fluid, the leg with gas. The origin of the fluid and the gas became a matter of interesting inquiry. By pressing upon the thigh fluid and bubbles of gas were forced to escape into the pelvic cavity. Finding the

opening indicated, a catheter was introduced and allowed to trace its way into the thigh. Its point stopped just below the fold of the nates where it could be felt superficially. A careful dissection now revealed, that the fœces and fœcal gases after escaping from the rectum, had made their way, with the aid of ulceration and gangrene, through the pelvic fascia, escaping from the pelvis between the pyriformis and gemelli muscles and burrowed right through the glutei muscles.

The cellular tissue was infiltrated and its meshes distended clear to the ankle. Wherever the fluid fœces touched the muscles gangrene had occurred. So greatly was the leg distended by the gases that the skin had the feeling of a drum-head, and tapping it brought forth the same sound. The fatal hæmorrhage occurred because ulceration laid open one of the hæmorrhoidal arteries and let the blood escape. Many physicians at the autopsy pronounced the case (so far they knew) unique. Its recital should give rise to many questions. A glance at the chart shows a plain history of a light case of typhoid with every indication of convalescence during the last week. The symptoms are especially well clustered. Is it not strange that this grave complication proceeded to its terminate without an outward sign or manifestation.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, Monday Evening, June 5, 1882.

President, Dr. A. R. Davidson, in the chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cronyn, Rochester, Fowler, Storck, Howe, Harvey, C. A. Ring, Burkhardt, Runner, Moody, Bartow, O'Brien, Hartwig, Stockton, Hopkins, Brecht, Mynter, Bartlett, Van Peyma, McNeil, and by invitation Drs. McBeth, Frederick, Frank and Fell.

The minutes of the last meeting were read and approved.

Essay—By Dr. Lucien Howe, subject: "The Pupil in Disease." A full report of this paper appears in the June number of THE BUFFALO MEDICAL AND SURGICAL JOURNAL.

Discussion—Dr. Cronyn thought the essayist had succeeded in giving the members of the society something to think about, and considered the subject one of great importance well taken, and said it was now being considered extensively by several European physicians. He thought the conditions were as demonstrated, although the root of the difficulty may not yet be fully appreciated. Practically it was a matter of almost daily experience and worthy of a great deal of thought.

Dr. Fell remarked that he was very much interested in the paper, and felt like following up the course pursued.

Dr. Howe further spoke of the effect of chloroform upon the pupil, that it contracts and remains so, when it is gradually administered, but dilatation may be obtained by suddenly slapping the patient. When patient is fully anæsthetized a sudden dilatation indicates serious consequences.

Dr. Rochester said he had often noticed that chloroform contracts and ether dilates the pupil, and asked that Dr. Howe further experiment and report.

Dr. Howe thought dyspnœa was the cause of dilatation with ether.

Voluntary Communication—Dr. Hartwig presented specimens of fungoid growths removed from the knee-joint, and related manner of removal by scraping, &c. He recommended the use of iodoform in surgical dressings. The specimens were given to Dr. Fell, with the request that he examine them microscopically and report.

Dr. Mynter remarked that opening the knee-joint was a dangerous proceeding.

Prevailing Diseases—Dr. Rochester reported measles, roseola and a little scarlet fever, and gave an interesting history of several cases of diphtheria, where the mortality was evidently greatly

increased by sewer gas, and took the ground that although sewer gas in itself may not propagate the disease, yet, where the disease is present, it seems to increase the fatality.

Dr. Cronyn thought the prevailing diseases were about the same as during May, and said he agreed with Dr. Rochester regarding the non-infecting power of sewer gas, although it doubtless assisted materially in advancing disease.

Dr. Hopkins had heard and read a good many extraordinary opinions about sewer gas, and asked the President or some other member of the society to enlighten them upon the subject by information as to what sewer gas is.

Dr. Davidson said that a good deal of alarm was caused by sensational statements of plumbers and others concerning the noxious and deadly nature of sewer gas. In fact there is no such thing as sewer gas. That so-called, being simply air more or less contaminated with carbonic acid and sulphuretted hydrogen. These gases are readily detected by testing with lead and baryta water. Their presence in the air does not render it particularly dangerous, nor can they possibly give rise to specific diseases. The danger from the admission of sewer air into our houses consists in the possibility of its conveying the germs of disease. If sewer air is present in a house, more or less odor is necessarily present. The inodorous and deadly "sewer gas" of which we hear so much is a myth.

Dr. Fell spoke of the general sewage of the city and of the lack of proper ventilation, as many sewers open below the surface of the water, and thought some action by this society would be proper to further an effort towards improving the present system.

Dr. Fowler related a case of diphtheria, giving its course and surroundings.

Dr. Bartlett thought that the impure air caused physical weakness, thereby making the system more accessible to disease, and that the cause of sewer gas in buildings was, that the structures being warm caused a natural draught upward from the sewers through

them. He thought that in itself it was not so poisonous as generally supposed. He reported that measles were now more fatal than at any time during the past six years.

Dr. Howe thought the sewer gas question was not as to chemical base, but of its infection with lower forms of animal or vegetable life, which are often multiplied with great rapidity.

Reports of Committees—The President reported that the Executive Committee had arranged for the use of the rooms now occupied, and their action met with the unanimous approval of the society.

Dr. Cronyn moved that this Association adjourn to meet again the first Monday in September. Seconded by Dr. Howe.

Dr. Rochester related past experiences, when adjournment was made for two months, and said it was difficult to get the members together again. Motion was lost.

Dr. Hopkins' motion was then put that when the Association adjourn, it shall be to the first Monday in July. Carried.

Dr. Brecht, the Treasurer, asked for instructions as to his duties regarding members who were more than five years in arrears for dues. Dr. Cronyn thought that two years should be long enough to wait for delinquent members and that decisive action should be taken to expel those who were so charged. After some discussion charges were preferred against several members, and the President referred the matter to a committee, consisting of Drs. Barrett, Bartow, Brecht, Mynter and Hopkins.

Dr. Fell invited all the members to be present at the meeting of the American Microscopical Society in Elmira in August next. Adjourned.

THE NEW YORK CODE.

At the annual meeting of the Onondaga Medical Society, held June 13th, the following resolutions were adopted by the following vote—twenty in favor, six opposed, and four declining to vote :

WHEREAS, The code of ethics of the American Medical Association, promulgated in 1847, was soon afterwards adopted by the Medical Society of the State of New York, and afterward by the Onondaga Medical Society; by a provision of this code consultation with practitioners who profess to be governed by an exclusive dogma is forbidden; it is the opinion of the Onondaga Medical Society that the State Society in assuming to repeal this provision and to sanction consultations with anybody and everybody exceeded its powers and justly forfeited all right to representation in the American Medical Association.

WHEREAS, It is also the opinion of the Onondaga Medical Society that the amendment to the code adopted by the State Society is impolitic, unwise, hurtful to the interests of the profession and of the public; and that it merits, as it seems to receive, general reprobation. It is as silly to charge the regular medical profession with illiberality and want of progress because it will not consult with the advertising quack or the doctor who professes to give doses so small as to be beyond the ken of human imagination, as to make the same charge against the orthodox clergyman because he declines to invite the atheist to consult as to the best method of promoting evangelical religion. The regular profession is liberal, tolerating the wildest differences of opinion; it is progressive, ready to test and welcome every new discovery in science and in the healing art; it points with just pride to all the glorious achievements of the past fifty years, in sanitary science and pathology, in surgery and in measures for preventing and alleviating pain, and shortening safely the course of disease; and it claims every one as the outcome of its professional and investigating policy; therefore

Resolved, That the permanent members of the State Society from this county be requested, and the delegates be instructed, to use all proper means to secure the prompt repeal of the New Code, against which this Society protested at its winter meeting.

RESOLUTIONS ADOPTED AT THE LAST MEETING OF THE
NIAGARA CO. MEDICAL SOCIETY.

Dr. Gould presented the following resolutions expressing the feeling of Niagara County Medical Society in the course taken by the State Medical Society at its last meeting:

WHEREAS, A judicious code of medical ethics is essential to the best interests of the medical profession and tends to promote the welfare and harmony of its members, as also the public good, it would seem but the dictate of sound judgment and good taste that the code of ethics so long adopted by the American Medical Association, and by our State Medical Society, should not be changed, except on due notice of such intention, and ample time given for mature deliberation and exchange of the views and opinions held by all interested and affected thereby, to the end that any such change when made should reflect the sentiment of the great majority of the members of the profession, and tend to conserve the best interest of legitimate medicine and the kindred arts and science; therefore

Resolved, That the action of the State Medical Society at its last meeting (annual) in 1882 in reference to a change in the code of ethics is not in harmony with the sentiments of this society.

Resolved, That the delegates of this society to the State Society at its next annual meeting are hereby instructed to protest against said action of the State Society, and in all suitable ways seek to rescind the same.

F. B. COSFORD, *Secretary*.

Editorial.

THE AMERICAN MEDICAL ASSOCIATION.

The thirty-third meeting of the American Medical Association was convened at St. Paul, Minn., on the 6th of June last and continued in session four consecutive days, its transactions being of an exceedingly interesting character; medical men, whose names alone insured an attentive audience, being attracted there from all sections of the country, while the younger, and less known, members of the profession were largely represented. The limited space accorded by the Journal to this report precludes a detailing of each subject brought up for discussion in the Society, and, indeed, such is rendered a work of supererogation by the full accounts of the proceedings given daily in the public press; a mere synopsis is therefore here presented touching only on a few of the salient points.

The Association was called to order at 11 A. M. on the 6th inst., a concourse of spectators of both sexes, besides the delegates, crowding the large Opera House of the city to overflowing, their extreme interest causing them to throng the stairs and select seats in the parquette and galleries long before the opening hour.

At the appointed time Chairman Stone conducted upon the stage Dr. P. C. Hooper, Gov. Hubbard and Bishop Ireland, and the latter inaugurated the convention by an appropriate prayer, according to the universal custom of such assemblages.

At its conclusion Gov. Hubbard was introduced, who welcomed the distinguished strangers with much cordiality and warmth. He said the people of his State felt highly honored by the presence of such a body of gentlemen, and he trusted the visit would not terminate with the completion of official duties alone. To physicians, Minnesota affords peculiar interest and invites especial investigation, as the exhilarating and vitalizing climate have made it a Mecca for health-seekers in past years, and he expected its reputation, in this respect, would be greatly widened and strengthened by a personal knowledge of its advantages. It was not, however, his purpose now to extol these, but rather to greet those present in the name of the people and assure them of their interest and sympathy in the coming deliberations.

The Vice-Presidents and ex-Presidents were then invited to occupy seats upon the platform. Dr. Sayre, of New York; Dr. Davis, of Chicago; Dr. Toner, of Washington, and Dr. Cole, of California, being hailed with applause as they ascended to their places. Immediately following this the ethical question was agitated; the Secretary announced that numerous protests had been received against the admission of delegates from the New York Medical Society, and condemning its course in reference to the Code of Ethics, deeming it an insult to the Association. The utmost indignation at the action of the recalcitrants was evidently felt and expressed in all parts of the Union. The letters of Drs. Sayre, of New York, and Gross, of Philadelphia, were also read, being greeted by a furor of applause, and the protests were then referred to the Judicial Council.

When the excitement, occasioned by the reading of the protests had subsided, Dr. Stone verbally presented, on behalf of the Committee on Arrangements, a programme of railroad excursions, receptions and entertainments by private individuals, and a banquet by the profession and citizens at the Metropolitan Hotel. Notably among the excursions was one to Stillwater and to the White Bear Lake.

These hospitable intentions being announced and disposed of, the annual address was delivered by the 1st Vice-President, Dr. Hooper; the President—Dr. J. J. Woodward, U. S. Army—having been obliged to go abroad on account of ill-health.

After a regretful reference to the sad reasons causing the absence of his distinguished colleague, and a complimentary mention of his predecessors in office, Dr. Hooper discharged his first duty by a grateful acknowledgment of the hearty reception extended by the citizens of St. Paul. He then sketched the history of the association, its aims and success, and in connection with its age, alluded briefly to those of its founders who had passed away since its inauguration, paying a tribute also to the few honored survivors. The retrospect over past years of science in general naturally suggested to him the contrast between the derision with which Newton's views were met by the public, and the liberality now accorded to each new idea. Today, he said, every thinker has substantial recognition; the people are being educated continually by schools, libraries, lectures, etc. "The skepticism of the age is not afraid of the new and startling; the tendencies are to prove all things, holding fast that which is good. The cry of Sir Thomas Bodley to Bacon 'a fresh creating new principles of science would be to be disposed of the learning we have' is not needed." He noted the progress which had been made by medical science within the last year, and dwelt upon the important influence the Association would exert in reforming medical education. He believed this influence would be further increased by the substitution of a weekly medical journal in lieu of the present annual volume of transactions. He earnestly called attention to the recent action of the New York Medical Society, and in concluding this topic remarked: "One mistaken movement would involve us in a whirl of inconsistencies, tending to place us in a false attitude and bring dishonor upon the profession. The broad lines of demarcation between the irregular and the true

physician should never be obliterated. Our Association stands prominently forth in its high purposes, and its means of accomplishing these purposes are distinctly enunciated."

Finally he glowingly eulogized the President of last year, Dr. J. T. Hodgen, whose death occurred at St. Louis but a few weeks since.

The address was followed by the transaction of some small matters of business, and the presentation of a series of resolutions from the Women's National Christian Temperance Union by Dr. Davis, of Chicago, who felt, in offering them, that the universal woman heart beat in unison with the sentiments therein expressed.

The Section on Medical Practice assembled in the afternoon of the first day, the subject presented being: The Practice of Medicine, *Materia Medica* and Physiology. The Section was called to order by Dr. John A. Ochterlony, of Louisville, who later read the address in medicine. The reading of the first paper, on Therapeutic Action of Chlorate of Potassium, by Dr. J. V. Shoemaker (Philadelphia), was postponed till after that of Dr. J. H. Tyndale on Home Treatment of Pulmonary Consumption by General Local Antisepsis on the Basis of Strict Individualization.

Dr. Donnelly, of New York, addressed the Section on the Use of Salicylate of Potassa in Acute Rheumatism and Dyspepsia. The merits of the subject were afterwards fully discussed, and the paper referred to the Committee on Publication.

The Section on Surgery and Anatomy also convened in the afternoon with a large attendance, and was called to order by Dr. Wm. A. Byrd, of Quincy, Ill., the Secretary, who was subsequently elected Chairman, and Dr. McCall, of Michigan, Secretary. Several papers of interest were presented, and in place of one passed, a paper on Anchylosis of the Hip, by Dr. C. C. F. Gay, of Buffalo, was read. He distinguished between true and false anchylosis, giving the false as the rule, and the true as the exception. He said no age is exempt from it; movable, articu-

lations show both forms and anæsthesia is often necessary to determine the true and the false. An illustrative case was cited from his service at the Buffalo General Hospital, where an operation was performed with good prospect of success. The paper was discussed at length.

A contribution to the Surgery of the Liver was offered by Dr. Joseph Ranoshoff, of Cincinnati, who reported two important cases successfully operated upon by novel methods. Another paper was on The proper Points for Incision in the Drainage of Suppurating Knee Joints, by Dr. Andrews, of Chicago, which paper was prefaced by the expression of the opinion that the reading of all the papers (and afterwards discussing those desired) was the correct way and should have been earlier adopted.

At the meeting of the Section on Ophthalmology, Otology and Laryngology the election of officers was as follows: President, Dr. Jones, of Chicago; Secretary, Dr. Carl Seiler, of Philadelphia. Valuable information was given and interesting cases cited by Drs. Agnew, of New York; Seiler, of Philadelphia; Calhoun, of Atlanta, and other prominent specialists. The matter of communicable diseases of the eye received considerable attention.

The State Medicine Section was called to order by Dr. A. L. Gibson, U. S. N., and proceeded immediately to discuss the questions referred to them by the Association.

The branch of the profession interested in Dentistry held its meeting under the organization of the Chairman of last year, Dr. D. H. Goodwille, of New York; subsequently electing him President, and Dr. T. W. Brophy, of Chicago, Secretary.

The report of the Committee on Journalizing the Transactions of the Association was presented by Dr. Packard, of Philadelphia, and it was resolved that a Board of Trustees be appointed to agree, as early as possible, upon a plan of a medical journal, to be called the *Journal of the American Medical Association*; said Board to send circulars to all members of the profession

throughout the entire country, asking pledges of support and ascertaining, reliably, what basis the proposed journal can have for commencing publication. Suggestions were added in regard to the editor's salary, subscription price, etc.

Following this Dr. Charles Denison, of Denver, introduced a resolution to the effect:

"That, in order to correct a misconception existing in the public mind, and also prevailing among the medical profession, as to the liberty authorized by the Association in the treatment of disease, a declaration of principles, as sanctioned under our code, was deemed proper, namely: Rational medicine demands absolute freedom in the methods of administration of *materia medica*, and nothing in our code of ethics prohibits the use of any known and honorable means of combating disease. We hail with pleasure and gratitude every discovery in therapeutical science, by whomsoever made. We therefore reject as obnoxious the term "allopathists." First—because it tends to convey the erroneous impression that we are restricted in our choice of remedies. Second—because we have always held it dangerous in practice and unscientific in principle for any association of men, claiming to be physicians, to adopt a name based upon limited theories of therapeutics, for the purpose of designating a particular school of medicine."

The report of the Librarian, Dr. Wm. Lee, of Washington, included a full list of books added to the library during the year. This addition makes the library consist at present of 1,702 distinct titles, which comprehend from a general estimate about 4,448 volumes, inclusive of pamphlets. The Boston Medical Library Association has generously placed a large number of its duplicate periodicals at the disposal of this library, which have gone far towards completing certain imperfect sets of the same.

The report of the Treasurer, Dr. R. J. Dunglison, was read, showing a balance of \$1141.38 in the treasury at this date.

Dr. Keller, Arkansas, offered for action the resolution:

“That in many of our large cities cremation will soon become a sanitary necessity.”

Dr. J. G. Thomas, of Georgia, presented the following resolution on medical examinations:

“*Resolved*, That the Association approve the organization of Faculties in medicine having no other foundation than the examination for degrees as a measure which will increase the value of the present methods of education in medical colleges in this country.”

A motion to lay on the table was lost, but after some further discussion the subject was postponed.

EVERY OTHER MEETING TO BE HELD IN WASHINGTON.

N. S. Davis introduced the following:

“*Resolved*, That after the next annual meeting the permanent interests and influence of this Association would be best promoted by again holding every second meeting in Washington, as its home on common national ground and not as invited guests, while each alternate meeting should be held in such section of the Union as would be most useful in promoting the society organizations in all parts of our country.” Adopted.

The Committee on Nominations presented their report and the following is the list of officers elected for the ensuing year:

President—Dr. John L. Atlee, Philadelphia.

First Vice President—Dr. Eugene Grissom, North Carolina.

Second Vice President—Dr. A. J. Stone, Minnesota.

Third Vice President—Dr. J. A. Octerlony, Kentucky.

Fourth Vice President—Dr. H. S. Orme, California.

Treasurer—R. J. Dungleson, Pennsylvania.

Librarian—Wm. Lee, Washington.

Members of Judicial Council—N. S. Davis, Illinois; J. M. Brown, United States Navy; X. C. Scott, Ohio; M. Sexton, Indiana; N. C. Husted, New York; Wm. Lee, Maryland; J. E. Rives, West Virginia.

OFFICERS OF THE VARIOUS SECTIONS.

Practice of Medicine—J. H. Hollister, Illinois, Chairman ; J. G. Lee, Pennsylvania, Secretary.

Surgery and Anatomy—W. F. Peck, Iowa, Chairman ; Paul F. Eve, Tennessee, Secretary.

Obstetrics—J. K. Bartlett, Wisconsin, Chairman ; G. A. Moses, Missouri, Secretary.

Medical Jurisprudence and State Medicine—Foster Pratt, Michigan, Chairman ; Thos. L. Neal, Ohio, Secretary.

Ophthalmology, Otology and Laryngology—A. W. Calhoun, Georgia, Chairman ; Carl Seiler, Pennsylvania, Secretary.

Diseases of Children—R. Blount, Indiana, Chairman ; J. H. Sears, Texas, Secretary.

Dentistry—D. H. Goodwillie, New York, Chairman ; T. W. Brophy, Illinois, Secretary.

The Committee further announced that Cleveland, Ohio, had been selected as the place of meeting for 1883. The President elect, Dr. John L. Atlee, was then escorted to the platform and made a brief address. Thanks were tendered to the retiring President, Dr. P. O. Hooper, and the Association adjourned to assemble at Cleveland on the first Tuesday in June, 1883.

 EDITORIAL NOTES.

NOTICE TO GRADUATES OF BELLEVUE HOSPITAL MEDICAL COLLEGE.—A second decennial revision of the catalogue of alumni of this college is being prepared for publication, and we are requested to ask that all graduates send their present address, at once, on a postal card, to the Historian of the Alumni Association, Bellevue Hospital Medical College, New York, N. Y.

This Book is due on the last date stamped below. No further preliminary notice will be sent. Requests for renewals must be made on or before the date of expiration.

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DUE

A fine of twenty-five cents will be charged for each week or fraction of a week the book is retained without the Library's authorization.

